



**Planet Depos®**  
We Make It *Happen™*

---

# Transcript of Robert M. Kimmel, Sc.D.

**Date:** April 17, 2026

**Case:** ClearCorrect Operating, LLC -v- Align Technology, Inc. (PTAB)

**Planet Depos**

**Phone:** 888.433.3767

**Email:** [transcripts@planetdepos.com](mailto:transcripts@planetdepos.com)

**www.planetdepos.com**

WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2  
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4  
5 CLEARCORRECT OPERATING, LLC,

6 Petitioner,

7 vs.

8 ALIGN TECHNOLOGY, INC.,

9 Patent Owner.

10  
11 CASE NOS. IPR2025-00818  
12 IPR2025-00819  
13 IPR2025-00820  
14 IPR2025-00821

15  
16 US PATENT NOS. 10,973,613  
17 11,154,384  
18 11,648,090  
19 11,648,091

20 STENOGRAPHIC DEPOSITION OF

21 ROBERT M. KIMMEL, SC.D.

22 ATLANTA, GEORGIA

FRIDAY, APRIL 17, 2026

REPORTED BY: TANYA L. VERHOVEN-PAGE,  
CCR-B-1790 (GA), CSR-12254 (TX),  
LCR-991 (TN)

FILE NO. 628319

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

April 17, 2026

9:08 a.m.

Stenographic deposition of  
ROBERT M. KIMMEL, SC.D., held at the  
offices of Finnegan, Henderson, Farabow,  
Garrett & Dunner, LLP, 271 17th Street,  
N.W., Atlanta, Georgia before Tanya L.  
Verhoven-Page, Certified Court Reporter  
(GA), Licensed Court Reporter (TN) and  
Certified Shorthand Reporter (TX).

1 APPEARANCES OF COUNSEL

2  
3 On behalf of the Petitioner:

4 FINNEGAN, HENDERSON, FARABOW,  
5 GARRETT & DUNNER, LLP  
6 901 New York Avenue, N.W.  
7 Washington, D.C. 20001-4413  
(202) 408-4000  
BY: CHARLES T. COLLINS-CHASE, ESQ.  
e-mail: charles.collins-chase@finnegan.com

8 FINNEGAN, HENDERSON, FARABOW,  
9 GARRETT & DUNNER, LLP  
10 1875 Explorer Street  
Suite 800  
Reston, Virginia 20190-6023  
(571) 203-2428  
11 BY: KYLE W. HOWARTH, ESQ.  
12 e-mail: kyle.howarth@finnegan.com

13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
PLANET DEPOS

888.433.3767 | WWW.PLANETDEPOS.COM

APPEARANCES OF COUNSEL

On behalf of the Patent Owner:

WILSON, SONSINI, GOODRICH & ROSATI  
701 Fifth Avenue  
Suite 5100  
Seattle, Washington 98104-7036  
(202) 973-8800  
BY: MICHAEL T. ROSATO, ESQ.  
e-mail: mrosato@wsgr.com  
BY: PATRICK M. MEDLEY, ESQ.  
e-mail: pmedley@wsgr.com

- - -

PLANET DEPOS

888.433.3767 | WWW.PLANETDEPOS.COM

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

I N D E X

WITNESS: ROBERT M. KIMMEL, SC. D.

| Examination          | Page |
|----------------------|------|
| BY MR. COLLINS-CHASE | 7    |

## EXHIBITS INDEX:

| Kimmel<br>Deposition<br>Exhibit | Description                                                                                     | Page |
|---------------------------------|-------------------------------------------------------------------------------------------------|------|
| Exhibit 1001                    | United States Patent<br>Patent Nos.<br>US 11,648,090 B2<br>US 11,648,091 B2<br>US 10,973,613 B2 | 113  |
| Exhibit 2014                    | Declaration of<br>Robert M. Kimmel,<br>Sc.D.                                                    | 10   |
| Exhibit 2015                    | Curriculum vitae of<br>Robert M. Kimmel,<br>Sc.D.                                               | 22   |

(Kimmel Deposition Exhibit Nos.  
1001, 2014 and 2015 were identified for  
the record. Exhibits will not be  
attached to the transcript.)

1 ATLANTA, GEORGIA; FRIDAY, APRIL 17, 2026

2 9:08 A.M.

3  
4 Thereupon --

5 ROBERT M. KIMMEL, Sc.D.,  
6 called as a witness, having been first duly sworn,  
7 was examined and testified as follows:

8  
9 EXAMINATION

10 BY MR. COLLINS-CHASE:

11 Q Good morning, Dr. Kimmel. How are you?

12 A Good morning.

13 Q Could you please state your full name for  
14 the record.

15 A Robert M. Kimmel.

16 Q Thank you. We met earlier, but my name  
17 is Charles Collins-Chase. I'll be asking you some  
18 questions today.

19 Dr. Kimmel, have you ever had your  
20 deposition taken before?

21 A Yes, I have.

22 Q How many times?

1           A       I don't know. Twenty -- 26, 27, 28,  
2 something like that. It's in my CV.

3           Q       Do you understand that you're here today  
4 to provide testimony under oath?

5           A       Yes.

6           Q       And you understand that you're expected  
7 to tell the truth with your testimony?

8           A       Yes.

9           Q       Is there any reason that you should not  
10 be able to provide complete and accurate testimony  
11 today, Dr. Kimmel?

12          A       No.

13          Q       Dr. Kimmel, I know you've been deposed  
14 many times so you probably know the rules, but just  
15 to go over a couple of them.

16                   If you don't understand any of my  
17 questions, please let me know if you don't understand  
18 it, and if you don't tell me otherwise, I will assume  
19 that you understand the question.

20                   Is that okay?

21          A       Yes.

22          Q       If you need a break at any time, please

1 let me know. This is not a forced march. We can  
2 take a break at any time that you need to. If we're  
3 in the middle of a question and answer, I'd ask that  
4 we finish that before we take a break, but really,  
5 please let me know if you need to take a break and  
6 I'm happy to do that.

7 A I understand.

8 Q Dr. Kimmel, is it your understanding that  
9 you are here today to testify regarding your  
10 declaration that was submitted in four inter partes  
11 review proceedings at the U.S. Patent and Trademark  
12 Office?

13 A That's my understanding.

14 Q Dr. Kimmel, do you have any papers with  
15 you today that you brought in?

16 A No.

17 Q Okay. So we can give you a copy of the  
18 declaration that you submitted in the case. Here you  
19 are, sir.

20 A Thank you.

21 MR. COLLINS-CHASE: And I have  
22 copies for you guys, too, if you need

1 any.

2 MR. ROSATO: Thanks.

3 BY MR. COLLINS-CHASE:

4 Q Dr. Kimmel, is this the declaration that  
5 you submitted in the IPR proceedings we just  
6 mentioned?

7 A It appears to be, yes.

8 Q And those are, for the record, IPR  
9 2025-00818, IPR 2025-000819, IPR 2025-00820 and IPR  
10 2025-00821.

11 Do you see that?

12 A Yes.

13 Q Did you submit the same declaration with  
14 the same text for all four of those proceedings?

15 A I just wrote one declaration.

16 (Kimmel Deposition Exhibit No. 2014  
17 was identified for the record.)

18 BY MR. COLLINS-CHASE:

19 Q Perfect. Dr. Kimmel, is it your  
20 understanding that the patents that are at issue in  
21 those IPR proceedings are the four patents that are  
22 listed on the front page of your declaration, Exhibit

1 2014?

2 A That's my understanding.

3 Q Okay. Could you please turn to the last  
4 page of Exhibit 2014. And then I think if we go  
5 backwards two pages, 95, so the last page of text of  
6 your declaration, is that your signature, sir?

7 A Yes, it is.

8 Q Dr. Kimmel, did you write this  
9 declaration yourself?

10 A No. I wrote it in cooperation with the  
11 attorneys.

12 Q Did you review the entire substance of  
13 the declaration to ensure that you agreed with all  
14 the statements in the declaration?

15 A Before I put my signature on it, I made  
16 sure I agreed with everything.

17 Q Dr. Kimmel, have you reviewed the patent  
18 owner response that Align filed in these IPR  
19 proceedings?

20 A No, I have not.

21 Q Dr. Kimmel, would you please turn to  
22 Paragraph 39 of your declaration. And it's on Page

1 21, if that's helpful. Take a moment and read  
2 Paragraph 39, if you need to, and let me know when  
3 you're ready.

4 A I've read it.

5 Q The paragraph, 39, says: Dr. Osswald has  
6 provided a description of the person of ordinary  
7 skill for each of the multilayer appliance patents.

8 And then you reproduce Dr. Osswald's  
9 definition of a person of ordinary skill in the art.

10 Do you see that?

11 A Yes.

12 Q Do you agree with Dr. Osswald's  
13 definition of the person of ordinary skill in the  
14 art?

15 A My comments on Dr. Osswald's description  
16 are in Paragraph 41. And I can summarize it, I can  
17 read it, whichever.

18 Q Yeah. So you pointed to Paragraph 41 of  
19 your declaration, and you say: In this declaration,  
20 I apply a level of skill in the art not lower than  
21 the standard adopted by Dr. Osswald.

22 Do you see that?

1           A       Yes.

2           Q       So did you apply the same level of  
3 ordinary skill in the art as Dr. Osswald or a  
4 different one?

5           A       No. I applied the same level of skill in  
6 the art, but my comment was that -- that he doesn't  
7 require a POSITA to have an understanding of  
8 experience with the design, manufacture and  
9 processing of thermoformable polymer sheets for use  
10 in orthodontic or dental appliances.

11                   So I felt it was important to have some  
12 of that information. I don't have it by my work  
13 experience, but I have it by depending and relying on  
14 the declaration that was filed by Ms. Chen in this  
15 case.

16           Q       When you say, "I don't have it by my work  
17 experience," you mean that you don't have experience  
18 through your work in the design, manufacture and  
19 processing of thermoformable polymer sheets for use  
20 in orthodontic and dental appliances?

21           A       That's correct.

22           Q       Do you have any experience designing or

1 manufacturing a dental appliance?

2 A No, I don't.

3 Q Do you have any experience in performing  
4 clinical trials?

5 A Not in performing them. I think I've  
6 been in a clinical trial at one point in time.

7 Q As a patient?

8 A As a patient, but --

9 Q Understood. Dr. Kimmel, you do not have  
10 any experience measuring tooth movement, correct?

11 A I do not.

12 Q Dr. Kimmel, you said you relied on the  
13 declaration that was filed by Yen Chen in this case?

14 A Yes.

15 Q Did you speak with Ms. Chen?

16 A I did not.

17 Q You reviewed her declaration during the  
18 time that you were preparing your own declaration  
19 with your attorneys?

20 A I did.

21 Q Dr. Kimmel, if you would please turn to  
22 Paragraph 8 of your declaration, which is on Page 4.

1 You state that from 2004 until your retirement you  
2 taught the Capstone course of the Packaging Science  
3 Curriculum, Package Design and Development.

4 Do you see that?

5 A Yes.

6 Q Over the last 22 years or so, has the  
7 focus of your work been on package design and  
8 development?

9 A Well, the last part of my career, I was  
10 teaching in the Packaging Science Department at  
11 Clemson. And so, naturally, it was -- a lot of the  
12 work was focused on teaching and -- and doing  
13 research and guiding research in the area of package  
14 development and materials for package development.

15 So a lot of it was -- it was based on my  
16 expertise, which is really materials, the materials  
17 side of development. The packaging is an extremely  
18 broad field, demanding skills in a lot of different  
19 areas. It is one of the broadest fields -- well,  
20 it's a very broad field. And within the department  
21 we had specialists in a lot of different areas of  
22 that field.

1           My responsibility -- my responsibilities  
2           focused on the use of plastics in packaging.  
3           Plastics have been my entire -- my entire career.  
4           You know, at this point it's well over 60 years of  
5           experience working with polymers and plastics. And  
6           so -- but in this -- in this course, it gave me the  
7           opportunity to really broaden my scope because -- to  
8           really guide these -- these projects that the  
9           students work on.

10           So in this course, students work on -- in  
11           teams, you know, for a whole semester on a project, a  
12           lot of them sponsored by companies. And they could  
13           be anything. You know, package water, package  
14           microphones, you know, and everything in between. We  
15           did one packaging, 10-ton copper -- big copper -- I  
16           don't know, big copper cylinders, I guess. I don't  
17           even remember the application. I just happen to  
18           remember there were 10 tons of copper, and the issue  
19           was how you transport those.

20           So there's issues, you know, on a very  
21           micro scale when you're talking about -- you're  
22           talking about packaging medical devices and -- which

PLANET DEPOS

888.433.3767 | WWW.PLANETDEPOS.COM

1 we did quite a bit of, and issues on a very macro  
2 scale. So it's very broad. And so the benefit to me  
3 mentoring this course was it greatly broadened my  
4 scope and my expertise in the kinds of things I had  
5 to learn in order to guide the students. You know,  
6 it was an area that was outside my specialty, you  
7 know. I had to develop some expertise in order to  
8 guide them.

9 Q When you say it was outside your  
10 specialty, what specialty are you referring to?

11 A My specialty is polymers and plastics.  
12 And -- but, you know, almost all of these projects  
13 involved corrugated and designing with corrugated.  
14 Because, as we all know, you know, corrugated boxes  
15 are the outside of most of these packages. If you're  
16 going to ship something, you usually put it in a  
17 corrugated box. And so, you know, I learned a lot  
18 about corrugated, I learned a lot about paperboard.  
19 I learned about the issues in designing for  
20 transportation. It was just -- it was a very  
21 broadening experience, which I enjoyed tremendously.  
22 So --

1           Q       You mentioned, Dr. Kimmel, that the  
2 packaging field is very broad and requires skill in  
3 many different areas.

4                   What areas are you referring to?

5           A       So fundamentally it involves, first of  
6 all, skills in a variety of materials. It involves  
7 skills in how to form those materials into  
8 containers. It involves the -- once you've formed  
9 the material, it involves, particularly in many areas  
10 of packaging, an understanding of how the products in  
11 those packages are going to interact with the  
12 environment.

13                   And -- and then the whole issue is  
14 involved in designing for transportation, which is --  
15 you know, it's -- it's very heavily rooted in  
16 mechanical engineering, but it's still -- and, you  
17 know, we have -- we had laboratories -- we have  
18 laboratories at Clemson to do all of those, to work  
19 in all of those fields, because the students were  
20 training and going to go out and work in all of those  
21 fields.

22                   And one of the benefits of an education

1 in packaging science is they can work -- develop in  
2 the lab developing materials or they can go work in  
3 marketing or purchasing or sales. And so our  
4 students go out to all of these different areas, but  
5 they have to have a fundamental understanding of what  
6 goes into designing and using the package that works.  
7 Packages are very functional things. We don't -- you  
8 know, the ordinary person never thinks about it.  
9 Right? We take packaging for granted. But, in fact,  
10 it's a very detailed, very scientifically rooted  
11 field.

12 Q All those skill areas that you mentioned  
13 have applicability within the packaging field  
14 specifically, right?

15 A Well, a lot of them overlap with -- I  
16 mean, when you're talking about using -- about  
17 developing and using particularly plastic materials,  
18 the same sorts of skills and understanding applies to  
19 making other plastic articles that aren't packaging,  
20 that are -- that are -- that are, you know, liners,  
21 even.

22 So the thermoforming process for liners

1 is really no different than the thermoforming process  
2 for making a medical device package. It's the  
3 basic -- same basic technology. So there's --  
4 it's -- we're taking -- we're taking from all kinds  
5 of different fields and applying them to a specific  
6 application.

7 But those of us working in the field, you  
8 know, have expertise that goes well beyond -- I mean,  
9 I spent 30 years of my career in the plastics film  
10 and plastic resin industry before I went to Clemson.  
11 So, you know, the -- yeah.

12 Q Much of your experience before Clemson  
13 was still in the packaging area, though, correct?

14 A No. Not necessarily. Packaging was just  
15 one market that we serviced.

16 So I worked in a company that was making  
17 polyester resins and films. So that means the resins  
18 to make these plastic bottles that we're all very  
19 familiar with and are the subject of much angst  
20 because we don't know how to dispose of them. But  
21 that's a different subject.

22 But the film applications ranged from

1 applications which don't even exist anymore,  
2 microfilm, computer tape, HUD stamping foil, as well  
3 as packaging. So packaging is about -- I don't  
4 know -- 20 or 25 percent of the polyester film market  
5 and we serviced all of those. I worked -- I worked  
6 in many of those applications over the course of 30  
7 years.

8 Q Dr. Kimmel, you just referred to the  
9 plastic water bottle that's sitting on the table in  
10 front of you. What polymer is used to make that  
11 water bottle?

12 A That's poly -- it's PET, polyethylene  
13 terephthalate.

14 Q What class of polymers is PET?

15 A It's a condensation polymer.

16 Q Have you worked with other polymers in  
17 your packaging experience besides PET?

18 A Many, yeah, almost, yeah. I mean, the  
19 largest polymer used in packaging is actually  
20 polyethylene, so.

21 Q Have you worked with PVC?

22 A Yes.

1 Q Polycarbonate?

2 A Yes.

3 Q HTPE?

4 A Yes.

5 Q LDPE?

6 A Yes.

7 Q PETG?

8 A Yes.

9 Q Are there any others that you spent a lot  
10 of time working on that I haven't mentioned?

11 A Yeah. I did a lot of work with  
12 high-temperature plastics that are capable of  
13 sustaining high temperatures, and we don't -- yeah.

14 Q Polystyrene? I forgot that one.

15 A Yes.

16 (Kimmel Deposition Exhibit No. 2015  
17 was identified for the record.)

18 BY MR. COLLINS-CHASE:

19 Q Dr. Kimmel, I'll hand you your CV so you  
20 can have it for a couple questions that I'm going to  
21 ask you. And this is Exhibit 2015.

22 MR. ROSATO: Thank you.

1 BY MR. COLLINS-CHASE:

2 Q Dr. Kimmel, is Exhibit 2015 an accurate  
3 copy of your CV?

4 A It appears to be, yes.

5 Q Is this your standard CV that you use or  
6 one that was prepared for the purposes of these  
7 proceedings?

8 A No, it's a standard CV. I mean, I  
9 updated it for the purposes of these proceedings, and  
10 I'm constantly updating it of course.

11 Q That was my question.

12 It's updated as of the date that you  
13 submitted your declaration?

14 A Yes, of course.

15 Q And we talked about your experience since  
16 2004. And under the University and Teaching  
17 Experience on the first page of Exhibit 2015, it's  
18 got a position from 2004 to 2022, Director, Center  
19 for Flexible Packaging.

20 Do you see that?

21 A Yes.

22 Q What is the Center for Flexible

1 Packaging?

2 A I actually describe that in the  
3 biographical section of my deposition, which might be  
4 easier to -- to look at that. Let's see. So it's  
5 Paragraph 10 on Page 5.

6 So I wrote here: The Center is an  
7 academic-industry consortium dedicated to teaching,  
8 research and service in flexible packaging. The  
9 Center provides the domestic and international  
10 packaging industries with a wide range of testing  
11 services and prototyping and product development  
12 services using cast and co-extruded blown film  
13 manufacture, coding, adhesive lamination,  
14 thermoforming and a variety of package manufacturing.

15 And I wrote this in the present tense  
16 because the Center still exists. It was taken over  
17 by the professor who was my associate director.

18 Q You also list experience under University  
19 and Teaching Experience from 2006 to 2011, Chair,  
20 Department of Packaging Science.

21 Is that the chair of the Department of  
22 Packaging Science at Clemson?

1           A       Yes.

2           Q       What were your roles and responsibilities  
3 in your chair position?

4           A       Trying to manage a bunch of very  
5 difficult people.

6           Q       That sounds like most chair positions.

7           A       Yeah. It's -- I think a chair position  
8 is the worst -- absolutely the worst, the worst  
9 position in the university, without question. You  
10 can't win. There's absolutely no win.

11                   Especially, as I did, if you have  
12 individuals who didn't want me to be appointed chair,  
13 who included the man who had been dismissed from the  
14 chair position because of his conduct. And so, you  
15 know, it was constantly -- constantly fighting  
16 against me. It was not much fun.

17                   But it was a good experience, of course,  
18 plus it exposed me to the highest levels of  
19 administration at the university. It was very -- it  
20 was, in many respects, a good experience, but very,  
21 very different from working in industry.

22           Q       Were you continuing your research and

1 teaching during the time that you were serving as  
2 chair?

3 A To the extent that I could, yeah. I  
4 really had to stop a lot of research and -- you know,  
5 there was just no time. So I did continue teaching.  
6 I continued teaching the course we talked about  
7 before, but I gave up the other courses I was  
8 teaching.

9 Q You continued teaching the Capstone?

10 A Yes.

11 Q You were the chair until 2011, and your  
12 CV lists a position from 2011 through 2022, Director,  
13 Packaging Science Program, Department of Food,  
14 Nutrition and Packaging Sciences.

15 Do you see that?

16 A Yes.

17 Q What was your role as the director?

18 A So in -- in 2010, 2011, I'm going step  
19 down as chair. The administration decided to merge  
20 the Packaging Science Department with the Food  
21 Science and with -- with the Food Science and Human  
22 Nutrition Department, which was next to us, down the

1 hall, because they thought it would be more  
2 efficient.

3 And so -- and the gentleman who was  
4 brought in to chair that new department was a food  
5 scientist, who knew something about packaging  
6 science. But we decided that we needed someone to  
7 take responsibility and coordinate the activities of  
8 the faculty of the Packaging Science Department. So  
9 that was my role, was -- was to develop strategic  
10 direction and to -- it wasn't -- I didn't have any  
11 administrative responsibility for the people, but I  
12 did have responsibility for organizing our  
13 curriculum, for helping the team make decisions about  
14 curriculum and about which students we were going to  
15 accept and what we were going to try and do in terms  
16 of adding equipment. It was a strategic -- you know,  
17 very much a strategic position.

18 And so I did that from -- when I say i  
19 was the logical person to do it, I had just been  
20 chair of the department, so, and doing a lot of the  
21 same things as chair of the department. So, you  
22 know, I did that until I retired.

1           Q       Before you were at Clemson, you were in  
2 industry; is that correct?

3           A       That's correct.

4           Q       You list a position on the first page of  
5 Exhibit 2015, it says, 1999 to present at Reedy River  
6 Associates in Roswell, Georgia, President.

7                   Do you see that?

8           A       Yes.

9           Q       What is Reedy River Associates?

10          A       That's just the name for the company  
11 under which I do consulting. I set it up as soon as  
12 I left -- as soon as I left industry and I could  
13 start doing consulting, you know, which is, of  
14 course, an encouraged activity for faculty. So I  
15 just -- if you know Greenville, you know what the  
16 Reedy River is.

17          Q       So the consulting company Reedy River  
18 Associates is the --

19          A       It's just a sole proprietorship.

20          Q       -- the company name that you have for  
21 your consulting work?

22          A       Yeah. It's just a company name that I

1 use sometimes. I get a tax number for it.

2 Q That's useful.

3 And you've done consulting to the  
4 plastics and packaging industries from 1999, when you  
5 left industry, during your time at Clemson; is that  
6 right?

7 A Until now, yes.

8 Q Are you still engaging in consulting to  
9 the plastics and packaging industries?

10 A I still engage in -- yeah, I still engage  
11 in consulting in the form of expert witness work. I  
12 don't do -- I don't do much technical -- pure  
13 technical consulting anymore, but I do -- I continued  
14 doing, you know, legal-related work or whatever,  
15 expert witness kind work, consulting with law firms.

16 Q What position did you hold before you  
17 left industry?

18 A Well, that's what's the next item here.  
19 Right?

20 So from '94 to '98, I ran a team doing  
21 new business development in the -- you know, in the  
22 areas that are outlined on the CV. So I had a

1 multifunctional team of people, and we were working  
2 on developing new products based on -- based on the  
3 company's plastics technology. And we were very  
4 successful.

5 In fact, at this same time, Hoechst was  
6 going through a whole reorganization and, you know,  
7 they ended up -- in 1998 they closed a lot of  
8 activities and became a pharmaceutical company. And  
9 the -- which is why I retired, because they -- they  
10 took a lot of their activities in the U.S. and just  
11 said, well, we don't need you anymore. And I was  
12 fortunate, but it was a good time for me to retire  
13 from industry.

14 Q During that period --

15 A Which is when I went to Clemson, so.

16 Q Understood. During that period from 1994  
17 through 1998 that you mentioned, was your work  
18 focused on plastics for packaging?

19 A Actually not. Packaging was only one --  
20 was only one application. So we were -- we were  
21 working on multilayer films and we had  
22 state-of-the-art equipment for co-extruding

1 multilayer films. And we were concerned with a  
2 particular polymer that Hoechst Celanese had in its  
3 portfolio that we learned how to make into films and  
4 into multilayer films.

5 It had a very unique set of properties,  
6 and we were looking for all kinds of applications for  
7 it. We looked at -- we worked on printed circuit  
8 boards, we worked on gas tanks, as well as -- as well  
9 as packages. And the -- during that time, we worked  
10 on -- it was the -- really the beginning interest in  
11 plastic beer bottles, which had very special barrier  
12 requirements, and we thought our material might be  
13 applicable to that. We did a lot of work with Miller  
14 Beer.

15 So it was a very wide-ranging set of  
16 applications.

17 Q There were packaging applications --

18 A Yeah, there were --

19 Q -- in your work in that role?

20 A -- packaging applications, there were  
21 non-packaging applications.

22 Q Were all the packaging applications you

1 were working on food packaging?

2 A No.

3 Q What other types of packaging?

4 A Well, as I said, there was -- you know,  
5 we worked on packages. Well, as I said, the packages  
6 for beer. I guess that's food, to some people  
7 anyway. And we worked on -- we worked on fuel  
8 additive containers. You know, all kinds of things  
9 that need to be packaged and need good barrier  
10 properties.

11 Q Any dental applications?

12 A I don't remember correctly.

13 Q You don't recall working on any dental  
14 applications?

15 A I don't recall, no.

16 Q And you don't list any dental  
17 applications on that part of your CV?

18 A No. It certainly wasn't a major part of  
19 our work.

20 Q And you don't remember that it was a part  
21 of your work?

22 MR. ROSATO: Objection to form.

1                   THE WITNESS: It could have been.  
2                   We could have had some applications. We  
3                   worked on a lot of different things.

4                   Because we were looking for -- I  
5                   mean, we had this -- had this material  
6                   that we had a proprietary position in  
7                   that had very unique properties, and we  
8                   were trying to develop ways for the  
9                   corporation to take advantage of this  
10                  technology and make some money on it. So  
11                  we were looking for all kinds of  
12                  applications.

13 BY MR. COLLINS-CHASE:

14                Q       If we go back one position on your CV,  
15                1991 through 1994, it says, Department Head, New  
16                Films Business Development.

17                       Do you see that?

18                A       Yes.

19                Q       What types of films were you working on  
20                in that role?

21                A       So I spent those three years in Germany  
22                and managing a team -- I don't know -- it was about

1 20 people, I guess, and we were responsible for  
2 research for all of the miscellaneous films that  
3 Hoechst had. .

4 Hoechst was a major chemical company that  
5 had all kinds of products. The big films they made  
6 were polyester and polypropylene, and to some extent  
7 cellophane. And -- but they were interested in all  
8 kinds of other things, high-temperature films. And  
9 so my group was doing research supporting all  
10 these -- all these different -- all these different  
11 films, film applications, and it was a very  
12 interesting time.

13 Q Going back one more position from, 1987  
14 to 1991, it says you were Business Manager, Packaging  
15 and Specialty Films.

16 Do you see that?

17 A Yes.

18 Q Was the focus of your work as a business  
19 manager different from when you were the department  
20 head of new films business development?

21 A Oh, very different.

22 Q What was the focus of your work as a

1 business manager?

2 A Well, I was running a business. So it  
3 ended up -- by the time I left it, it was about a  
4 \$50 million business, and I was really responsible  
5 for -- I didn't have administrative responsibility  
6 for all of that, but I had strategic direction and  
7 coordination between manufacturing and R&D and sales  
8 and marketing, you know, for applications in, as I  
9 say, packaging and specialty films. And specialty  
10 films includes a whole bunch of non-packaging  
11 applications for polyester film.

12 So it was a business management thing,  
13 heavily oriented towards marketing, but I interacted  
14 with a lot of customers. And in order to enable our  
15 work, as it's noted here, we justified and installed  
16 a \$2 million application laboratory that did things  
17 like heat set lamination and extrusion lamination,  
18 and so we had the equipment to do that.

19 We did -- we were doing a lot of work in  
20 what our customers would do with our films. So we --  
21 so we sold this film which had special properties,  
22 but we had to teach the customers how to use it, and

1 the best way to do that was to actually do the work  
2 ourselves. So we invested in the equipment and it  
3 was extremely successful. So, yeah.

4 Q In your position before that, Process  
5 Research Manager, Polyester Films, from 1985 to 1987,  
6 you were also, I assume, working on polyester films?

7 A Yes, this was all under the -- I was  
8 working in the polyester films business, but it  
9 was -- by that time it was polyester film and  
10 polyester resin.

11 So -- yeah, so that was a -- that was  
12 really a development position. You know, one of  
13 those things that happens in industry. Right? So,  
14 you go work here for a few years, you need to do  
15 that. And so that was part of the R&D organization.

16 We had a -- one responsibility was the --  
17 our pilot line for making polyester film. I mean, I  
18 had a big department because I had -- I had enough  
19 operators who were running that pilot line 24/7, plus  
20 then a research team who was doing process research  
21 rather than product research. And -- and I was --  
22 also had an engineering design group who was doing

1 all the design work for everybody in the R&D  
2 organization.

3 So it was -- it was a good learning  
4 experience.

5 Q Dr. Kimmel, to avoid having to go through  
6 every line of your CV, you have a number of  
7 publications and journal articles and the like that  
8 you list in your CV, right?

9 A Yes.

10 Q Are the subject areas of your  
11 publications primarily in the area of polyester films  
12 and packaging?

13 A Oh. No, not necessarily -- well, I mean,  
14 I didn't publish very much on polyester films because  
15 all the research work we were doing in the company  
16 was proprietary research. You know, we didn't  
17 publish. The researchers wrote a lot of patents, but  
18 we weren't publishing articles.

19 And these -- the patents were -- so  
20 the -- and so, you know, most of the publications, at  
21 least on Page 4, were, you know, work that I did with  
22 graduate students, and it's a very broad range of

1 things. Most of them -- I mean, these are all  
2 packaging science department, so they were somehow  
3 related to packaging.

4 But, you know, it's very wide-ranging  
5 things. But, I mean, everything from -- from how you  
6 can put something in a package and send it off in a  
7 truck and have a record of what happened to it, you  
8 know, to all kind of things. It's just a very wide  
9 range of things because, of course, I was working  
10 with other faculty members and helping -- helping  
11 their graduate students. You know, a typical  
12 academic sort of thing.

13 And then on Page 5, those are all --  
14 yeah, so after the first -- after the first four, the  
15 rest of them were all publications that resulted from  
16 my -- my two theses and my dissertation.

17 Q And you're referring to the publications  
18 on Page 5 of Exhibit 2015 --

19 A On Page 5.

20 Q That have --

21 A Yes.

22 Q -- dates ranging from 1964 through 1971

1 or so; is that right?

2 A Yes, that's correct.

3 Q And those were publications associated  
4 with your own --

5 A That was my own --

6 Q -- academic research when you were a  
7 student?

8 A Academic research, yeah, yeah. And then  
9 the other four -- I mean, so -- the first -- the  
10 second -- the second and third on that page were kind  
11 of review articles I was asked to write. The fourth  
12 one related to the first projects I did when I went  
13 to industry when I was in central research. I was  
14 working on graphite fiber development. It was the  
15 beginnings of developing carbon fibers, and we wrote  
16 and presented what's still regarded as a very  
17 important paper.

18 So, you know, you do a lot of things in a  
19 long career.

20 Q You don't list any publications relating  
21 to dental or orthodontic applications, do you?

22 A No, I don't.

1           Q       You list additional publications,  
2       proceedings published with oral presentations, et  
3       cetera, on Pages 5, 6 and 7 of Exhibit 2015?

4           A       Yeah.

5           Q       There aren't any dental proceedings or  
6       publications or presentations, are there?

7           A       I don't think so. No.

8           Q       And the same with book chapters, there's  
9       no book chapters on dental or orthodontic  
10      applications?

11          A       No.

12          Q       Dr. Kimmel, is it your position that even  
13      though your academic and industry experience is in  
14      polymers and with a specialty in packaging, it's  
15      nonetheless representative of the skills and  
16      experience that one would have working with polymers  
17      that would be used for dental appliances?

18                   MR. ROSATO: Objection to form.

19                   THE WITNESS: Yes.

20      BY MR. COLLINS-CHASE:

21          Q       How does your background in polymers and  
22      packaging make you qualified to opine on patent

1 claims that talk about dental appliances?

2 A Because the patent claims I'm opining on  
3 have to do with the structure of how you put those  
4 aligners together, which is taking different polymer  
5 films and creating them and thermoforming them. And  
6 those are standard plastics processes that I did,  
7 that -- you know, that permeated my whole career and  
8 my academic training.

9 Q Dr. Kimmel, for some level setting, we're  
10 talking today a lot about polymers, what is a  
11 polymer?

12 A A polymer -- yeah. Polymers are long  
13 chain molecules made up of monomers, individual  
14 chemical species, that are linked together in long  
15 chains.

16 Q What is a homopolymer?

17 A A homopolymer is made up of one type of  
18 monomer.

19 Q And what is a copolymer?

20 A Something made up of more than one type  
21 of polymer -- of monomer.

22 Q Are there different classes or categories

1 of copolymers?

2 A Yes. Many.

3 Q What are some of the categories of  
4 copolymer?

5 MR. ROSATO: Object to form and  
6 foundation.

7 THE WITNESS: Yeah, I mean, I  
8 didn't cover that in my declaration. You  
9 know, there must be six or seven or eight  
10 different kinds of copolymers. I'm not  
11 sure I could even list them all off the  
12 top of my head.

13 BY MR. COLLINS-CHASE:

14 Q Are you familiar with the block  
15 copolymer?

16 A I am.

17 Q What is a block copolymer?

18 A It's just what it says. The monomers  
19 appear in blocks along the chain.

20 Q When you say they "appear in blocks,"  
21 what is a block?

22 A A block is -- there's a group of one type

1 of monomer, then a group of another type of monomer  
2 of significant enough length that its properties are  
3 important. So AAAA, BBBB, AAAA, BBBB.

4 Q What's an alternating copolymer?

5 MR. ROSATO: Object to form and  
6 foundation.

7 BY MR. COLLINS-CHASE:

8 Q I'll ask it this way.

9 Are you familiar with something called an  
10 alternating copolymer?

11 A Yeah, I mean, it's well beyond the scope  
12 of anything I wrote about.

13 Q You mentioned a block copolymer AAAA,  
14 BBBB, AAAA, BBBB.

15 Did I get that right?

16 MR. ROSATO: Object to form.

17 THE WITNESS: With -- there was  
18 nothing -- nothing important about the  
19 number of As or number of Bs.

20 BY MR. COLLINS-CHASE:

21 Q Understood. So is alternating A, B, A,  
22 B, also a block copolymer?

1 MR. ROSATO: Objection to form,  
2 foundation.

3 THE WITNESS: Block means there's a  
4 significant length of those individual  
5 monomer species.

6 BY MR. COLLINS-CHASE:

7 Q Understood. Does that differentiate it  
8 from a copolymer where it alternates A, B, A, B and  
9 you don't have greater length of A or a greater  
10 length of B before switching?

11 MR. ROSATO: Object to form and  
12 foundation.

13 THE WITNESS: Yeah, I mean, we're  
14 getting well beyond anything that I've  
15 talked about here in my declaration, you  
16 know.

17 BY MR. COLLINS-CHASE:

18 Q Do you know the answer?

19 MR. ROSATO: Objection. Asked and  
20 answered.

21 THE WITNESS: Yeah, I think I  
22 answered your question, but I -- I think

1           it's an inappropriate for me to go any  
2           further because you're going beyond the  
3           scope of what's in my declaration.

4 BY MR. COLLINS-CHASE:

5           Q       You talk about the term "copolymer" in  
6           your declaration, right?

7           A       I'm sure I must, yes.

8           Q       So I'm just trying to understand what you  
9           understand the boundaries of that term to be.

10                  So my question was, if you have  
11           alternating monomers A, B, A, B, that's a copolymer,  
12           right?

13                  MR. ROSATO: Objection to form and  
14           foundation.

15                  THE WITNESS: Well, maybe it would  
16           be appropriate to look at my declaration  
17           where I talked about that subject,  
18           because I think I was very specific. I  
19           think it's in Paragraph 50 on Page 26.

20 BY MR. COLLINS-CHASE:

21           Q       Okay. And what part of Paragraph 50 are  
22           you pointing to, Doctor?

1           A       Well, it's right at the beginning: A  
2 copolyester is a copolymer form of a polyester which  
3 means that it is formed of two or more different  
4 kinds of polyester monomer.

5           Q       Okay. And so my question was, if you  
6 have monomers A and B alternating A, B, A, B, is that  
7 a copolymer?

8                   MR. ROSATO: Objection to form.  
9 Outside the scope of direct.

10                  THE WITNESS: Yeah, I don't -- I  
11 don't specifically deal with that issue  
12 here because it's -- it's -- you know, I  
13 didn't think it was relevant to this.  
14 That's not here. So I'm going to leave  
15 it at that.

16 BY MR. COLLINS-CHASE:

17           Q       So you don't know whether alternating  
18 monomers A, B, A, B would make the polymer a  
19 copolymer?

20                   MR. ROSATO: Object to form. Asked  
21 and answered.

22                  THE WITNESS: Whether I -- sorry.

1           Whether I know or not isn't the issue.

2           The issue is it's not -- it's not in my  
3           direct testimony.

4 BY MR. COLLINS-CHASE:

5           Q       So in Paragraph 50, you use the term  
6           "copolymer," right?

7           A       Yes.

8           Q       And I'm trying to understand, when you  
9           use the term copolymer, what the definition of that  
10          term is for you as used in Paragraph 50.

11          A       The first sentence defines it.

12          Q       I believe the first sentence defines a  
13          copolyester. It says: A copolyester is a copolymer  
14          form of a polyester, which means it's formed of two  
15          or more different kinds of polyester monomers.

16                 You would agree that that's not a  
17          definition of a copolymer generally, right?

18                 MR. ROSATO: Object to form.

19                 THE WITNESS: Substitute anything  
20          else for polyester and it's a general  
21          definition. It's -- a copolymer is a  
22          form of a polymer, which means that it's

1           formed of two different kinds of  
2           monomers.

3 BY MR. COLLINS-CHASE:

4           Q       Does it matter what order those monomers  
5 appear in the polymer as to whether it is classified  
6 as a copolymer?

7           A       I haven't addressed that issue.

8           Q       Well, you just gave what you said was a  
9 general definition of copolymer, which is a term that  
10 you used in Paragraph 50.

11                   So I'm trying to understand, in that  
12 definition, when you say "formed of two or more  
13 different kinds of monomers," whether that definition  
14 requires any particular arrangement of those monomers  
15 in the polymer structure.

16                   So if you could answer that, please?

17           MR. ROSATO: Object to form.

18           THE WITNESS: The implication of  
19 this sentence and certainly what I meant  
20 is that a copolymer is formed of two or  
21 more different kinds of monomers.

22

1 BY MR. COLLINS-CHASE:

2 Q Full stop?

3 A Full stop.

4 Q What is a polyester?

5 A A polyester is a condensation polymer --  
6 let's see. I don't know if I put that in here or  
7 not. Well, I think it's in here someplace. I'm not  
8 sure.

9 A polyester is a condensation polymer  
10 formed by a diacid and a diol reacted together and  
11 then polymerized into a polymer. At which --  
12 Dr. Osswald wasn't able -- an answer Dr. Osswald was  
13 not able to provide correctly.

14 Q If you make a polyester from a diol and  
15 both the first diacid and a second diacid, does that  
16 it make it a copolyester?

17 MR. ROSATO: Object to the form.

18 Foundation, scope.

19 THE WITNESS: Well, if you look at  
20 the definition I provided in 50, it's two  
21 or more different kinds of polyester  
22 monomers. The polyester monomer is, like

1           the picture in 8, the -- the diol and the  
2           diacid reacted together.

3                     If you add two different diols or  
4           two different diacids, then it would be a  
5           copolymer.

6 BY MR. COLLINS-CHASE:

7           Q        It's the existence of either two of the  
8           diols or two of the diacids that makes it a  
9           copolyester instead of just a regular copolyester; is  
10          that right?

11          A        Two or more.

12          Q        Two or more?

13          A        Yeah, I mean, so there is -- yeah, two or  
14          more.

15          Q        Okay. And you mentioned Paragraph 50. I  
16          think you do address this in Paragraph 49, if that's  
17          helpful. The --

18          A        Oh, yeah. That's what I was looking for,  
19          yeah.

20          Q        I found it. So -- sorry. To rephrase.  
21                     So if you have two diols with different  
22          structures or two diacids with different structures

1 in your polymerization, that's a copolyester?

2 A Yes.

3 MR. ROSATO: Object to form and  
4 foundation.

5 THE WITNESS: And that's what's  
6 stated in 49.

7 BY MR. COLLINS-CHASE:

8 Q Dr. Kimmel, you pointed to part of  
9 Paragraph 49 on Page 25 of your declaration where it  
10 talks about the -- what a polyester is. At least I  
11 think you pointed to this portion. It says: A  
12 polyester is a polymer formed of repeating monomer  
13 units, with each monomer formed from the reaction of  
14 a dicarboxylic acid, paren, or an esterified  
15 dicarboxylic acid, closed paren, and a diol.

16 Do you see that?

17 A Yes.

18 Q That's not the only way that you can make  
19 a polyester, is it?

20 MR. ROSATO: Object to form and  
21 foundation.

22 THE WITNESS: Yeah, I mean, I don't

1 address that issue in what I've written  
2 here. You know, I suppose there are  
3 different ways of coming up with -- with  
4 the monomer, but you've still got to make  
5 a monomer that contains both species,  
6 both monomer species.

7 BY MR. COLLINS-CHASE:

8 Q When you say "both monomer species," what  
9 are you referring to?

10 A The diol and the diacid or the esterified  
11 acid.

12 Q You could make a polyester by performing  
13 a ring-opening polymerization of a cyclic structure,  
14 couldn't you?

15 MR. ROSATO: Object to form,  
16 foundation and scope.

17 THE WITNESS: I mean, there are  
18 ring-opening polymerizations, but it  
19 doesn't change the fact that you still  
20 have to have an ester linkage in there.  
21 That's what makes it a polyester.

22 BY MR. COLLINS-CHASE:

1 Q You said an ester linkage?

2 A Uh-huh.

3 Q The ring-opening polymerization to make a  
4 polyester would be different in terms of the setup  
5 compared to a process where you were adding a diol  
6 and a diacid together, right?

7 MR. ROSATO: Objection. Form,  
8 foundation and scope.

9 THE WITNESS: I haven't addressed  
10 that in my declaration.

11 BY MR. COLLINS-CHASE:

12 Q In your declaration, in Paragraph 49, you  
13 give a definition of a polyester, correct?

14 A Yes.

15 Q You state that: Each monomer is formed  
16 from the reaction of a dicarboxylic acid or an  
17 esterified dicarboxylic acid and a diol.

18 Right?

19 A Yeah.

20 Q In a ring-opening polymerization to  
21 create a polyester, the monomers are not being formed  
22 from the reaction of a dicarboxylic acid or an

1 esterified dicarboxylic acid and a diol, are they?

2 MR. ROSATO: Object to form,  
3 foundation.

4 THE WITNESS: I haven't addressed  
5 that question.

6 BY MR. COLLINS-CHASE:

7 Q You've given a definition, and I'm asking  
8 you whether that definition is complete. So I'll ask  
9 my question again.

10 In a ring-opening polymerization to  
11 create a polyester, the monomers are not being formed  
12 through the reaction of a dicarboxylic acid or an  
13 esterified dicarboxylic acid and a diol, are they?

14 MR. ROSATO: Object to form. Asked  
15 and answered.

16 THE WITNESS: Yeah, I just haven't  
17 addressed the whole issue of ring-opening  
18 polymerizations in this -- in my  
19 declaration and --

20 BY MR. COLLINS-CHASE:

21 Q Is it that you can't answer the question  
22 or you're choosing not to answer the question?

1 MR. ROSATO: Object to form.

2 THE WITNESS: I understand that I  
3 can answer questions about what I've  
4 written and that anything beyond  
5 what's -- what I've commented under the  
6 declaration is -- is a subject I  
7 shouldn't discuss because I haven't  
8 provided the background for it in my  
9 declaration.

10 BY MR. COLLINS-CHASE:

11 Q Did you consider in drafting the  
12 definition of polyester in Paragraph 49 of your  
13 declaration whether there were other synthesis  
14 pathways besides the one that you mentioned in  
15 Paragraph 49?

16 MR. ROSATO: Object to form.

17 THE WITNESS: The -- yeah, my  
18 discussion of this subject here was  
19 directed towards what's taught in -- to  
20 understanding and summarizing what's  
21 taught in Tadros, and that was the basis  
22 for how I decided to make this

1 discussion. I didn't go beyond that.

2 BY MR. COLLINS-CHASE:

3 Q My question was whether you considered  
4 other synthesis pathways for polyesters.

5 Did you consider other synthesis pathways  
6 for polyesters when you gave the definition in  
7 Paragraph 49?

8 A I considered --

9 MR. ROSATO: Object to form.

10 THE WITNESS: Sorry.

11 MR. ROSATO: Asked and answered.

12 THE WITNESS: I considered the --  
13 as I just said, I mean, I considered what  
14 was relevant to what I was discussing  
15 here. I mean --

16 BY MR. COLLINS-CHASE:

17 Q And so other synthesis pathways for  
18 polyesters were not relevant to your discussion, so  
19 you did not include them in Paragraph 49?

20 MR. ROSATO: Object to form.

21 THE WITNESS: I included the -- I  
22 mean, in my brief description of this

1           technology, I discussed what I thought  
2           was relevant to understanding Tadros,  
3           which had been put before me and which  
4           Dr. Osswald put before us.

5 BY MR. COLLINS-CHASE:

6           Q       Sitting here today, you can't say that  
7           you did consider other synthesis pathways for  
8           polyesters when you drafted this definition in  
9           Paragraph 49?

10                  MR. ROSATO: Object to form. Asked  
11           and answered.

12                  THE WITNESS: Yeah, I mean, I've  
13           already answered your question three  
14           different times. So --

15 BY MR. COLLINS-CHASE:

16           Q       I note that we don't actually have an  
17           answer to the question of whether you considered  
18           other synthesis pathways. You stated that you  
19           considered what you felt was relevant and we talked  
20           about a specific synthesis route of a ring-opening  
21           polymerization that does not have a reaction of a  
22           diol and a dicarboxylic acid.

1 I can ask it again, but we don't have an  
2 answer to this question. So I'll just say: Did you  
3 consider the ring-opening polymerization pathway for  
4 making a polyester when you drafted the definition of  
5 polyester in Paragraph 49?

6 MR. ROSATO: Object to form. Asked  
7 and answered. This is getting to  
8 badgering the witness.

9 THE WITNESS: Yeah, as I said --  
10 and I'll say it one more time -- I  
11 considered what I thought was relevant to  
12 the discussion of Tadros.

13 BY MR. COLLINS-CHASE:

14 Q And so you will not answer the question  
15 of whether you considered the specific synthesis  
16 pathway that I mentioned in your definition?

17 MR. ROSATO: Object to form. Asked  
18 and answered.

19 THE WITNESS: I mean, I don't have  
20 an answer. I don't even remember.

21 MR. ROSATO: We've been going about  
22 an hour, Charles.

1 MR. COLLINS-CHASE: Would you like  
2 to take a break, Dr. Kimmel?

3 THE WITNESS: Yeah, that would be  
4 good.

5 MR. COLLINS-CHASE: Sure.

6 MR. ROSATO: Thank you.

7 (Brief pause.)

8 THE WITNESS: I'd like to make one  
9 comment, which I should have made at the  
10 beginning, if I may.

11 There's actually one paragraph in  
12 the declaration, Paragraph 142, that on  
13 reviewing the final version I realized  
14 that it got -- for some reason, it got  
15 all confused and it doesn't make any  
16 sense. And I'd like to strike that  
17 paragraph from the -- from the  
18 declaration, if we can do that, because  
19 it's -- the way it's written, it's -- I'm  
20 not quite sure what happened, but I think  
21 some -- some words and sentences got  
22 mixed up and --

1 BY MR. ROSATO:

2 Q Well, it's in the declaration. I  
3 understand you're noting that there's an issue with  
4 the paragraph.

5 What is the issue with the paragraph,  
6 Dr. Kimmel?

7 A Just what I said, it doesn't make any  
8 sense.

9 Q Right. How does it not make any sense?

10 A Because it --

11 Q You said Paragraph 142, right?

12 A Yeah, 142.

13 Q Okay. Why don't you explain what you  
14 mean when you say it doesn't make any sense.

15 A Yeah, so the -- the second and third  
16 sentences are inconsistent with the first sentence,  
17 and it just -- the -- and, as written, are confusing.  
18 The paragraph doesn't say what we wanted it to say.  
19 And I'm not sure. It just -- it just escaped me when  
20 I read through it, until I read through it just in  
21 the last day or so, and --

22 Q So there's no error in Paragraph 142? It

1 just doesn't say what you wanted it to say?

2 A Well, I think there are some --

3 MR. ROSATO: Object to form.

4 Misstates.

5 THE WITNESS: Sorry. I think there  
6 are some errors here. I think, you know,  
7 polycarbonate maybe should have been some  
8 other -- something else and -- because  
9 it's just -- yeah. It's -- these  
10 sentences don't -- don't reflect what I  
11 was trying to say in this paragraph, as  
12 written.

13 BY MR. COLLINS-CHASE:

14 Q Okay. Well, maybe we can come back to  
15 that. Just, you know, so you know, correcting an  
16 error in a thing is usually a word is wrong or  
17 something. Striking it is different. That would  
18 need to be done through some -- some different  
19 procedure, you know.

20 A I leave that to you gentlemen.

21 Q But I understand that you're noting an  
22 issue in 142.

1           A       That's my intention.

2           Q       Dr. Kimmel, before the break, we were  
3 talking about polyester and copolyester definitions.

4                   Do you remember that?

5           A       Yes.

6           Q       You mentioned that you worked on plastic  
7 water bottles made from PET, right?

8           A       Yes.

9           Q       Is PET a polyester?

10          A       Yes.

11          Q       And then you mentioned you worked with a  
12 polymer called PETG. Is PETG a copolyester?

13          A       Yes.

14          Q       We talked for a while about the  
15 definition of a copolymer. And you referred to a  
16 paragraph in your declaration, Paragraph 50, which  
17 you said was something you could turn into a general  
18 definition. And I just wanted to make sure that we  
19 had your testimony, you know, clean and accurate.

20                   The sentence in Paragraph 50 says: A  
21 copolyester is a copolymer form of a polyester, which  
22 means that is formed of two or more different kinds

1 of polyester monomers.

2 Do you see that?

3 MR. ROSATO: Object to form.

4 THE WITNESS: I think that's what  
5 it says, yeah.

6 BY MR. COLLINS-CHASE:

7 Q To make the general definition that you  
8 mentioned, I'll try to do that and you can tell me if  
9 I got it right or wrong; is that okay?

10 A Okay.

11 Q A copolymer form of a polymer means that  
12 it is formed of two or more different kinds of  
13 monomers.

14 Do you agree with that?

15 MR. ROSATO: Object to form.

16 THE WITNESS: I think that's what I  
17 said before, you know. And the -- and as  
18 I also said, you know, the discussion in  
19 49 and 50 is relevant to the technology  
20 discussed in Tadros. It's not my purpose  
21 to give a general dissertation on  
22 copolymers.

1 BY MR. COLLINS-CHASE:

2 Q Dr. Kimmel, you mentioned in your  
3 declaration cis and trans isomers, right?

4 MR. ROSATO: Object to foundation.

5 THE WITNESS: Yes.

6 BY MR. COLLINS-CHASE:

7 Q What is a cis isomer?

8 A Yeah. So cis and trans are terms that  
9 refer to the -- to the stereochemistry of these  
10 monomers, and -- and they arise in some cases because  
11 carbon atoms have four bonds that can react with  
12 other things. And although we draw it on paper in a  
13 plane, that's not the real world. The real world is  
14 it's three-dimensional and these bonds go off in  
15 different directions.

16 And if you have a side group, some side  
17 group on -- attached to it and it's -- it's  
18 different -- it's different on -- on two adjacent of  
19 those bonds, and, for example, with polypropylene,  
20 one bond is hydrogen, the other is a CH<sub>3</sub> group. And  
21 so if -- if all of the CH<sub>3</sub>s point off the molecule in  
22 the same direction, that would be cis, okay, and it

1 would result in -- no, I guess that would be -- let's  
2 see.

3                   Actually, that would be -- I think the  
4 cis and trans are confusing, but it would be trans.  
5 Okay. It would be -- and we'd call that an isotactic  
6 polymer, in the case of polypropylene. If they're on  
7 different -- if they -- if they're not all on the  
8 same side, then you'd get a cis polymer. And it just  
9 has to do with the stereochemistry of the molecule.

10           Q       I think that might be backwards. The  
11 trans is when they're on opposite sides?

12                   Does that sound right?

13           A       Yeah, I think that's probably true. I  
14 don't know. I -- you know, it's -- yeah, you know,  
15 it's funny, I didn't define them in -- in the -- I  
16 didn't define them in here. But yes, I think that's  
17 right. That's what I started to say at first and I  
18 think that is right. Trans is -- yeah. Yeah, right.

19           Q       That's okay. If I can summarize.

20                   The idea of cis-trans isomerism applies  
21 when you have a molecule with the same chemical  
22 formula or components, but arranged differently

1 geometrically?

2 A That's a good definition.

3 Q Have you heard cis-trans isomerism  
4 referred to as geometric isomerism?

5 MR. ROSATO: Object to form.

6 THE WITNESS: I don't know.

7 Probably. It would be logical.

8 BY MR. COLLINS-CHASE:

9 Q If you have a molecule arranged in the  
10 cis configuration and a molecule arranged in the  
11 trans configuration, those are structurally different  
12 molecules, right?

13 MR. ROSATO: Object to form.

14 THE WITNESS: In terms of their  
15 three-dimensional structure, they're  
16 different.

17 BY MR. COLLINS-CHASE:

18 Q Can the properties of the molecule differ  
19 based on whether it is the cis or the trans isomer?

20 A Yes.

21 MR. ROSATO: Object to form,  
22 foundation.

1 BY MR. COLLINS-CHASE:

2 Q If you have a cis monomer and a trans  
3 monomer that could be used to make polymer, can the  
4 properties of the polymer differ depending on whether  
5 you use the cis monomer or the trans monomer to  
6 polymerize?

7 MR. ROSATO: Object to form and  
8 foundation.

9 THE WITNESS: Yeah, I mean, you're  
10 really going beyond the subject in my  
11 declaration. But, I mean, as a -- you  
12 know, as a general question, yes, it can  
13 vary.

14 BY MR. COLLINS-CHASE:

15 Q Dr. Kimmel, would you turn to Paragraph  
16 126 of your declaration, please. It's Page 66.

17 A Okay.

18 Q And if you want to look at Paragraph 126,  
19 please go ahead. My question is about the part  
20 that's on Page -- so on Page 67, but take your time  
21 if you'd like to look at the paragraph.

22 A Okay.

1           Q       On Page 67 in Paragraph 126, do you see  
2       the line starting on -- or the sentence starting on  
3       the third line. It says: The specific arrangement  
4       of layers used in ST30 aligners is a three-layer  
5       configuration with a hard layer formed of a hard  
6       copolyester material disposed between two soft layers  
7       formed of a soft thermoplastic polyurethane elastomer  
8       material.

9                       Do you see that?

10          A       I see it.

11          Q       Dr. Kimmel, this is a yes-or-no question.

12                       Do you know what polymers are used to  
13       make the three layers of ST30?

14                       MR. ROSATO: Object to form.

15                       THE WITNESS: The specific  
16       information I have is what's in  
17       Ms. Chen's declaration, and this is a  
18       quote from -- basically a quote from  
19       Ms. Chen's declaration.

20                       So she -- she talks only about a  
21       copolyester material and a -- and a  
22       thermoplastic polyurethane elastic

1 material. I don't think she gets -- I  
2 don't remember that she gets any more  
3 specific than that in her declaration.  
4 And so that's -- that's the source of my  
5 knowledge.

6 So I guess the answer to your  
7 question is you wanted a yes-or-no  
8 answer, so the answer to the question is  
9 no.

10 BY MR. COLLINS-CHASE:

11 Q Understood. Dr. Kimmel, if you look at  
12 Page 68 -- well, I guess it begins on Page 67. So  
13 there's a table beginning on 67 and continuing for  
14 several pages.

15 Do you see that?

16 A I do.

17 Q The table has a title '613 Patent Claims  
18 in the left-hand column and ST30 Aligners in the  
19 right-hand column.

20 Do you see that?

21 A I do see that.

22 Q This is a claim chart comparing the '613

1 patent claims to the properties of ST30 Aligners,  
2 right?

3 A I would characterize it as comparing the  
4 ST30 Aligners to the '613 patent claims. A little  
5 bit different.

6 Q If you look on Page 68, the first row  
7 under the heading, under the Column '613 Patent  
8 Claims, it says: A hard polymer layer comprising a  
9 copolyester and having a flexural modulus greater  
10 than about 150,000 PSI.

11 Do you see that?

12 A I see that.

13 Q And in the right-hand column, you cite  
14 Exhibit 2016, Paragraph 16, right?

15 A Yes.

16 Q That's the declaration by Yen Chen that  
17 you mentioned earlier, correct?

18 A Yes, it is.

19 Q Besides the Chen declaration Paragraph  
20 16, you don't cite any other evidence to support the  
21 ST30 Aligner having the characteristic of a hard  
22 polymer layer comprising a copolyester and having a

1 flexural modulus greater than about 150,000 PSI,  
2 right?

3 A That's correct.

4 Q Your understanding of the properties of  
5 the hard layer come from the Chen declaration, right?

6 A Yes.

7 Q The same question for the next row. And  
8 maybe I can avoid reading all the text to you so we  
9 don't waste your time. It talks about a soft polymer  
10 layer with certain properties.

11 Do you see that?

12 A Yes.

13 Q And then you cite Exhibit 2016, Paragraph  
14 17.

15 Do you see that?

16 A Yes.

17 Q So my question is, for the properties of  
18 the soft polymer layer, does your knowledge come  
19 solely from the Chen declaration?

20 A Yes.

21 Q Okay. Dr. Kimmel, earlier you testified  
22 that you had performed co-extrusion processes at some

1 point in your career, correct?

2 A Yes.

3 Q How would someone create a multilayer  
4 sheet with co-extrusion?

5 MR. ROSATO: Object to form,  
6 foundation, outside the scope of direct  
7 testimony.

8 THE WITNESS: Yeah, I mean, I --  
9 that's -- that's well beyond what I've  
10 talked about here. I mean, you know,  
11 co-extrusion comes up only because  
12 Dr. Osswald says, I don't like  
13 co-extrusion. I want to use -- I want to  
14 use adhesive lamination. And he doesn't  
15 say why, really. He doesn't back up that  
16 statement. And that's where co-extrusion  
17 arises, in his declaration, to the best  
18 of my recollection.

19 That -- so that -- there was no  
20 need for me to undertake a discussion of  
21 co-extrusion because he didn't care about  
22 co-extrusion. He wanted to use adhesive

1 lamination, and so I spent some time

2 discussing adhesive lamination.

3 BY MR. COLLINS-CHASE:

4 Q In your personal experience of using  
5 co-extrusion, did you ever co-extrude a multilayer  
6 polymer sheet?

7 MR. ROSATO: Objection to form,  
8 foundation, outside the scope of direct.

9 THE WITNESS: I think I already  
10 answered that question when we were  
11 discussing my CV.

12 BY MR. COLLINS-CHASE:

13 Q And what was the answer?

14 A The answer is yes. I told you we had a  
15 state-of-the-art line for making multilayer, multi --  
16 state-of-the art co-extrusion line for multilayer  
17 films. So, you know, the answer to your question is  
18 yes.

19 Q How many layers were in the multilayer  
20 film that you were creating using co-extrusion?

21 MR. ROSATO: Object to form.  
22 Outside the scope of direct.

1           THE WITNESS: Yeah, you know, it's  
2           been a long time. I don't -- I don't  
3           specifically remember what the full  
4           capabilities of that machine were. Yeah,  
5           I don't remember. At least three.

6 BY MR. COLLINS-CHASE:

7           Q       Is there any risk of layer delamination  
8           when you are making a multilayer sheet using a  
9           co-extrusion process?

10          MR. ROSATO: Object to form,  
11          foundation, outside the scope of direct.

12          THE WITNESS: Yeah, I -- you know,  
13          that's beyond what I've discussed here.

14 BY MR. COLLINS-CHASE:

15          Q       You talk about delamination in your  
16          declaration, right?

17          A       Where do I do that?

18          Q       Well, you talk about differences in your  
19          opinion between co-extrusion and adhesive lamination;  
20          would you agree with that?

21          MR. ROSATO: Object to form.

22          Misstates.

1 THE WITNESS: Could you point me to  
2 where that is, please?

3 BY MR. COLLINS-CHASE:

4 Q Yeah. You have a section titled Use of  
5 Adhesive Lamination is Not Justified. It's on Page  
6 57. So I'm just asking you the general question.

7 You talk about co-extrusion in contrast  
8 to adhesive lamination, right?

9 MR. ROSATO: Object to form.

10 THE WITNESS: Yeah. In a quick  
11 review of this section, I don't see  
12 anyplace in here where I discuss -- I  
13 even use the word delamination.

14 BY MR. COLLINS-CHASE:

15 Q Is delamination a risk for co-extrusion  
16 processes?

17 MR. ROSATO: Object to form,  
18 foundation, outside the scope of direct.

19 THE WITNESS: It's -- it's not --  
20 it's not one of the subjects that  
21 Dr. Osswald includes in his very brief  
22 statement in which he rejects

1 co-extrusion as a way of combining these  
2 layers.

3 BY MR. COLLINS-CHASE:

4 Q Dr. Kimmel, do you recall talking in your  
5 declaration about bubbles between layers?

6 A Yes.

7 Q And you state that having bubbles between  
8 layers could cause the layers to delaminate?

9 Does this refresh your recollection?

10 A Did I give you that?

11 Q Do you recall addressing that in your  
12 declaration?

13 A Yeah, I do recall. I was just looking --  
14 oh, here we go. It's 116, yeah.

15 Q So that -- delamination.

16 So is delamination a risk in a  
17 co-extrusion process?

18 MR. ROSATO: Object to form,  
19 foundation, outside the scope, and this  
20 has been asked and answered.

21 MR. COLLINS-CHASE: Counsel, he's  
22 got delamination. The first times we

1           asked about it, he said he didn't address  
2           it in the declaration. So now that we've  
3           corrected the record, this is not asked  
4           and answered. This is being asked.

5           THE WITNESS: When I read through  
6           here, I didn't get to 116.

7           MR. COLLINS-CHASE: That's quite  
8           all right.

9           THE WITNESS: Delamination appears  
10          in 116, yes.

11 BY MR. COLLINS-CHASE:

12          Q       And my question is whether the same  
13          delamination is a possibility in co-extrusion.

14          MR. ROSATO: Object to form,  
15          outside the scope of direct.

16          THE WITNESS: Yeah, I haven't  
17          expressed an opinion about that.

18 BY MR. COLLINS-CHASE:

19          Q       So you don't know?

20          A       I haven't expressed an opinion about it.

21          MR. ROSATO: Object to form.

22 BY MR. COLLINS-CHASE:

1           Q       I understand that. You talk about  
2 co-extrusion processes. You compare them to adhesive  
3 lamination, which you say has a danger of  
4 delamination.

5                   So my question is whether co-extrusion  
6 has a danger of delamination.

7           MR. ROSATO: Objection. Form,  
8 foundation, scope, asked and answered.

9           THE WITNESS: If we look at what I  
10 say in 116, what happens when you're  
11 using an adhesive or adhesive lamination  
12 that is applied in some sort of a  
13 solvent, be that an organic solvent or  
14 water, there's always the risk of forming  
15 bubbles. And if you form bubbles, you  
16 have a place where the layers that the  
17 adhesion between the layers is interfered  
18 with and so, therefore, it can serve as  
19 an initiation point for delamination.  
20 That sort of phenomenon specifically  
21 that's discussed here, you know, is  
22 relevant to adhesive lamination.

1           And, you know, co-extrusion is an  
2           extremely complex process. There's  
3           variations in the process and the type of  
4           equipment, all kinds of variables, and I  
5           didn't see any need to get into that  
6           discussion here. I just -- what was  
7           important was that Dr. Osswald kind of  
8           blithely rejected co-extrusion as a  
9           suitable method for making aligners.

10       BY MR. COLLINS-CHASE:

11           Q       In a multilayer sheet made with  
12           co-extrusion, how do the different layers bind to one  
13           another?

14                   MR. ROSATO: Object to form. This  
15           is outside the scope of direct.

16                   THE WITNESS: Yeah, I mean, again,  
17           that's one of the points. I just haven't  
18           done a detailed discussion of  
19           co-extrusion. I -- you know, I mean, you  
20           could write a book about it, and it  
21           wasn't necessary to -- for me to provide  
22           a critique of Dr. Osswald's assumptions

1           and conclusions.

2       BY MR. COLLINS-CHASE:

3           Q       In Paragraph 110 of your declaration,  
4       Dr. Kimmel, you cite Dr. Osswald, who says that  
5       co-extrusion -- and this is a quote in your Paragraph  
6       110 of Dr. Osswald: Co-extrusion, quote, may lead to  
7       molecular diffusion or mixing between the layers, as  
8       well as cross-linking, that can change the properties  
9       of the polymers within a layer.

10                   Do you see that?

11           A       Yes.

12                   MR. ROSATO: Object to form.

13                   THE WITNESS: Sorry.

14       BY MR. COLLINS-CHASE:

15           Q       Do you agree with Dr. Osswald that  
16       co-extrusion may lead to molecular diffusion?

17                   MR. ROSATO: Object to form.

18                   THE WITNESS: I haven't expressed  
19       that opinion. The opinion I expressed  
20       here is that Dr. Osswald doesn't cite  
21       anything supporting his assertion, and --  
22       and then goes on to contradict himself by

1 saying, well, you should use adhesive  
2 lamination but, look, his quote in  
3 Ebnesajjad, E-B-N-E-S-A-J-J-A-D, when  
4 describing -- you know, describes exactly  
5 the same problems.

6 So he contradicts himself. He  
7 doesn't give us a satisfactory  
8 explanation, anything close to a complete  
9 explanation of why he's making this  
10 conclusion. That was what's important --  
11 what was important to me in writing the  
12 declaration.

13 BY MR. COLLINS-CHASE:

14 Q You said that he contradicts himself. So  
15 you disagree with his statement that you quote in  
16 this paragraph?

17 MR. ROSATO: Object to form.

18 Misstates.

19 THE WITNESS: I haven't said that I  
20 disagree with him. I -- all I've said is  
21 he doesn't provide us any evidence that  
22 supports his assertions, plus he provides

1           contradictory evidence which seems to  
2           contradict his assertion, and that's all  
3           I'm trying to say.

4 BY MR. COLLINS-CHASE:

5           Q       And my question to you, sir, is whether  
6           you agree with the statement that you've quoted in  
7           this paragraph by Dr. Osswald regarding co-extrusion  
8           leading to molecular diffusion.

9                   MR. ROSATO: Object to form. Asked  
10           and answered.

11                   THE WITNESS: I haven't -- I  
12           haven't taken any position on that point  
13           in the declaration.

14 BY MR. COLLINS-CHASE:

15           Q       I understand that's your position. I'm  
16           asking you right now whether you agree with the  
17           statement. You put the statement in your Paragraph  
18           110 and I'm asking you if you agree with it.

19           A       I can --

20                   MR. ROSATO: Object to form. Asked  
21           and answered.

22                   THE WITNESS: Sorry.

1 MR. ROSATO: You're good.

2 THE WITNESS: I can quote his  
3 statement without making any conclusion  
4 about whether I agree with it or not  
5 agree with it. The point is that he  
6 contradicts himself. And it's -- the  
7 fact that he contradicts himself has  
8 nothing to do with the fact of whether I  
9 agree with his statement or whether I do  
10 not agree with his statement. I haven't  
11 taken any position on that in the  
12 declaration.

13 BY MR. COLLINS-CHASE:

14 Q Sir, you quoted his statement. I'm  
15 entitled to ask you whether you agree with it. And  
16 I'm asking you that and you haven't answered the  
17 question. So I'm going to ask you one more time.

18 You quoted Dr. Osswald as saying that  
19 co-extrusion may lead to molecular diffusion or  
20 mixing between the layers. Do you agree with that  
21 statement?

22 MR. ROSATO: Object to form.

1 Mischaracterizes the testimony, and this  
2 has been asked and answered. Quit  
3 badgering the witness.

4 THE WITNESS: I haven't taken a  
5 position on that and I'm not going to  
6 take a position on it today because it's  
7 not something that I've worked on,  
8 thought about and put in writing in the  
9 declaration.

10 BY MR. COLLINS-CHASE:

11 Q So sitting here today, you haven't worked  
12 on, thought about or put in writing whether a  
13 co-extrusion may lead to molecular diffusion or  
14 mixing between the layers?

15 MR. ROSATO: Object to form. Asked  
16 and answered, outside the scope of  
17 direct.

18 THE WITNESS: I think you just  
19 quoted what I said. So, yeah, I said  
20 that.

21 BY MR. COLLINS-CHASE:

22 Q And you can't, as a matter of scientific

1 principle in a process that you used in your career,  
2 tell me whether that process leads to molecular  
3 diffusion or mixing between polymer layers?

4 MR. ROSATO: Object to form.

5 Foundation, asked and answered, outside  
6 the scope of direct.

7 THE WITNESS: Again, my -- my  
8 understanding of this process is not to  
9 test what I've learned in over 60 years  
10 in this field, but what I've said in my  
11 declaration in terms of my testimony.

12 BY MR. COLLINS-CHASE:

13 Q We're entitled, given that you're holding  
14 yourself out as an expert, to also ask about your  
15 understanding of the scientific principles that  
16 you've put at issue in the declaration, and that  
17 includes co-extrusion, so I'll ask you again.

18 As a matter of general science,  
19 co-extrusion, being a process that you have used in  
20 your career, do you know whether co-extrusion may  
21 lead to molecular diffusion or mixing between the  
22 layers in a multilayer polymer sheet?

1 MR. ROSATO: Object to form. Asked  
2 and answered.

3 THE WITNESS: Yeah, I mean, you're  
4 asking an extremely general question that  
5 would require, you know -- you know,  
6 months and years of study with a variety  
7 of different systems in order to come up  
8 with an answer. There's not one answer  
9 to the question, and it's -- was not  
10 necessary to even address that issue in  
11 order to make the point I was trying to  
12 make in Paragraph 110.

13 So I haven't addressed it, and I'm  
14 not -- I'm not ready to address it now.  
15 I -- it's a very complicated question.

16 BY MR. COLLINS-CHASE:

17 Q You ran a co-extrusion process in your  
18 experience that you've mentioned involving a sheet  
19 that had, you thought, perhaps three layers, right?

20 MR. ROSATO: Object to form.

21 THE WITNESS: I said that, yes.

22 BY MR. COLLINS-CHASE:

1           Q       When you ran the co-extrusion process,  
2 did the three layers bind to each other?

3           MR. ROSATO: Objection. Form,  
4 outside the scope of direct.

5           THE WITNESS: Yeah, I mean, I don't  
6 know what that has to do with this, but  
7 the simple answer is sometimes yes,  
8 sometimes no.

9 BY MR. COLLINS-CHASE:

10          Q       You did not always have the three layers  
11 adhering to each other in the co-extrusion process  
12 that you used?

13          A       I mean --

14          MR. ROSATO: Object to form, scope.

15          THE WITNESS: Sorry. I mean, I --  
16 we -- now we're getting into an area of  
17 what would be proprietary knowledge of  
18 what -- the development work we were  
19 doing at that time.

20                 It's -- it's -- you know, I  
21 still -- even though it was a long time  
22 ago, I still have some knowledge that I

1           would regard -- you know, I think falls  
2           under my obligation of secrecy of what I  
3           learned, you know, as an employee. I  
4           just can't answer that question for that  
5           reason.

6                     It -- what we were doing is a very  
7           special case of co-extrusion because of  
8           the kinds of materials we were working  
9           with, and so any conclusions from that  
10          work have very little bearing on -- in  
11          terms of a specific question of like did  
12          the layers adhere in terms of what we're  
13          discussing here. And it has nothing to  
14          do with the fact that Dr. Osswald makes  
15          the statement and didn't -- he doesn't  
16          explain what he means and why he says  
17          that. So --

18   BY MR. COLLINS-CHASE:

19           Q        To avoid any confidentiality, I can ask  
20           it this way.

21                     In your experience that you are relying  
22           on in forming your opinions in this case, have you

1 ever come across a co-extrusion process used to make  
2 a multilayer polymer sheet in which the layers  
3 adhered to each other?

4 MR. ROSATO: Object to form --  
5 excuse me. Object to form, outside the  
6 scope of direct.

7 THE WITNESS: In most practical and  
8 commercial applications of co-extrusion,  
9 we want the layers to adhere to each  
10 other.

11 BY MR. COLLINS-CHASE:

12 Q How do the different layers in a  
13 multilayer sheet adhere to each other in a  
14 co-extrusion process?

15 MR. ROSATO: Object to form,  
16 outside the scope.

17 THE WITNESS: Yeah. I mean, again,  
18 that's -- that's a complicated question.  
19 There's all kinds of different answers  
20 and it's well beyond the scope of  
21 anything that I talked about in the  
22 declaration. It's just -- I -- you know,

1           it's -- yeah. I leave it at that.

2 BY MR. COLLINS-CHASE:

3           Q       To clarify, you are unwilling to answer  
4 the question of how the layers in a co-extruded  
5 multilayer sheet might adhere to each other?

6           MR. ROSATO: Object to form,  
7 outside the scope of direct, and asked  
8 and answered.

9           THE WITNESS: I think "unwilling"  
10 is the wrong term to characterize what  
11 I'm saying.

12           I'm saying I have, you know -- that  
13 you've asked a very complicated question,  
14 it's beyond the scope of what I've  
15 written here, and my understanding is  
16 that -- that you're supposed to be asking  
17 me questions about what I've written, and  
18 that doesn't -- what you're asking about  
19 is not what I've written. It's nowhere  
20 in here. Because my concern was what  
21 Dr. Osswald said and didn't say and  
22 that's what this is about.

1 BY MR. COLLINS-CHASE:

2 Q Your declaration talks about what you  
3 believe are disadvantages of adhesive lamination, and  
4 you contrast those with the co-extrusion process,  
5 including in Paragraph 110.

6 MR. ROSATO: Object to form.

7 BY MR. COLLINS-CHASE:

8 Q But despite the fact that you address  
9 those issues, you're not willing to answer questions  
10 about co-extrusion processes that you contrast with  
11 adhesive lamination; is that right?

12 MR. ROSATO: Object to form,  
13 misstates testimony.

14 THE WITNESS: Yeah, I don't believe  
15 that the -- that my discussion of  
16 adhesive lamination has anything to do  
17 with what would happen in co-extrusion.

18 This is a specific discussion of  
19 the process that Dr. Osswald is  
20 recommending and relied upon that is  
21 independent of anything else. It's --  
22 it's a discussion of co-extrusion. I

1           don't think there's any -- any comparison  
2           of co-extrusion to adhesive lamination.  
3           This is evaluating adhesive lamination  
4           standing on its own as a process.

5 BY MR. COLLINS-CHASE:

6           Q       In Paragraph 112, Dr. Kimmel, you say:  
7           Instead of extruding film simultaneously in a process  
8           like co-extrusion, adhesive lamination requires  
9           forming, cooling and winding up sheets separately,  
10          moving the wound-up rolls to a suitable lamination  
11          machine where adhesive can be added to form a new  
12          layer in between the two layers, cured and combined  
13          with another layer.

14                   Do you see that?

15          A       Yes.

16          Q       So you, in that sentence, have compared  
17          co-extrusion to adhesive lamination, right?

18                   MR. ROSATO: Object to form.

19                   THE WITNESS: Only in terms of the  
20          general nature of the process, not in  
21          terms of its details.

22 BY MR. COLLINS-CHASE:

1           Q       And so the general nature of the  
2 co-extrusion process is that it does not require the  
3 things that you list here for adhesive lamination; is  
4 that right?

5                   MR. ROSATO: Object to form.

6                   THE WITNESS: Yeah, I mean, that's  
7 what I've stated, yeah.

8 BY MR. COLLINS-CHASE:

9           Q       But you're unwilling to tell us what it  
10 does involve instead in terms of forming the  
11 multilayer sheet in terms of the co-extrusion  
12 process?

13                  MR. ROSATO: Object to form.

14                  THE WITNESS: I don't understand  
15 your question.

16 BY MR. COLLINS-CHASE:

17           Q       You say in this sentence in Paragraph 112  
18 things that you think make adhesive lamination  
19 undesirable, but you're not willing to specify what  
20 actually happens in a co-extrusion process that makes  
21 it different; is that correct?

22                  MR. ROSATO: Object to form.

1           THE WITNESS: I don't cover that  
2           subject because it's not necessary to  
3           make the points I'm trying to make, and  
4           it's beyond the -- it's beyond the scope  
5           of my discussion.

6 BY MR. COLLINS-CHASE:

7           Q       You don't cite any support for that  
8           sentence in your declaration in Paragraph 112, do  
9           you?

10          MR. ROSATO: Object to form.

11          THE WITNESS: You mean I don't cite  
12          any -- I don't cite anything that backs  
13          up what I -- how I describe adhesive  
14          lamination? Is that your question?

15 BY MR. COLLINS-CHASE:

16          Q       Right. There's no citation to support  
17          that sentence, correct?

18          A       No, this discussion is based on my  
19          personal experience.

20          Q       In your personal experience, how is  
21          co-extrusion preferable to adhesive lamination in  
22          terms of how the layers are adhered?

1 MR. ROSATO: Object to form,  
2 outside the scope of direct.

3 THE WITNESS: I haven't -- first of  
4 all, I haven't made that assumption. And  
5 second of all, it's not a question that  
6 I've considered because I didn't think it  
7 was relevant to the points I was trying  
8 to make about Dr. Osswald's assertions.

9 BY MR. COLLINS-CHASE:

10 Q Do co-extrusion processes use heat?

11 MR. ROSATO: Object to form,  
12 outside the scope of direct.

13 THE WITNESS: If we're going to get  
14 into a detailed discussion of what kind  
15 of little bits there are in the  
16 co-extrusion process, you know, that's --  
17 I just don't discuss that. I don't talk  
18 about what co-extrusion is and isn't  
19 because it's not part of my -- the points  
20 I'm trying to make.

21 BY MR. COLLINS-CHASE:

22 Q I'm asking the question to explore your

1 experience as a purported expert in this area  
2 regarding the co-extrusion process that you address  
3 in your declaration. So I'll ask my question again.

4 Does co-extrusion use heat?

5 MR. ROSATO: Object to form,  
6 outside the scope of direct.

7 THE WITNESS: But I haven't  
8 addressed co-extrusion in my declaration.  
9 I've only quoted what Dr. Osswald said.  
10 I haven't discussed what co-extrusion is  
11 or isn't.

12 BY MR. COLLINS-CHASE:

13 Q Do you know what it is or isn't?

14 A Except to say that --

15 MR. ROSATO: You've got to let him  
16 finish his answer.

17 THE WITNESS: Except to say what's  
18 in 112, that co-extrusion, in its -- in  
19 the most general terms, is extruding film  
20 simultaneously. I think that's all I've  
21 said about co-extrusion because it's  
22 totally outside the points I'm trying to

1           make about why adhesive lamination is a  
2           poor choice for the Aligner application.

3 BY MR. COLLINS-CHASE:

4           Q       Dr. Kimmel, do you know whether the  
5 SmartTrack ST30 product is made using co-extrusion?

6           A       The only way I would know that is if it's  
7 in -- is if it's in Ms. Chen's declaration. And off  
8 the top of my head I don't remember whether it's in  
9 the declaration or not, but I have no other way of  
10 knowing whether ST30 is made using co-extrusion.

11          Q       Okay. Dr. Kimmel, if you turn to Page --  
12 or Paragraph 127 of your declaration, and again, that  
13 is on Page 67.

14          A       Yes.

15          Q       In Paragraph 127 you state: As  
16 illustrated in the charts below, ST30 Aligners embody  
17 the independent claims of the multilayer appliance  
18 patents.

19                   Do you see that?

20          A       I see that, yes.

21          Q       And then these are the charts below that  
22 paragraph that you said compare the ST30 Aligners to

1 the -- some of the claims of the patents, right?

2 A Yes.

3 Q Your basis for these statements was, as  
4 you've said, Ms. Chen's declaration, right?

5 A That's correct.

6 Q If you look at Claim 1 of the '613 patent  
7 that you reproduce in the chart in Paragraph 128, do  
8 you see in the third row down, which is on Page 68 of  
9 your declaration, that Claim 1 requires a hard layer?

10 Do you see that?

11 A Yes.

12 Q And then in the next box down, Claim 1  
13 requires a soft polymer layer.

14 Do you see that?

15 A Yes.

16 Q And then it's a three-layer aligner,  
17 right?

18 MR. ROSATO: Object to form.

19 BY MR. COLLINS-CHASE:

20 Q And I'll direct your attention back to  
21 Page 67, if that's helpful.

22 A No, I mean, Ms. Chen -- Ms. Chen states

1       that ST30 is the three layers.

2               Q       Right. And in the second row on Page 67,  
3       it says: A sheet comprising three or more polymer  
4       layers.

5                       Right? It's on the prior page. It  
6       says --

7               A       Oh, three or more polymer layers. Okay.

8               Q       You see it says: Providing a sheet  
9       comprising three or more polymer layers.

10                      Right?

11              A       Yes.

12              Q       Okay. So Claim 1 of the '613 patent  
13       requires a third layer, right?

14              A       Yes.

15              Q       Does Claim 1 of the '613 patent require  
16       the third layer to be a hard polymer?

17                      MR. ROSATO: Object to form.

18                      THE WITNESS: Claim 1 is silent as  
19       to what the third layer is.

20       BY MR. COLLINS-CHASE:

21              Q       Does Claim 1 of the '613 patent require  
22       the third layer to be located in any specific place

1 relative to the other two layers?

2 A Let me -- Claim 1 is reproduced here, and  
3 the only place a third layer was mentioned is in the  
4 second phrase, where it says: Providing a sheet  
5 comprising three or more polymer layers.

6 That's all it says about the third --  
7 that's all Claim 1 says about the third layer.

8 Q It, therefore, doesn't require it to be  
9 in any particular configuration or orientation  
10 relative to the other two layers, right?

11 A Claim 1 --

12 MR. ROSATO: Object to form.

13 THE WITNESS: -- is not specific  
14 about the third layer, right.

15 BY MR. COLLINS-CHASE:

16 Q Is it your understanding, Dr. Kimmel,  
17 that Claim 1 of the '613 patent encompasses a soft,  
18 hard, soft layer configuration?

19 A Could you ask your question again,  
20 please.

21 Q Sure. Is it your understanding that  
22 Claim 1 of the '613 patent encompasses a soft, hard,

1 soft layer configuration?

2 MR. ROSATO: Object to form.

3 THE WITNESS: Claim 1 is -- Claim  
4 1, in and of itself, is silent on that  
5 point.

6 BY MR. COLLINS-CHASE:

7 Q Claim 1 of the '613 patent is silent  
8 regarding layer configuration?

9 A I've said that already.

10 Q Claim 1 of the '613 patent allows for  
11 more than three layers to be present in the  
12 multilayer sheet, right?

13 A It does.

14 Q Is there any limit in Claim 1 of the '613  
15 patent regarding how many layers can be present in  
16 the multilayer sheet?

17 A It says three or more layers. That  
18 sounds pretty wide open.

19 Q Dr. Kimmel, if you would turn to Page 71  
20 of your declaration, please.

21 A Okay.

22 Q Do you see that below Paragraph 136,

1       there is a similar table for the '384 patent?

2               A       I see that.

3               Q       If you flip to the next page, Page 72, do  
4       you see in the middle row that Claim 1 of the '384  
5       patent requires a hard layer?

6               A       Yes.

7               Q       And Claim 1 of the '384 patent also  
8       requires a soft layer, correct?

9               A       Yes.

10              Q       And Claim 1 of the '384 patent requires  
11      three or more polymer layers, right?

12              A       Yes.

13              Q       Just as we discussed for the '613 patent,  
14      does Claim 1 of the '384 patent impose any  
15      limitations on the characteristics of the third  
16      layer?

17                      MR. ROSATO: Object to form.

18                      THE WITNESS: Not in the claim  
19      we're looking at, no.

20      BY MR. COLLINS-CHASE:

21              Q       And Claim 1 of the '384 patent also does  
22      not impose any restrictions on the arrangement or

1 configuration of the three layers, does it?

2 A It does not.

3 Q Claim 1 of the '384 patent also doesn't  
4 impose any limitations on the number of layers that  
5 may be present in the sheet, does it?

6 A It says three or more layers.

7 Q So as with the '613 patent Claim 1, it  
8 could have any number greater than three, three or  
9 more?

10 A Yes, that would be the interpretation.

11 Q Dr. Kimmel, is it your understanding that  
12 Claim 1 of the '384 patent encompasses a soft, hard,  
13 soft layer configuration?

14 A Claim 1 of the '384 patent doesn't tell  
15 us anything about the order of the layers. It says  
16 three or more layers, at least -- you know, it  
17 comprises a hard polymer layer, a soft polymer layer  
18 and undisclosed other layers with the order  
19 unspecified.

20 Q Dr. Kimmel, would you please turn to Page  
21 76.

22 A I'm there.

1           Q       Do you see that there's a similar table  
2 for the '090 patent claims?

3           A       I do.

4           Q       Do you see on this page that it -- the  
5 Claim 1 of the '090 patent recites: A multilayer  
6 sheet comprising three polymer layers.

7           A       Yes.

8           Q       And then if you turn the page, does Claim  
9 1 of the '090 patent require that the first layer  
10 consists of a copolyester?

11          A       That's what it says.

12          Q       And the second layer in Claim 1 of the  
13 '090 patent consists of a thermoplastic polyurethane  
14 elastomer, right?

15          A       Yes.

16          Q       Claim 1 of the '090 patent doesn't impose  
17 any restrictions on what is used to make the third  
18 layer, does it?

19                   MR. ROSATO: Object to form.

20                   THE WITNESS: That's correct.

21 BY MR. COLLINS-CHASE:

22          Q       Claim 1 of the '090 patent doesn't impose

1 any restriction on the number of layers in the sheet,  
2 does it?

3 A No, because it says comprising three  
4 layers. So it means it has to have at least three  
5 layers.

6 Q And like the claims we discussed from the  
7 '613 and '384 patents, Claim 1 of the '090 patent  
8 also doesn't impose any restriction on the  
9 arrangement of the layers, does it?

10 MR. ROSATO: Object to form.

11 THE WITNESS: That would be my  
12 interpretation.

13 BY MR. COLLINS-CHASE:

14 Q Dr. Kimmel, if you could turn the page to  
15 Page 79. Do you see that this is a table where the  
16 heading says '090 Patent Claims?

17 A Yes.

18 Q If you look at the prior page, Page 78,  
19 the heading here is the '091 Patent?

20 A Yep.

21 Q Is it -- my understanding is that this  
22 may be a typo in the heading of the table and that

1     you're intending to refer here --

2             A       That's what I was just thinking about.

3             Q       -- to the '091 patent.

4                     Can you confirm that for me, please?

5             A       Well, yeah, I mean, the heading 4 before  
6     Paragraph 138 says the '091 patent. So that chart is  
7     mislabeled, yeah.

8             Q       So in Claim 1 of the '091 patent, it  
9     requires a first layer containing a single polymer  
10    wherein the single polymer of the first layer is a  
11    copolyester.

12                    Do you see that?

13            A       Yes.

14            Q       And Claim 1 of the '091 patent requires a  
15    second layer containing a single polymer wherein the  
16    single polymer of the second layer is a thermoplastic  
17    polyurethane elastomer.

18                    Do you see that?

19            A       Yes.

20            Q       Does Claim 1 of the '091 patent also  
21    require a third layer?

22            A       Yes.

1           Q       Claim 1 of the '091 patent does not  
2 impose any restriction on the polymer for the third  
3 layer, does it?

4           A       No.

5           Q       Claim 1 of the '091 patent does not  
6 impose any restriction on the number of layers in the  
7 sheet, does it?

8                   MR. ROSATO: Object to form.

9                   THE WITNESS: No.

10 BY MR. COLLINS-CHASE:

11           Q       Claim 1 of the '091 patent does not  
12 impose any restriction on the arrangement or  
13 configuration of the layers, does it?

14           A       No.

15                   MR. COLLINS-CHASE: I think we've  
16 been going about an hour. We could take  
17 a break, if you'd like, Dr. Kimmel. I'm  
18 happy to soldier on to the next thing,  
19 but it's a new section of the outline.  
20 So I'm happy to take a break if you'd  
21 prefer. Just let me know what you'd like  
22 to do.

1 MR. ROSATO: Let's take a break.

2 THE WITNESS: Do you want to take a  
3 break now? Are we going to do a lunch  
4 break?

5 MR. COLLINS-CHASE: Would you like  
6 a lunch break now?

7 THE WITNESS: No, I'm saying it's  
8 11:30.

9 MR. COLLINS-CHASE: We will at some  
10 point eat food, yeah, I assume so. I  
11 don't know if that's now for you or not.

12 THE WITNESS: No, it's a little  
13 early.

14 MR. ROSATO: Why don't we take a  
15 five-minute break.

16 (Brief pause.)

17 BY MR. COLLINS-CHASE:

18 Q Dr. Kimmel, before the break, we were  
19 discussing the claims of the patents that you've  
20 reproduced in your declaration.

21 Do you recall that?

22 A Yes.

1           Q       For all four of the patents, we talked  
2 about there not being any restrictions on the polymer  
3 used to make the third layer, right?

4           A       That's correct.

5           Q       How many types of polymers could be used  
6 to make that third layer?

7                   MR. ROSATO: Object to form,  
8 outside the scope of direct.

9                   THE WITNESS: In principle -- I  
10 mean, that's not something I commented  
11 on. But I will say, in principle, it  
12 could be any polymer that exists. In  
13 practice, we have to take into account  
14 the application. So it's got to be a  
15 polymer that's suitable for the  
16 application. Okay?

17                   And -- but beyond that, you know, I  
18 don't know how many such polymers there  
19 are, and I haven't even -- I haven't  
20 considered that question, you know. But  
21 the -- but as he said, the third layer,  
22 at least in the independent claim, is --

1 is unspecified.

2 BY MR. COLLINS-CHASE:

3 Q It would have to be a suitable polymer  
4 for the third layer, right?

5 A Well, why would you use it if it weren't  
6 suitable?

7 Q We talked about how the claims we were  
8 discussing had a hard layer or a copolyester layer.  
9 Do you remember that?

10 A Yes.

11 Q For the claims that specify copolyester  
12 layer, there are many types copolyester, right?

13 MR. ROSATO: Object to form.

14 THE WITNESS: Yes. Yes, there are.

15 BY MR. COLLINS-CHASE:

16 Q Hundreds of copolyesters, would you say?

17 A There are certainly lots of -- I don't  
18 know if it's hundreds, but there are lots.

19 Q Some of the claims mentioned a  
20 thermoplastic polyurethane elastomer layer, right?

21 A Yes.

22 Q Have you heard thermoplastic polyurethane

1 elastomers referred to as TPUs?

2 A Yes.

3 Q There are many types of TPUs, right?

4 A Yes, there are.

5 Q Hundreds?

6 A I don't know.

7 Q If you put those things together in terms  
8 of the number of copolyesters, the number of TPUs and  
9 the number of polymers that could be used for the  
10 third layer, there are quite a few permutations of  
11 polymers that could be used for this multilayer sheet  
12 in the claims, right?

13 MR. ROSATO: Object to form,  
14 outside the scope of direct.

15 THE WITNESS: Yeah, in this  
16 context, I haven't addressed that  
17 question, but, I mean, if there are many  
18 polyesters and many TPUs and unspecified  
19 third layers, obviously there are  
20 multiple combinations.

21 BY MR. COLLINS-CHASE:

22 Q That's just common, right?

1           A       Yeah, right.

2           Q       I guess we can add one thing.

3                   The claims that we talked about also  
4 aren't limited to three layers, right?

5           A       That's correct.

6           Q       So you could add, on top of those  
7 permutations, other polymer layers made of other  
8 polymers, right?

9                   MR. ROSATO: Object to form,  
10 outside the scope of direct.

11                  THE WITNESS: I mean, the literal  
12 interpretation of the claims would say  
13 the answer to that question is yes.

14 BY MR. COLLINS-CHASE:

15           Q       And SmartTrack ST30 is a three-layer  
16 material with two soft layers surrounding a hard  
17 layer, right?

18           A       Yes.

19           Q       So that's one permutation that would fall  
20 within the claims in your opinion?

21           A       Yes.

22           Q       Dr. Kimmel, would you please turn to

1 Paragraph 128 of your declaration, which is on Page  
2 67.

3 And this is the chart for the '613 patent  
4 that we talked about earlier, right?

5 A Yes.

6 Q If you turn -- actually, I might need to  
7 give them to you. I'm going to hand you a copy of  
8 the '613 patent.

9 A Okay.

10 (Kimmel Deposition Exhibit No. 1001  
11 was identified for the record.)

12 BY MR. COLLINS-CHASE:

13 Q This has been marked as Exhibit 1001.

14 Dr. Kimmel, I believe you're familiar  
15 with this document, right?

16 A Yes.

17 Q Would you please turn to the second to  
18 last page, which is labeled Page 20 of 21.

19 A Okay.

20 Q Do you see Claim 3 in Column 9?

21 A Yes.

22 Q Do you see Claim 3 begins: The method of

1 Claim 1 wherein the hard polymer layer comprises at  
2 least two layers.

3 Do you see that?

4 A Yes.

5 Q Does the hard polymer layer in ST30  
6 comprise two layers?

7 A Not to the best of my knowledge.

8 Q If you look at Claim 11 in Column 10 on  
9 the same page?

10 A Column?

11 Q Sorry.

12 A I'm sorry. What was that again?

13 Q Claim 11.

14 A Claim 11.

15 Q And it's in Column 10 on the same page.

16 A Okay.

17 Q Claim 11 states: The method of Claim 1  
18 wherein the hard polymer layer comprises a plurality  
19 of co-extruded or laminated polymer layers.

20 Do you see that?

21 A Yes.

22 Q Do you agree that the hard layer in ST30

1 does not have a plurality of co-extruded or laminated  
2 polymer layers, as recited in the claim?

3 MR. ROSATO: Object to form,  
4 outside the scope of direct.

5 THE WITNESS: Yeah, there's nothing  
6 in Chen's declaration that would account  
7 for that.

8 BY MR. COLLINS-CHASE:

9 Q Nothing in Chen's declaration that would  
10 tell you that it has that characteristic?

11 A That's correct.

12 Q If you look at Claim 19 in that same  
13 column, do you see that it states: The hard polymer  
14 layer comprises at least two layers?

15 A Yes.

16 Q Similar question to the one I asked you  
17 earlier.

18 You agree that ST30 does not have a hard  
19 polymer layer that comprises at least two layers as  
20 recited in Claim 19, right?

21 MR. ROSATO: Object to form,  
22 outside the scope of direct.

1 THE WITNESS: Yeah, based -- based  
2 on my reading of Chen's declaration, I  
3 don't believe it does.

4 BY MR. COLLINS-CHASE:

5 Q Dr. Kimmel, would you please turn to  
6 Paragraph 137 of your declaration.

7 A 137.

8 Q It's Page 76.

9 A I'm there.

10 Q And this is the chart for the '090  
11 patent, right?

12 A Correct.

13 Q I'm going to hand you the '090 patent,  
14 which has been marked as Exhibit 1001 in the '820  
15 IPR.

16 Dr. Kimmel, I assume you're familiar with  
17 this document, the '090 patent?

18 A Yes.

19 Q Would you please turn to the last page,  
20 which is Page 16 of 16 in Exhibit 1001.

21 A Page 16?

22 Q Correct.

1           A       Oh, you could have just said the back.

2           Q       Dr. Kimmel, in Paragraph 137 of your  
3 declaration, you say: At least independent Claim 1  
4 of the '090 patent is embodied by the making -- by  
5 the method of making ST30 Aligners.

6                   Do you see that?

7           A       Yes.

8           Q       Would you please look at Claim 3 of the  
9 '090 patent, which is on the back page.

10          A       Okay.

11          Q       Do you see that Claim 3 states: The  
12 method of Claim 1 wherein the third layer comprises a  
13 same or different copolyester.

14          A       I see that.

15          Q       You agree, right, that ST30 does not have  
16 a second layer of a copolyester as recited in Claim  
17 3?

18                   MR. ROSATO: Object to form,  
19 outside the scope of direct.

20                   THE WITNESS: Yeah, that's not what  
21 Chen's declaration teaches.

22 BY MR. COLLINS-CHASE:

1           Q       If you look at Claim 6 of the '090  
2 patent, it states: The method of Claim 1 wherein the  
3 multilayer sheet further comprises a fourth layer  
4 comprising a same or different thermoplastic  
5 polyurethane elastomer.

6                   Do you see that?

7           A       Yes.

8           Q       You agree that ST30 is a three-layer  
9 appliance and doesn't have the fourth layer recited  
10 in Claim 6, right?

11          A       That's what Chen's declaration tells us.

12          Q       If you look at Claim 7, it says: The  
13 method of Claim 6 wherein the first layer and the  
14 third layer are disposed between the second and the  
15 fourth layer.

16                  Do you see that?

17          A       Yes.

18          Q       You would agree that ST30 does not have a  
19 fourth layer disposed anywhere as recited in Claim 7,  
20 right?

21          A       Yes.

22          Q       If you would please turn to Paragraph 138

1 of your declaration, which is on Page 78.

2 A Yes.

3 Q This is addressing the '091 patent,  
4 right?

5 A Correct.

6 Q You state: In my opinion and as shown in  
7 the chart below, at least the '091 patent's  
8 independent claims are embodied by ST30 Aligners.

9 Do you see that?

10 A Yes.

11 Q I'm going to hand you the '091 patent,  
12 which has been marked as Exhibit 1001 in the '821  
13 proceeding.

14 Dr. Kimmel, you're familiar with the '091  
15 patent, Exhibit 1001, right?

16 A Yes.

17 Q Would you please turn to Page 15 of 16  
18 and look at Claim 2.

19 A Yes.

20 Q Claim 2 states: The multilayer sheet of  
21 Claim 1 wherein the third layer contains a single  
22 polymer, and wherein the single polymer of the third

1 layer is a same or different copolyester as the  
2 single polymer of the first layer, and wherein the  
3 first layer is disposed between the second layer and  
4 the third layer.

5 Do you see that?

6 A Yeah, I see it.

7 Q You would agree that ST30 does not have  
8 two layers of a copolyester as recited in Claim 2,  
9 right?

10 MR. ROSATO: Object to form,  
11 outside the scope of direct.

12 THE WITNESS: According to Chen's  
13 declaration, that's correct.

14 BY MR. COLLINS-CHASE:

15 Q If you look at Claim 3, please, it  
16 states: The multilayer sheet of Claim 1 comprising a  
17 fourth layer containing a single polymer.

18 Do you see that?

19 A Yes.

20 Q It specifies that the single polymer of  
21 the fourth layer is a same or different thermoplastic  
22 polyurethane elastomer as the singular polymer of the

1 second layer.

2 Do you see that?

3 A Yeah.

4 Q You agree that ST30 does not have a  
5 fourth layer of any kind as recited in Claim 3,  
6 right?

7 A That's correct according to Chen's  
8 declaration.

9 MR. ROSATO: Object to form and  
10 outside the scope.

11 BY MR. COLLINS-CHASE:

12 Q If you look at Claim 8, please,  
13 Dr. Kimmel. Do you see that Claim 8 says: The  
14 multilayer dental aligner of Claim 6 wherein the  
15 multilayer sheet further comprises a third layer  
16 containing a single polymer wherein the single  
17 polymer of the third layer is a same or different  
18 copolyester as the single polymer of the first layer.

19 A Okay.

20 MR. ROSATO: Object to form.

21 BY MR. COLLINS-CHASE:

22 Q You agree that ST30 does not have a

1 second layer of a copolyester as recited in Claim 8,  
2 right?

3 MR. ROSATO: Object to form and  
4 outside the scope of direct.

5 THE WITNESS: According to Chen's  
6 declaration, that's correct.

7 BY MR. COLLINS-CHASE:

8 Q Would you look at Claim 14 of the '091  
9 patent, please.

10 A I'm -- yes. I'm sorry.

11 Q Do you see that Claim 14 requires the  
12 multilayer sheet to have a fourth layer?

13 A Yes.

14 Q You would agree that ST30 does not have a  
15 fourth layer as recited in Claim 14 of the '091  
16 patent, right?

17 A Again, that's not what Chen's declaration  
18 teaches.

19 Q If you look at Claim 15, it states that:  
20 The fourth layer consists of a same or different  
21 thermoplastic polyurethane elastomer.

22 Do you see that?

1           A       Yes.

2           Q       ST30 does not have a fourth layer as  
3       recited in Claim 15, right?

4           A       That's correct.

5           Q       And if you look at Claim 21, which is on  
6       the back page of this document, Page 16 of 16, do you  
7       see that Claim 21 recites that: The third layer  
8       consists of a same or different copolyester and  
9       wherein the third layer is co-extruded with or  
10      laminated to the first layer.

11                   Do you see that?

12          A       I see it, yes.

13          Q       You agree that ST30 does not have two  
14      layers of a copolyester as recited in Claim 21 of the  
15      '091 patent, right?

16                   MR. ROSATO: Object to form and  
17      outside the scope.

18                   THE WITNESS: Again, that's what  
19      Chen's declaration proposes.

20      BY MR. COLLINS-CHASE:

21          Q       Dr. Kimmel, do you still have the '613  
22      patent in front of you in your stack of documents?

1 A Yes, I have it.

2 Q Would you please turn to Column 5, which  
3 is on Page 18 of 21.

4 A Okay.

5 Q I'll direct your attention to the text  
6 beginning on Line 18. And I can read it to you --

7 A Okay.

8 Q -- to make sure we're on the same page.  
9 It says: Figure two shows a multilayer  
10 structure according to the present invention.

11 A That's not Line 18 of Column 6.

12 Q Column 5.

13 A Okay. Now I see it. Okay. Okay.  
14 Column 5, right.

15 Q So Line 18 begins: Figure 2 shows a  
16 multilayer structure according to the present  
17 invention. As shown, a Multilayer Sheet 20 can  
18 include a three-layer structure, colon, a Hard  
19 Polymer Layer 24 and Two Soft Polymer Layers 22, 26.  
20 The hard polymer layer can be disposed between a  
21 first soft polymer layer and a second soft polymer  
22 layer.

1                   This describes a soft, hard, soft layer  
2 configuration, right?

3           A       That's what --

4                   MR. ROSATO: Object to form.

5                   THE WITNESS: Sorry. That's what  
6 it describes.

7 BY MR. COLLINS-CHASE:

8           Q       This section of text references Figure 2  
9 of the patent, right?

10          A       Yes.

11          Q       And it states that the Multilayer Sheet  
12 20 can include a three-layer structure, right?

13          A       I'm sorry. Would you repeat that  
14 question?

15          Q       Sure. This section of Column 5  
16 referencing Figure 2 states that: The Multilayer  
17 Sheet 20 can include a three-layer structure.

18                   Do you see that?

19          A       Yes.

20          Q       And then it gives numbers to label the  
21 layers. It labels the hard polymer layer 24, right?

22          A       Uh-huh.

1           Q       And it labels the soft polymer layers  
2 with the numbers 22 and 26?

3           A       Yes.

4           Q       Do you see that?

5           A       Yes.

6           Q       Okay. If you go down a little ways in  
7 Column 5 to Line 51, it says: In some embodiments,  
8 the hard layer can be composed of multiple hard  
9 layers, e.g., two or three Hard Polymer Layers 24-1,  
10 24-2, 24-N, co-extruded to form one hard layer.

11                   Do you see that?

12          A       Yes.

13          Q       Those numeric indications 24-1, 24-2 and  
14 24-N refer to sublayers of the Hard Layer 24, right?

15                   MR. ROSATO: Object to form.

16                   THE WITNESS: Yeah, that's what it  
17 says.

18 BY MR. COLLINS-CHASE:

19          Q       Would you agree that the N in 24-N  
20 indicates that you can have up to N number of  
21 sublayers?

22          A       Yes.

1           Q       And would you agree with me that that  
2 denotation indicates that the number is not bounded?

3           A       There's no bound specified in this part  
4 of the specification.

5           Q       The specification doesn't instruct a  
6 person of ordinary skill regarding how to make or use  
7 sublayers, does it?

8                   MR. ROSATO: Object to form,  
9 outside the scope of direct.

10                  THE WITNESS: Certainly not in  
11 Column 5. The only instruction is what  
12 the suitable -- a list of suitable  
13 materials for hard polymer layer, which  
14 starts on Line 39 of Column 5.

15 BY MR. COLLINS-CHASE:

16           Q       You're referring to Column 5, Line 39?

17           A       Yes, sir.

18           Q       That portion of the specification gives  
19 suitable polymeric materials, and states that the  
20 hard layer can be comprised of those materials or a  
21 combination thereof, right?

22           A       Yes.

1           Q       If you look at Column 6, Dr. Kimmel, Line  
2       41, do you see it says: For example, the hard  
3       polymer layer can include several polymer layers  
4       laminated together to form the hard polymer layer.

5           A       Yes.

6           Q       The specification states that the hard  
7       polymer layers can be laminated, right?

8           A       Yes.

9                   MR. ROSATO: Object to form.

10          BY MR. COLLINS-CHASE:

11          Q       If you look down in Column 6 to Line 52,  
12       it states: Similarly, in some embodiments, the  
13       multilayer appliances can include a soft polymer  
14       layer of at least two layers of polymeric material.

15                   Do you see that?

16          A       Yes.

17          Q       And then it says: For example, the Soft  
18       Polymer Layers 22, 26 can include a layer of several  
19       polymer layers 22-1, 22-2, 22-N and 26-1, 26-2, 26-N,  
20       respectively, laminated together.

21                   Do you see that?

22          A       Yes.

1           Q       The labels there, would you agree that  
2       those have the same meaning as the labels we were  
3       talking about for the hard layer in terms of  
4       referring to sublayers of the soft layers?

5                   MR. ROSATO: Object to form.

6                   THE WITNESS: Yes. Yes.

7       BY MR. COLLINS-CHASE:

8           Q       And would you agree that the denotation  
9       of N, again, refers to an unbounded number of  
10      potential sublayers for the soft layer?

11                  MR. ROSATO: Object to form.

12                  THE WITNESS: Yes.

13      BY MR. COLLINS-CHASE:

14           Q       And the soft layers that are referred to  
15      in Column 6 can be laminated together, right?

16           A       Yes, we're -- they're using "laminated"  
17      in a general term. So laminated means forming  
18      multiple layers of materials by some process.

19           Q       If you turn to Figure 2, which is on Page  
20      9 of 21, do you see the three-layer multilayer sheet  
21      that was being discussed in Columns 5 and 6?

22           A       Yes, I do.

1           Q       And do you see that the three layers are  
2 set out with a sort of thicker bold line around them?

3           A       Yes.

4           Q       So the top bold line rectangle is labeled  
5 22.

6                   Do you see that?

7           A       Yes. Yes, I see that. Sorry.

8           Q       The bottom bold rectangle is labeled 26?

9           A       Yes.

10          Q       And the middle layer is labeled 24,  
11 right?

12          A       Yes.

13          Q       And then the sublayers are labeled, as  
14 well, with the dash numbers 1, 2, and --

15          A       Yes.

16                   MR. ROSATO: Object to form.

17 BY MR. COLLINS-CHASE:

18          Q       Dr. Kimmel, are you aware of any language  
19 in the patents that you analyzed indicating that  
20 using sublayers was a novel feature of the invention?

21                   MR. ROSATO: Object to form and  
22 outside the scope of direct.

1 THE WITNESS: Yeah, I -- in order  
2 to answer your question, I'd have to go  
3 look through all the claims of the  
4 patents. I did not consider that point.

5 BY MR. COLLINS-CHASE:

6 Q Dr. Kimmel, will you turn to Paragraph 25  
7 of your declaration, please. That is on Page 12.

8 A Yes.

9 Q You state in Paragraph 25: Each patent  
10 describes, quote, multilayer orthodontic positioning  
11 appliances, closed quote, that, quote, apply forces  
12 to a tooth to generate movement of the tooth, closed  
13 quote, to improve the positioning of a patient's  
14 teeth.

15 Do you see that?

16 A Yes.

17 Q You speak, a couple lines later in  
18 Paragraph 25, about improved aligner performance. Do  
19 you see that? I can read you the sentence if that's  
20 easier.

21 A I'm reading it.

22 Q The multilayer --

1           A       I see what it says, yes.

2           Q       So you refer in that sentence to:  
3   Improved aligner performance, including improved  
4   material performance and stress relaxation  
5   properties.

6                   Do you see that?

7           A       Yes.

8           Q       What stress relaxation properties are you  
9   referring to there?

10          A       The stress relaxation properties that  
11   are -- yeah, I don't know off the top of my head if  
12   Chen's declaration describes the stress relaxation  
13   tests in detail.

14                 But, in general, stress relaxation is  
15   when you stress a material to a different strain and  
16   then look at how the stress decays over time, which  
17   is a viscoelastic property of polymers.

18                 And it's important in the aligner  
19   performance because you want the aligner to continue  
20   exerting force on the tooth over as long a period of  
21   time as possible, or at least over the period of time  
22   that the orthodontist has designated it should be

1 worn. And so that's -- I mean, stress relaxation is  
2 being used, you know, as -- as a person of skill  
3 would understand stress relaxation.

4 Q Is improved performance on stress  
5 relaxation referring to greater stress relaxation or  
6 less stress relaxation?

7 MR. ROSATO: Object to form.

8 THE WITNESS: Well, as I just said,  
9 you'd want -- you want the aligner to  
10 continue exerting force on the tooth for  
11 as long as possible, and so you want as  
12 little stress relaxation as possible.

13 BY MR. COLLINS-CHASE:

14 Q The next part of this sentence regarding  
15 improved material performance, you mentioned longer  
16 working range.

17 Do you see that?

18 A Yes.

19 Q What is the working range that you're  
20 referring to here?

21 A Yeah, this is -- this is a measure of the  
22 distance over which the aligner can perform its tasks

1 or the individual component of the aligner can  
2 perform its task.

3 Q When you say "the distance over which the  
4 aligner can perform its tasks," what do you mean?

5 A I mean just what I said. You know,  
6 the -- you're trying to set up moving these teeth  
7 really very small amounts at a time, but the further  
8 you can go in the desired direction, the fewer  
9 aligners you're going to need. The aligner --  
10 changes you're going to need for the thing to keep  
11 working.

12 Q Dr. Kimmel, would you turn to Page 87 of  
13 your declaration, please.

14 A Yes.

15 Q Do you see in Paragraph 145, you state:  
16 As the Chen declaration describes, Align conducted a  
17 clinical study comparing the performance of aligners  
18 made of ST30 to those made of EX30.

19 Do you see that?

20 A Yes.

21 Q Do you know what the composition is of  
22 EX30?

1           A       I think it was a -- a type of  
2 polyurethane thermoplastic.

3           Q       Did you review the results of this study  
4 that you refer to in this paragraph?

5           A       I reviewed what -- Chen's description in  
6 the declaration.

7           Q       If you'd turn the page and look at  
8 Paragraph 147, please.

9                   Do you see that this paragraph says, in  
10 the second sentence, that: Patients treated with  
11 ST30 Aligners showed significantly superior outcomes  
12 to those treated with EX30 Aligners.

13          A       Yes.

14          Q       And the sentence continues to state:  
15 Including a strongly significant increase in on-track  
16 performance.

17                   Do you see that?

18          A       Yes.

19          Q       You don't have any experience determining  
20 on-track performance for teeth, right?

21          A       No. My knowledge is confined to what  
22 I've read about the description. And I think in 146

1 I reproduce how On-track, Off-track and Cannot Match  
2 are defined, and I understand it in concept,  
3 certainly.

4 Q You mentioned On-track, Off-track and  
5 Cannot Match, right?

6 A Yes.

7 Q You don't have any experience determining  
8 off-track tooth movement for a dental appliance,  
9 right?

10 A I make no claim to being an orthodontist,  
11 no.

12 Q Same is true for Cannot Match, no  
13 experience determining a Cannot Match for an  
14 appliance, right?

15 A Yeah, that's correct. I guess my  
16 experience is limited to my daughter's experience  
17 with braces, but that was a very long time ago.

18 Q Were those wire braces?

19 A Yeah, those were wire braces. It was  
20 long before aligners were even conceived, I think.

21 Q Dr. Kimmel, in Paragraph 148 you refer  
22 again to the Chen declaration regarding improved

1 performance of ST30 as: A surprising and unexpected  
2 result.

3 Do you see that?

4 A Yes.

5 Q For the clinical trial data results that  
6 you discuss in the prior paragraphs, you rely  
7 entirely on the statements from the Chen declaration,  
8 right?

9 A That's correct.

10 Q So your conclusion in 148 regarding the  
11 performance being a surprising and unexpected result  
12 is based on what you read in the Chen declaration?

13 A She says it was a surprising and  
14 unexpected result.

15 Q And you don't have an independent basis  
16 to reach that conclusion apart from what you read in  
17 the Chen declaration?

18 A No, that's correct.

19 Q Dr. Kimmel, can you grab the '613 patent  
20 again, please?

21 A Okay.

22 Q If you look at first page of the patent,

1 do you see a section that says Related U.S.

2 Application Data?

3 A Yes.

4 Q Do you see that under that heading it  
5 says: Division of Application No. 13-470,681 --

6 A Yes.

7 Q -- filed on May 14, 2012, now Patent No.  
8 9,655,691.

9 A I see that.

10 Q Is it your understanding that the '613  
11 patent claims priority to another patent application  
12 that issued as Patent No. 9,655,691?

13 A That's my understanding.

14 Q Did you consider the '691 patent in  
15 reaching your conclusions regarding secondary  
16 considerations in this case?

17 A Yes.

18 Q The '691 patent is not listed in your  
19 materials considered, is it?

20 A I don't remember.

21 Q Would you like to take a look? It's at  
22 the back of your declaration.

1           A       I mean, it's cited in the text.

2                   No, it doesn't appear to be cited.

3           Q       So did you consider the '691 patent, or  
4 no?

5           A       I considered it to the point which really  
6 doesn't consider its content. It really just  
7 considers the fact that the '691 patent is one of the  
8 patents that are prior art that Bay Materials  
9 compared to its patent, the '630 patent, in the IPR  
10 with 3M.

11                   And it also states that -- I  
12 understand -- that each of the multilayer appliance  
13 patents claims priority to the '691 patent.

14                   So that's -- that's the extent to which I  
15 cite it. It doesn't talk about the content of '691.  
16 It just talks about the prosecution history of these  
17 patents.

18           Q       Because you didn't consider the content  
19 of the '691 patent, you didn't consider whether ST30  
20 falls within the claims of the '691 patent, right?

21           A       We did not consider that.

22                   MR. COLLINS-CHASE: I'm at a good

1           stopping point. If this is a good time  
2           for lunch, we can do that. The  
3           sandwiches are there. If that would work  
4           for you, we can take a pause. It's  
5           12:30.

6                               (Brief pause.)

7 BY MR. COLLINS-CHASE:

8           Q       Welcome back, Dr. Kimmel.

9           A       Thank you.

10          Q       Dr. Kimmel. We've taken a number of  
11       breaks today. At any point during the break, did you  
12       discuss the substance of your testimony with your  
13       counsel?

14          A       No.

15          Q       And that includes your discussion of  
16       Paragraph 142, you didn't discuss that with your  
17       counsel?

18          A       No.

19          Q       Dr. Kimmel, what did you do to prepare  
20       for your deposition today?

21          A       What did I?

22          Q       What did you do to prepare for your

1 deposition today?

2 A What did I do. I read a lot of documents  
3 and I met with these guys, the attorneys. So we met,  
4 yeah.

5 Q You're referring to Mr. Rosato and  
6 Mr. Medley?

7 A And yesterday and the day before Matt  
8 Argenti was on -- was with us on-line.

9 Q Did you meet with anybody else besides  
10 the individuals who you've mentioned already?

11 A No.

12 Q And you mentioned meeting for a couple  
13 days; is that --

14 A Yeah.

15 Q -- a good approximation?

16 A We met for part of Wednesday, a long  
17 session yesterday, and -- and we were actually  
18 on-line Wednesday, in-person yesterday, but these  
19 days it doesn't matter.

20 Q You said you read a lot of documents?

21 A Yes.

22 Q Were the documents all documents that are

1 cited in your declaration?

2 A And in Dr. Osswald's declaration. I went  
3 back and looked at some of those.

4 Q They're all -- all the documents that you  
5 read in preparation for your deposition are documents  
6 that are of record as exhibits for filings in the  
7 case?

8 A Yes, they are. They all had exhibit  
9 numbers.

10 MR. COLLINS-CHASE: Okay. Well,  
11 Dr. Kimmel, thank you. We don't have any  
12 additional cross-examination questions  
13 for you.

14 THE WITNESS: Oh, okay.

15 MR. ROSATO: Let's take a  
16 five-minute break.

17 (Brief pause.)

18 MR. ROSATO: We can go back on.

19 Dr. Kimmel, thank you. We don't  
20 have any further questions either.

21 THE WITNESS: Thank you.

22 MR. COLLINS-CHASE: Thank you, sir.

1 Nice to meet you.

2

3 (Thereupon, the deposition was  
4 concluded at approximately 1:28 p.m.)

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

D I S C L O S U R E

STATE OF GEORGIA ) DEPOSITION OF:

FULTON COUNTY ) ROBERT M. KIMMEL, SC.D.

Pursuant to Article 8.B of the Rules and Regulations of the Board of Court Reporting of the Judicial Council of Georgia, I make the following disclosure:

I am a Georgia Certified Court Reporter. I am here as a representative of Planet Depos.

Planet Depos was contacted by the offices of Finnegan, Henderson, Farabow, Garrett & Dunner, LLP to provide court reporting services for this deposition. Planet Depos will not be taking this deposition under any contract that is prohibited by O.C.G.A. 15-14-37 (a) and (b).

Planet Depos has no contract or agreement to provide court reporting services with any party to the case, or any reporter or reporting agency from whom a referral might have been made to cover the deposition.

Planet Depos will charge its usual and customary rates to all parties in the case, and a financial discount will not be given to any party in this litigation.

  
\_\_\_\_\_  
Tanya L. Verhoven-Page,  
Certified Court Reporter,  
B-1790.

CERTIFICATE OF SHORTHAND REPORTER

I, Tanya Verhoven-Page, Certified Reporter  
within and for the State of Georgia do hereby certify:

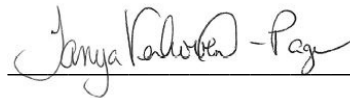
That ROBERT M. KIMMEL, Sc.D., the witness whose  
deposition is hereinbefore set forth, was duly sworn  
by me before the commencement of such deposition and  
that such deposition was taken before me and is a true  
record of the testimony given by such witness.

I further certify that the adverse party,  
ALIGN TECHNOLOGY, INC., was represented by counsel at  
the deposition.

I further certify that the deposition of  
ROBERT M. KIMMEL, Sc.D., occurred at the offices  
of Finnegan, Henderson, Farabow, Garrett & Dunner, LLP,  
271 17th Street, NW, Suite 1400, Atlanta, Georgia,  
30363, on Friday, April 17, 2026, commencing at  
9:08 a.m. to 1:28 p.m.

1 I further certify that I am not related to  
2 any of the parties to this action by blood or  
3 marriage, I am not employed by or an attorney to any  
4 of the parties to this action, and that I am in no way  
5 interested, financially or otherwise, in the outcome  
6 of this matter.

7  
8 IN WITNESS WHEREOF, I have hereunto set my hand  
9 this 22nd day of April, 2026.

10  
11 

12 Tanya L. Verhoven-Page,  
13 Certified Court Reporter,  
14 CCR-B-1790, CSR-12254  
15 and LCR-991.

CERTIFICATE OF DEPONENT

I, ROBERT M. KIMMEL, SC.D., hereby certify that I  
have read the foregoing pages, numbered 1 through  
143, of my deposition of testimony taken in these  
proceedings on Friday, April 17th, 2026 and, with the  
exception of the changes listed on the next page  
and/or corrections, if any, find them to be a true  
and accurate transcription thereof.

Signed: \_\_\_\_\_

Name: ROBERT M. KIMMEL, SC.D.

Date: \_\_\_\_\_

1 ERRATA SHEET FOR THE TRANSCRIPT OF:

2 Case Name: ClearCorrect v. Align

3 Dep. Date: April 17, 2026

4 Deponent: Robert M. Kimmel, Sc.D.

5 CORRECTIONS

6 Pg. Ln. Now Reads Should Read Reason

7 \_\_\_\_\_

8 Pg. Ln. Now Reads Should Read Reason

9 \_\_\_\_\_

10 Pg. Ln. Now Reads Should Read Reason

11 \_\_\_\_\_

12 Pg. Ln. Now Reads Should Read Reason

13 \_\_\_\_\_

14 Pg. Ln. Now Reads Should Read Reason

15 \_\_\_\_\_

16 Pg. Ln. Now Reads Should Read Reason

17 \_\_\_\_\_

18 Pg. Ln. Now Reads Should Read Reason

19 \_\_\_\_\_

20 Pg. Ln. Now Reads Should Read Reason

21 \_\_\_\_\_

22 \_\_\_\_\_

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

CORRECTIONS

| Pg.   | Ln.   | Now Reads | Should Read | Reason |
|-------|-------|-----------|-------------|--------|
| _____ | _____ | _____     | _____       | _____  |
| Pg.   | Ln.   | Now Reads | Should Read | Reason |
| _____ | _____ | _____     | _____       | _____  |
| Pg.   | Ln.   | Now Reads | Should Read | Reason |
| _____ | _____ | _____     | _____       | _____  |
| Pg.   | Ln.   | Now Reads | Should Read | Reason |
| _____ | _____ | _____     | _____       | _____  |
| Pg.   | Ln.   | Now Reads | Should Read | Reason |
| _____ | _____ | _____     | _____       | _____  |
| Pg.   | Ln.   | Now Reads | Should Read | Reason |
| _____ | _____ | _____     | _____       | _____  |

\_\_\_\_\_  
Signature of Deponent

SUBSCRIBED AND SWORN BEFORE ME

This the \_\_\_\_\_ day of \_\_\_\_\_, 2026.

\_\_\_\_\_

(Notary Public) My Commission Expires: \_\_\_\_\_

| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                 |                                                                                                                                                                                              |                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| aaaa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 39:8, 40:13,<br>41:8                                                            | 77:1, 86:10,<br>86:14, 91:8,<br>96:2                                                                                                                                                         | 79:16, 85:7,<br>85:17, 89:17,<br>96:3, 97:12,<br>100:19, 114:12,<br>122:17, 123:18,<br>129:9, 136:22,<br>137:20                                                                                                                               |
| 43:3, 43:13,<br>43:14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | academic-industry<br>24:7                                                       | addressed                                                                                                                                                                                    | against                                                                                                                                                                                                                                       |
| able                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | accept                                                                          | 48:7, 53:9,<br>54:4, 54:17,<br>86:13, 96:8,<br>111:16                                                                                                                                        | 25:16                                                                                                                                                                                                                                         |
| 8:10, 49:12,<br>49:13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | according                                                                       | addressing                                                                                                                                                                                   | agency                                                                                                                                                                                                                                        |
| about                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 120:12, 121:7,<br>122:5, 124:10,<br>124:16                                      | 76:11, 119:3                                                                                                                                                                                 | 144:23                                                                                                                                                                                                                                        |
| 16:21, 16:22,<br>17:18, 17:19,<br>19:8, 19:16,<br>21:3, 23:15,<br>26:6, 27:5,<br>27:13, 27:14,<br>33:22, 35:3,<br>41:1, 41:10,<br>43:12, 43:18,<br>44:15, 45:5,<br>45:17, 51:10,<br>55:3, 57:20,<br>58:21, 62:3,<br>62:14, 67:19,<br>68:20, 70:10,<br>71:1, 71:9,<br>72:10, 72:21,<br>74:15, 74:18,<br>75:7, 76:5,<br>77:1, 77:17,<br>77:20, 78:1,<br>79:20, 83:4,<br>84:8, 84:12,<br>85:14, 89:21,<br>90:17, 90:18,<br>90:22, 91:2,<br>91:10, 95:8,<br>95:18, 96:21,<br>97:1, 100:6,<br>100:7, 100:14,<br>103:15, 106:2,<br>107:16, 109:2,<br>110:7, 112:3,<br>113:4, 129:3,<br>131:18, 135:22,<br>139:15, 139:16 | account<br>109:13, 115:6                                                        | adhere                                                                                                                                                                                       | ago                                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | accurate                                                                        | 88:12, 89:9,<br>89:13, 90:5                                                                                                                                                                  | 87:22, 136:17                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 8:10, 23:2,<br>62:19, 147:9                                                     | adhered                                                                                                                                                                                      | agree                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | acid                                                                            | 89:3, 94:22                                                                                                                                                                                  | 12:12, 47:16,<br>63:14, 74:20,<br>80:15, 82:6,<br>82:16, 82:18,<br>83:4, 83:5,<br>83:9, 83:10,<br>83:15, 83:20,<br>114:22, 115:18,<br>117:15, 118:8,<br>118:18, 120:7,<br>121:4, 121:22,<br>122:14, 123:13,<br>126:19, 127:1,<br>129:1, 129:8 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 51:14, 51:15,<br>52:11, 53:16,<br>53:17, 53:22,<br>54:1, 54:12,<br>54:13, 57:22 | adhering                                                                                                                                                                                     | agreed                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | across                                                                          | 87:11                                                                                                                                                                                        | 11:13, 11:16                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 89:1                                                                            | adhesion                                                                                                                                                                                     | agreement                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | action                                                                          | 78:17                                                                                                                                                                                        | 144:21                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 146:2, 146:4                                                                    | adhesive                                                                                                                                                                                     | ahead                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | activities                                                                      | 24:13, 72:14,<br>72:22, 73:2,<br>74:19, 75:5,<br>75:8, 78:2,<br>78:11, 78:22,<br>81:1, 91:3,<br>91:11, 91:16,<br>92:2, 92:3,<br>92:8, 92:11,<br>92:17, 93:3,<br>93:18, 94:13,<br>94:21, 97:1 | 67:19                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 27:7, 30:8,<br>30:10                                                            | adjacent                                                                                                                                                                                     | align                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | activity                                                                        | 64:18                                                                                                                                                                                        | 1:12, 11:18,<br>134:16, 145:13,<br>148:2                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 28:14                                                                           | administration                                                                                                                                                                               | aligner                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | actually                                                                        | 25:19, 26:19                                                                                                                                                                                 | 70:21, 97:2,<br>98:16, 121:14,<br>131:18, 132:3,<br>132:18, 132:19,<br>133:9, 133:22,<br>134:1, 134:4,<br>134:9                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 21:19, 24:2,<br>30:19, 36:1,<br>57:16, 59:11,<br>65:3, 93:20,<br>113:6, 141:17  | administrative                                                                                                                                                                               | aligners                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | add                                                                             | 27:11, 35:5                                                                                                                                                                                  | 41:4, 68:4,                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 50:3, 112:2,<br>112:6                                                           | adopted                                                                                                                                                                                      |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | added                                                                           | 12:21                                                                                                                                                                                        |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 92:11                                                                           | advantage                                                                                                                                                                                    |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | adding                                                                          | 33:9                                                                                                                                                                                         |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 27:16, 53:5                                                                     | adverse                                                                                                                                                                                      |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | additional                                                                      | 145:12                                                                                                                                                                                       |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 40:1, 142:12                                                                    | after                                                                                                                                                                                        |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | additive                                                                        | 38:14                                                                                                                                                                                        |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 32:8                                                                            | again                                                                                                                                                                                        |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | address                                                                         | 54:9, 58:1,                                                                                                                                                                                  |                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 50:16, 52:1,                                                                    |                                                                                                                                                                                              |                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>69:18, 70:1,<br/>70:4, 79:9,<br/>97:16, 97:22,<br/>117:5, 119:8,<br/>134:9, 134:17,<br/>135:11, 135:12,<br/>136:20<br/><b>all</b><br/>10:14, 11:13,<br/>17:12, 17:14,<br/>18:6, 18:18,<br/>18:19, 18:20,<br/>19:4, 19:12,<br/>20:4, 20:18,<br/>21:5, 31:6,<br/>31:22, 32:8,<br/>33:11, 34:2,<br/>34:5, 34:7,<br/>34:9, 34:10,<br/>35:6, 36:7,<br/>37:1, 37:15,<br/>38:1, 38:8,<br/>38:13, 38:15,<br/>42:11, 59:15,<br/>64:21, 65:7,<br/>71:8, 77:8,<br/>79:4, 81:20,<br/>82:2, 89:19,<br/>95:4, 95:5,<br/>96:20, 100:6,<br/>100:7, 109:1,<br/>131:3, 141:22,<br/>142:4, 142:8,<br/>144:28<br/><b>allows</b><br/>101:10<br/><b>almost</b><br/>17:12, 21:18<br/><b>along</b><br/>42:19<br/><b>already</b><br/>57:13, 73:9,<br/>101:9, 141:10<br/><b>also</b><br/>24:18, 36:6,<br/>36:22, 43:22,<br/>63:18, 85:14,<br/>102:7, 102:21,</p> | <p>103:3, 105:8,<br/>106:20, 112:3,<br/>139:11<br/><b>alternates</b><br/>44:8<br/><b>alternating</b><br/>43:4, 43:10,<br/>43:21, 45:11,<br/>46:6, 46:17<br/><b>although</b><br/>64:12<br/><b>always</b><br/>78:14, 87:10<br/><b>amounts</b><br/>134:7<br/><b>analyzed</b><br/>130:19<br/><b>angst</b><br/>20:19<br/><b>another</b><br/>43:1, 79:13,<br/>92:13, 138:11<br/><b>answer</b><br/>9:3, 44:18,<br/>48:16, 49:12,<br/>54:21, 54:22,<br/>55:3, 57:17,<br/>58:2, 58:14,<br/>58:20, 69:6,<br/>69:8, 73:13,<br/>73:14, 73:17,<br/>86:8, 87:7,<br/>88:4, 90:3,<br/>91:9, 96:16,<br/>112:13, 131:2<br/><b>answered</b><br/>44:20, 44:22,<br/>46:21, 54:15,<br/>56:11, 57:11,<br/>57:13, 58:7,<br/>58:18, 73:10,<br/>76:20, 77:4,<br/>78:8, 82:10,<br/>82:21, 83:16,<br/>84:2, 84:16,<br/>85:5, 86:2, 90:8<br/><b>answers</b><br/>89:19</p> | <p><b>any</b><br/>8:9, 8:16,<br/>8:22, 9:2, 9:14,<br/>10:1, 13:22,<br/>14:3, 14:10,<br/>22:9, 27:10,<br/>32:11, 32:13,<br/>32:16, 39:20,<br/>40:5, 45:1,<br/>48:14, 59:15,<br/>60:7, 60:9,<br/>60:14, 69:2,<br/>70:20, 74:7,<br/>79:5, 81:21,<br/>82:12, 83:3,<br/>83:11, 88:9,<br/>88:19, 92:1,<br/>94:7, 94:12,<br/>99:22, 100:9,<br/>101:14, 102:14,<br/>102:22, 103:4,<br/>103:8, 104:17,<br/>105:1, 105:8,<br/>107:2, 107:6,<br/>107:12, 109:2,<br/>109:12, 121:5,<br/>130:18, 135:19,<br/>136:7, 140:11,<br/>142:11, 142:20,<br/>144:18, 144:22,<br/>144:23, 144:29,<br/>146:2, 146:3,<br/>147:8<br/><b>anybody</b><br/>141:9<br/><b>anymore</b><br/>21:1, 29:13,<br/>30:11<br/><b>anyplace</b><br/>75:12<br/><b>anything</b><br/>16:13, 43:12,<br/>44:14, 47:19,<br/>55:4, 80:21,<br/>81:8, 89:21,<br/>91:16, 91:21,<br/>94:12, 103:15<br/><b>anyway</b><br/>32:7</p> | <p><b>anywhere</b><br/>118:19<br/><b>apart</b><br/>137:16<br/><b>appeal</b><br/>1:3<br/><b>appear</b><br/>42:19, 42:20,<br/>48:5, 139:2<br/><b>appearances</b><br/>3:1, 4:1<br/><b>appears</b><br/>10:7, 23:4,<br/>77:9<br/><b>appliance</b><br/>12:7, 14:1,<br/>97:17, 118:9,<br/>136:8, 136:14,<br/>139:12<br/><b>appliances</b><br/>13:10, 13:20,<br/>40:17, 41:1,<br/>128:13, 131:11<br/><b>applicability</b><br/>19:13<br/><b>applicable</b><br/>31:13<br/><b>application</b><br/>16:17, 20:6,<br/>30:20, 35:16,<br/>97:2, 109:14,<br/>109:16, 138:2,<br/>138:5, 138:11<br/><b>applications</b><br/>20:22, 21:1,<br/>21:6, 31:6,<br/>31:16, 31:17,<br/>31:20, 31:21,<br/>31:22, 32:11,<br/>32:14, 32:17,<br/>33:2, 33:12,<br/>34:11, 35:8,<br/>35:11, 39:21,<br/>40:10, 89:8<br/><b>applied</b><br/>13:5, 78:12<br/><b>applies</b><br/>19:18, 65:20</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>apply</b><br/>12:20, 13:2,<br/>131:11<br/><b>applying</b><br/>20:5<br/><b>appointed</b><br/>25:12<br/><b>appropriate</b><br/>45:16<br/><b>approximately</b><br/>143:4<br/><b>approximation</b><br/>141:15<br/><b>april</b><br/>1:31, 2:1, 7:1,<br/>145:20, 146:9,<br/>147:6, 148:3<br/><b>area</b><br/>15:13, 17:6,<br/>20:13, 37:11,<br/>87:16, 96:1<br/><b>areas</b><br/>15:19, 15:21,<br/>18:3, 18:4,<br/>18:9, 19:4,<br/>19:12, 29:22,<br/>37:10<br/><b>aren't</b><br/>19:19, 40:5,<br/>112:4<br/><b>argenti</b><br/>141:8<br/><b>arise</b><br/>64:10<br/><b>arises</b><br/>72:17<br/><b>around</b><br/>130:2<br/><b>arranged</b><br/>65:22, 66:9,<br/>66:10<br/><b>arrangement</b><br/>48:14, 68:3,<br/>102:22, 105:9,<br/>107:12<br/><b>art</b><br/>12:9, 12:14,<br/>12:20, 13:3,</p> | <p>13:6, 73:16,<br/>139:8<br/><b>article</b><br/>144:7<br/><b>articles</b><br/>19:19, 37:7,<br/>37:18, 39:11<br/><b>asked</b><br/>39:11, 44:19,<br/>46:20, 54:14,<br/>56:11, 57:10,<br/>58:6, 58:17,<br/>76:20, 77:1,<br/>77:3, 77:4,<br/>78:8, 82:9,<br/>82:20, 84:2,<br/>84:15, 85:5,<br/>86:1, 90:7,<br/>90:13, 115:16<br/><b>asking</b><br/>7:17, 54:7,<br/>75:6, 82:16,<br/>82:18, 83:16,<br/>86:4, 90:16,<br/>90:18, 95:22<br/><b>assertion</b><br/>80:21, 82:2<br/><b>assertions</b><br/>81:22, 95:8<br/><b>associate</b><br/>24:17<br/><b>associated</b><br/>39:3<br/><b>associates</b><br/>28:6, 28:9,<br/>28:18<br/><b>assume</b><br/>8:18, 36:6,<br/>108:10, 116:16<br/><b>assumption</b><br/>95:4<br/><b>assumptions</b><br/>79:22<br/><b>atlanta</b><br/>1:30, 2:8, 7:1,<br/>145:19<br/><b>atoms</b><br/>64:11</p> | <p><b>attached</b><br/>6:23, 64:17<br/><b>attention</b><br/>98:20, 124:5<br/><b>attorney</b><br/>146:3<br/><b>attorneys</b><br/>11:11, 14:19,<br/>141:3<br/><b>avenue</b><br/>3:6, 4:5<br/><b>avoid</b><br/>37:5, 71:8,<br/>88:19<br/><b>aware</b><br/>130:18</p> <hr/> <p><b>B</b></p> <hr/> <p><b>b</b><br/>144:19, 144:35<br/><b>b2</b><br/>6:9, 6:10, 6:11<br/><b>back</b><br/>33:14, 34:13,<br/>61:14, 72:15,<br/>98:20, 117:1,<br/>117:9, 123:6,<br/>138:22, 140:8,<br/>142:3, 142:18<br/><b>background</b><br/>40:21, 55:8<br/><b>backs</b><br/>94:12<br/><b>backwards</b><br/>11:5, 65:10<br/><b>badgering</b><br/>58:8, 84:3<br/><b>barrier</b><br/>31:11, 32:9<br/><b>based</b><br/>15:15, 30:2,<br/>66:19, 94:18,<br/>116:1, 137:12<br/><b>basic</b><br/>20:3<br/><b>basically</b><br/>68:18<br/><b>basis</b><br/>55:21, 98:3,</p> | <p>137:15<br/><b>bay</b><br/>139:8<br/><b>bbbb</b><br/>43:3, 43:14<br/><b>bearing</b><br/>88:10<br/><b>became</b><br/>30:8<br/><b>because</b><br/>16:7, 17:14,<br/>18:19, 20:20,<br/>24:16, 25:14,<br/>27:1, 30:9,<br/>33:4, 36:18,<br/>37:14, 38:9,<br/>41:2, 45:2,<br/>45:18, 46:12,<br/>55:7, 59:18,<br/>60:10, 61:8,<br/>64:10, 72:11,<br/>72:21, 84:6,<br/>88:7, 90:20,<br/>94:2, 95:6,<br/>95:19, 96:21,<br/>105:3, 132:19,<br/>139:18<br/><b>been</b><br/>7:6, 8:13,<br/>14:6, 15:7,<br/>16:3, 25:13,<br/>27:19, 33:1,<br/>57:3, 58:21,<br/>61:7, 74:2,<br/>76:20, 84:2,<br/>107:16, 113:13,<br/>116:14, 119:12,<br/>144:24<br/><b>beer</b><br/>31:11, 31:14,<br/>32:6<br/><b>before</b><br/>1:3, 2:8, 7:20,<br/>9:4, 11:15,<br/>20:10, 20:12,<br/>26:7, 28:1,<br/>29:16, 36:4,<br/>44:10, 57:3,</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 57:4, 62:2,<br>63:17, 106:5,<br>108:18, 136:20,<br>141:7, 145:8,<br>145:9, 149:20<br><b>beginning</b><br>31:10, 46:1,<br>59:10, 69:13,<br>124:6<br><b>beginnings</b><br>39:15<br><b>begins</b><br>69:12, 113:22,<br>124:15<br><b>behalf</b><br>3:3, 4:3<br><b>being</b><br>53:21, 54:11,<br>77:4, 85:19,<br>109:2, 129:21,<br>133:2, 136:10,<br>137:11<br><b>believe</b><br>47:12, 91:3,<br>91:14, 113:14,<br>116:3<br><b>below</b><br>97:16, 97:21,<br>101:22, 119:7<br><b>benefit</b><br>17:2<br><b>benefits</b><br>18:22<br><b>besides</b><br>21:17, 55:14,<br>70:19, 141:9<br><b>best</b><br>36:1, 72:17,<br>114:7<br><b>between</b><br>16:14, 35:7,<br>68:6, 74:19,<br>76:5, 76:7,<br>78:17, 80:7,<br>83:20, 84:14,<br>85:3, 85:21,<br>92:12, 118:14,<br>120:3, 124:20 | <b>beyond</b><br>20:8, 43:11,<br>44:14, 45:2,<br>55:4, 56:1,<br>67:10, 72:9,<br>74:13, 89:20,<br>90:14, 94:4,<br>109:17<br><b>big</b><br>16:15, 16:16,<br>34:5, 36:18<br><b>bind</b><br>79:12, 87:2<br><b>biographical</b><br>24:3<br><b>bit</b><br>17:1, 70:5<br><b>bits</b><br>95:15<br><b>blithely</b><br>79:8<br><b>block</b><br>42:14, 42:17,<br>42:21, 42:22,<br>43:13, 43:22,<br>44:3<br><b>blocks</b><br>42:19, 42:20<br><b>blood</b><br>146:2<br><b>blown</b><br>24:12<br><b>board</b><br>1:3, 144:8<br><b>boards</b><br>31:8<br><b>bold</b><br>130:2, 130:4,<br>130:8<br><b>bond</b><br>64:20<br><b>bonds</b><br>64:11, 64:14,<br>64:19<br><b>book</b><br>40:8, 40:9,<br>79:20<br><b>both</b><br>49:15, 52:5, | 52:6, 52:8<br><b>bottle</b><br>21:9, 21:11<br><b>bottles</b><br>20:18, 31:11,<br>62:7<br><b>bottom</b><br>130:8<br><b>bound</b><br>127:3<br><b>boundaries</b><br>45:9<br><b>bounded</b><br>127:2<br><b>box</b><br>17:17, 98:12<br><b>boxes</b><br>17:14<br><b>braces</b><br>136:17, 136:18,<br>136:19<br><b>break</b><br>8:22, 9:2, 9:4,<br>9:5, 59:2, 62:2,<br>107:17, 107:20,<br>108:1, 108:3,<br>108:4, 108:6,<br>108:15, 108:18,<br>140:11, 142:16<br><b>breaks</b><br>140:11<br><b>brief</b><br>56:22, 59:7,<br>75:21, 108:16,<br>140:6, 142:17<br><b>broad</b><br>15:18, 15:20,<br>17:2, 18:2,<br>37:22<br><b>broaden</b><br>16:7<br><b>broadened</b><br>17:3<br><b>broadening</b><br>17:21<br><b>broadest</b><br>15:19<br><b>brought</b><br>9:15, 27:4 | <b>bs</b><br>43:19<br><b>bubbles</b><br>76:5, 76:7,<br>78:15<br><b>bunch</b><br>25:4, 35:10<br><b>business</b><br>29:21, 33:16,<br>34:14, 34:18,<br>34:20, 35:1,<br>35:2, 35:4,<br>35:12, 36:8<br><hr/> <b>C</b> <hr/> <b>call</b><br>65:5<br><b>called</b><br>7:6, 43:9,<br>62:12<br><b>can't</b><br>25:10, 54:21,<br>57:6, 84:22,<br>88:4<br><b>cannot</b><br>136:1, 136:5,<br>136:12, 136:13<br><b>capabilities</b><br>74:4<br><b>capable</b><br>22:12<br><b>capstone</b><br>15:2, 26:9<br><b>carbon</b><br>39:15, 64:11<br><b>care</b><br>72:21<br><b>career</b><br>15:9, 16:3,<br>20:9, 39:19,<br>41:7, 72:1,<br>85:1, 85:20<br><b>case</b><br>1:18, 9:18,<br>13:15, 14:13,<br>65:6, 88:7,<br>88:22, 138:16,<br>142:7, 144:23, |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 144:28, 148:2<br><b>cases</b><br>64:10<br><b>cast</b><br>24:12<br><b>categories</b><br>41:22, 42:3<br><b>cause</b><br>76:8<br><b>ccr-b</b><br>1:33, 146:14<br><b>celanese</b><br>31:2<br><b>cellophane</b><br>34:7<br><b>center</b><br>23:18, 23:22,<br>24:6, 24:9,<br>24:16<br><b>central</b><br>39:13<br><b>certain</b><br>71:10<br><b>certainly</b><br>32:18, 48:19,<br>110:17, 127:10,<br>136:3<br><b>certificate</b><br>145:1, 147:1<br><b>certified</b><br>2:9, 2:11,<br>144:12, 144:34,<br>145:3, 146:13<br><b>certify</b><br>145:4, 145:12,<br>145:16, 146:1,<br>147:3<br><b>cetera</b><br>40:3<br><b>ch3</b><br>64:20<br><b>ch3s</b><br>64:21<br><b>chain</b><br>41:13, 42:19<br><b>chains</b><br>41:15<br><b>chair</b><br>24:19, 24:21, | 25:3, 25:6,<br>25:7, 25:12,<br>25:14, 26:2,<br>26:11, 26:19,<br>27:4, 27:20,<br>27:21<br><b>change</b><br>52:19, 80:8<br><b>changes</b><br>134:10, 147:7<br><b>chapters</b><br>40:8, 40:9<br><b>characteristic</b><br>70:21, 115:10<br><b>characteristics</b><br>102:15<br><b>characterize</b><br>70:3, 90:10<br><b>charge</b><br>144:27<br><b>charles</b><br>3:9, 3:10,<br>7:17, 58:22<br><b>chart</b><br>69:22, 98:7,<br>106:6, 113:3,<br>116:10, 119:7<br><b>charts</b><br>97:16, 97:21<br><b>chemical</b><br>34:4, 41:14,<br>65:21<br><b>chen</b><br>13:14, 14:13,<br>14:15, 70:16,<br>70:19, 71:5,<br>71:19, 98:22,<br>134:16, 136:22,<br>137:7, 137:12,<br>137:17<br><b>chen's</b><br>68:17, 68:19,<br>97:7, 98:4,<br>115:6, 115:9,<br>116:2, 117:21,<br>118:11, 120:12,<br>121:7, 122:5,<br>122:17, 123:19, | 132:12, 135:5<br><b>choice</b><br>97:2<br><b>choosing</b><br>54:22<br><b>circuit</b><br>31:7<br><b>cis</b><br>64:3, 64:7,<br>64:8, 64:22,<br>65:4, 65:8,<br>66:10, 66:19,<br>67:2, 67:5<br><b>cis-trans</b><br>65:20, 66:3<br><b>citation</b><br>94:16<br><b>cite</b><br>70:13, 70:20,<br>71:13, 80:4,<br>80:20, 94:7,<br>94:11, 94:12,<br>139:15<br><b>cited</b><br>139:1, 139:2,<br>142:1<br><b>claim</b><br>69:22, 98:6,<br>98:9, 98:12,<br>99:12, 99:15,<br>99:18, 99:21,<br>100:2, 100:7,<br>100:11, 100:17,<br>100:22, 101:3,<br>101:7, 101:10,<br>101:14, 102:4,<br>102:7, 102:10,<br>102:14, 102:18,<br>102:21, 103:3,<br>103:7, 103:12,<br>103:14, 104:5,<br>104:8, 104:12,<br>104:16, 104:22,<br>105:7, 106:8,<br>106:14, 106:20,<br>107:1, 107:5,<br>107:11, 109:22,<br>113:20, 113:22, | 114:1, 114:8,<br>114:13, 114:14,<br>114:17, 115:2,<br>115:12, 115:20,<br>117:3, 117:8,<br>117:11, 117:12,<br>117:16, 118:1,<br>118:2, 118:10,<br>118:12, 118:13,<br>118:19, 119:18,<br>119:20, 119:21,<br>120:8, 120:15,<br>120:16, 121:5,<br>121:12, 121:13,<br>121:14, 122:1,<br>122:8, 122:11,<br>122:15, 122:19,<br>123:3, 123:5,<br>123:7, 123:14,<br>136:10<br><b>claims</b><br>41:1, 41:2,<br>69:17, 70:1,<br>70:4, 70:8,<br>97:17, 98:1,<br>104:2, 105:6,<br>105:16, 108:19,<br>110:7, 110:11,<br>110:19, 111:12,<br>112:3, 112:12,<br>112:20, 119:8,<br>131:3, 138:11,<br>139:13, 139:20<br><b>clarify</b><br>90:3<br><b>class</b><br>21:14<br><b>classes</b><br>41:22<br><b>classified</b><br>48:5<br><b>clean</b><br>62:19<br><b>clearcorrect</b><br>1:6, 148:2<br><b>clemson</b><br>15:11, 18:18,<br>20:10, 20:12, |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24:22, 28:1,<br>29:5, 30:15<br><b>clinical</b><br>14:4, 14:6,<br>134:17, 137:5<br><b>close</b><br>81:8<br><b>closed</b><br>30:7, 51:15,<br>131:11, 131:12<br><b>co-extrude</b><br>73:5<br><b>co-extruded</b><br>24:12, 90:4,<br>114:19, 115:1,<br>123:9, 126:10<br><b>co-extruding</b><br>30:22<br><b>co-extrusion</b><br>71:22, 72:4,<br>72:11, 72:13,<br>72:16, 72:21,<br>72:22, 73:5,<br>73:16, 73:20,<br>74:9, 74:19,<br>75:7, 75:15,<br>76:1, 76:17,<br>77:13, 78:2,<br>78:5, 79:1,<br>79:8, 79:12,<br>79:19, 80:5,<br>80:6, 80:16,<br>82:7, 83:19,<br>84:13, 85:17,<br>85:19, 85:20,<br>86:17, 87:1,<br>87:11, 88:7,<br>89:1, 89:8,<br>89:14, 91:4,<br>91:10, 91:17,<br>91:22, 92:2,<br>92:8, 92:17,<br>93:2, 93:11,<br>93:20, 94:21,<br>95:10, 95:16,<br>95:18, 96:2,<br>96:4, 96:8,<br>96:10, 96:18, | 96:21, 97:5,<br>97:10<br><b>coding</b><br>24:13<br><b>collins-chase@fi-</b><br><b>nnegan</b><br>3:10<br><b>colon</b><br>124:18<br><b>column</b><br>69:18, 69:19,<br>70:7, 70:13,<br>113:20, 114:8,<br>114:10, 114:15,<br>115:13, 124:2,<br>124:11, 124:12,<br>124:14, 125:15,<br>126:7, 127:11,<br>127:14, 127:16,<br>128:1, 128:11,<br>129:15<br><b>columns</b><br>129:21<br><b>com</b><br>3:10, 3:18,<br>4:10, 4:12<br><b>combination</b><br>127:21<br><b>combinations</b><br>111:20<br><b>combined</b><br>92:12<br><b>combining</b><br>76:1<br><b>come</b><br>61:14, 71:5,<br>71:18, 86:7,<br>89:1<br><b>comes</b><br>72:11<br><b>coming</b><br>52:3<br><b>commencement</b><br>145:8<br><b>commencing</b><br>145:20<br><b>comment</b><br>13:6, 59:9 | <b>commented</b><br>55:5, 109:10<br><b>comments</b><br>12:15<br><b>commercial</b><br>89:8<br><b>commission</b><br>149:23<br><b>common</b><br>111:22<br><b>companies</b><br>16:12<br><b>company</b><br>20:16, 28:10,<br>28:17, 28:20,<br>28:22, 30:8,<br>34:4, 37:15<br><b>company's</b><br>30:3<br><b>compare</b><br>78:2, 97:22<br><b>compared</b><br>53:5, 92:16,<br>139:9<br><b>comparing</b><br>69:22, 70:3,<br>134:17<br><b>comparison</b><br>92:1<br><b>complete</b><br>8:10, 54:8,<br>81:8<br><b>complex</b><br>79:2<br><b>complicated</b><br>86:15, 89:18,<br>90:13<br><b>component</b><br>134:1<br><b>components</b><br>65:22<br><b>composed</b><br>126:8<br><b>composition</b><br>134:21<br><b>comprise</b><br>114:6<br><b>comprised</b><br>127:20 | <b>comprises</b><br>103:17, 114:1,<br>114:18, 115:14,<br>115:19, 117:12,<br>118:3, 121:15<br><b>comprising</b><br>70:8, 70:22,<br>99:3, 99:9,<br>100:5, 104:6,<br>105:3, 118:4,<br>120:16<br><b>computer</b><br>21:2<br><b>conceived</b><br>136:20<br><b>concept</b><br>136:2<br><b>concern</b><br>90:20<br><b>concerned</b><br>31:1<br><b>concluded</b><br>143:4<br><b>conclusion</b><br>81:10, 83:3,<br>137:10, 137:16<br><b>conclusions</b><br>80:1, 88:9,<br>138:15<br><b>condensation</b><br>21:15, 49:5,<br>49:9<br><b>conduct</b><br>25:14<br><b>conducted</b><br>134:16<br><b>confidentiality</b><br>88:19<br><b>configuration</b><br>66:10, 66:11,<br>68:5, 100:9,<br>100:18, 101:1,<br>101:8, 103:1,<br>103:13, 107:13,<br>125:2<br><b>confined</b><br>135:21<br><b>confirm</b><br>106:4 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>confused</b><br>59:15<br><b>confusing</b><br>60:17, 65:4<br><b>consider</b><br>55:11, 56:5,<br>57:7, 58:3,<br>131:4, 138:14,<br>139:3, 139:6,<br>139:18, 139:19,<br>139:21<br><b>considerations</b><br>138:16<br><b>considered</b><br>56:3, 56:8,<br>56:12, 56:13,<br>57:17, 57:19,<br>58:11, 58:15,<br>95:6, 109:20,<br>138:19, 139:5<br><b>considers</b><br>139:7<br><b>consists</b><br>104:10, 104:13,<br>122:20, 123:8<br><b>consortium</b><br>24:7<br><b>constantly</b><br>23:10, 25:15<br><b>consulting</b><br>28:11, 28:13,<br>28:17, 28:21,<br>29:3, 29:8,<br>29:11, 29:13,<br>29:15<br><b>contacted</b><br>144:14<br><b>containers</b><br>18:8, 32:8<br><b>containing</b><br>106:9, 106:15,<br>120:17, 121:16<br><b>contains</b><br>52:5, 119:21<br><b>content</b><br>139:6, 139:15,<br>139:18<br><b>context</b><br>111:16 | <b>continue</b><br>26:5, 132:19,<br>133:10<br><b>continued</b><br>26:6, 26:9,<br>29:13<br><b>continues</b><br>135:14<br><b>continuing</b><br>25:22, 69:13<br><b>contract</b><br>144:18, 144:21<br><b>contradict</b><br>80:22, 82:2<br><b>contradictory</b><br>82:1<br><b>contradicts</b><br>81:6, 81:14,<br>83:6, 83:7<br><b>contrast</b><br>75:7, 91:4,<br>91:10<br><b>cooling</b><br>92:9<br><b>cooperation</b><br>11:10<br><b>coordinate</b><br>27:7<br><b>coordination</b><br>35:7<br><b>copies</b><br>9:22<br><b>copolyester</b><br>46:2, 47:13,<br>49:16, 50:9,<br>51:1, 62:3,<br>62:12, 62:21,<br>68:6, 68:21,<br>70:9, 70:22,<br>104:10, 106:11,<br>110:8, 110:11,<br>110:12, 117:13,<br>117:16, 120:1,<br>120:8, 121:18,<br>122:1, 123:8,<br>123:14<br><b>copolyesters</b><br>110:16, 111:8 | <b>copolymer</b><br>41:19, 42:4,<br>42:15, 42:17,<br>43:4, 43:10,<br>43:13, 43:22,<br>44:8, 45:5,<br>45:11, 46:2,<br>46:7, 46:19,<br>47:6, 47:9,<br>47:13, 47:17,<br>47:21, 48:6,<br>48:9, 48:20,<br>50:5, 62:15,<br>62:21, 63:11<br><b>copolymers</b><br>42:1, 42:10,<br>63:22<br><b>copper</b><br>16:15, 16:16,<br>16:18<br><b>copy</b><br>9:17, 23:3,<br>113:7<br><b>corporation</b><br>33:9<br><b>correct</b><br>13:21, 14:10,<br>20:13, 28:2,<br>28:3, 39:2,<br>53:13, 70:17,<br>71:3, 72:1,<br>93:21, 94:17,<br>98:5, 102:8,<br>104:20, 109:4,<br>112:5, 115:11,<br>116:12, 116:22,<br>119:5, 120:13,<br>121:7, 122:6,<br>123:4, 136:15,<br>137:9, 137:18<br><b>corrected</b><br>77:3<br><b>correcting</b><br>61:15<br><b>corrections</b><br>147:8, 148:5,<br>149:1<br><b>correctly</b><br>32:12, 49:13 | <b>corrugated</b><br>17:13, 17:14,<br>17:17, 17:18<br><b>could</b><br>7:13, 11:3,<br>16:12, 26:3,<br>28:12, 33:1,<br>33:2, 42:11,<br>48:16, 52:12,<br>62:17, 67:3,<br>75:1, 76:8,<br>79:20, 100:19,<br>103:8, 105:14,<br>107:16, 109:5,<br>109:12, 111:9,<br>111:11, 112:6,<br>117:1<br><b>couldn't</b><br>52:14<br><b>council</b><br>144:9<br><b>counsel</b><br>3:1, 4:1,<br>76:21, 140:13,<br>140:17, 145:13<br><b>county</b><br>144:5<br><b>couple</b><br>8:15, 22:20,<br>131:17, 141:12<br><b>course</b><br>15:2, 16:6,<br>16:10, 17:3,<br>21:6, 23:10,<br>23:14, 25:17,<br>26:6, 28:14,<br>38:9<br><b>courses</b><br>26:7<br><b>court</b><br>2:9, 2:10,<br>144:8, 144:12,<br>144:16, 144:22,<br>144:34, 146:13<br><b>cover</b><br>42:8, 94:1,<br>144:24<br><b>create</b><br>53:21, 54:11, |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 72:3<br><b>creating</b><br>41:5, 73:20<br><b>critique</b><br>79:22<br><b>cross-examination</b><br>142:12<br><b>cross-linking</b><br>80:8<br><b>csr</b><br>1:33, 146:14<br><b>cured</b><br>92:12<br><b>curriculum</b><br>6:15, 15:3,<br>27:13, 27:14<br><b>customary</b><br>144:27<br><b>customers</b><br>35:14, 35:20,<br>35:22<br><b>cv</b><br>8:2, 22:19,<br>23:3, 23:5,<br>23:8, 26:12,<br>29:22, 32:17,<br>33:14, 37:6,<br>37:8, 73:11<br><b>cyclic</b><br>52:13<br><b>cylinders</b><br>16:16 | 146:9, 149:21<br><b>days</b><br>141:13, 141:19<br><b>deal</b><br>46:11<br><b>decays</b><br>132:16<br><b>decided</b><br>26:19, 27:6,<br>55:22<br><b>decisions</b><br>27:13<br><b>declaration</b><br>6:12, 9:10,<br>9:18, 10:4,<br>10:13, 10:15,<br>10:22, 11:6,<br>11:9, 11:13,<br>11:14, 11:22,<br>12:19, 13:14,<br>14:13, 14:17,<br>14:18, 14:22,<br>23:13, 42:8,<br>44:15, 45:3,<br>45:6, 45:16,<br>51:9, 53:10,<br>53:12, 54:19,<br>55:6, 55:9,<br>55:13, 59:12,<br>59:18, 60:2,<br>62:16, 64:3,<br>67:11, 67:16,<br>68:17, 68:19,<br>69:3, 70:16,<br>70:19, 71:5,<br>71:19, 72:17,<br>74:16, 76:5,<br>76:12, 77:2,<br>80:3, 81:12,<br>82:13, 83:12,<br>84:9, 85:11,<br>85:16, 89:22,<br>91:2, 94:8,<br>96:3, 96:8,<br>97:7, 97:9,<br>97:12, 98:4,<br>98:9, 101:20,<br>108:20, 113:1, | 115:6, 115:9,<br>116:2, 116:6,<br>117:3, 117:21,<br>118:11, 119:1,<br>120:13, 121:8,<br>122:6, 122:17,<br>123:19, 131:7,<br>132:12, 134:13,<br>134:16, 135:6,<br>136:22, 137:7,<br>137:12, 137:17,<br>138:22, 142:1,<br>142:2<br><b>dedicated</b><br>24:7<br><b>define</b><br>65:15, 65:16<br><b>defined</b><br>136:2<br><b>defines</b><br>47:11, 47:12<br><b>definition</b><br>12:9, 12:13,<br>47:9, 47:17,<br>47:21, 48:9,<br>48:12, 48:13,<br>49:20, 53:13,<br>54:7, 54:8,<br>55:12, 56:6,<br>57:8, 58:4,<br>58:16, 62:15,<br>62:18, 63:7,<br>66:2<br><b>definitions</b><br>62:3<br><b>delaminate</b><br>76:8<br><b>delamination</b><br>74:7, 74:15,<br>75:13, 75:15,<br>76:15, 76:16,<br>76:22, 77:9,<br>77:13, 78:4,<br>78:6, 78:19<br><b>demanding</b><br>15:18<br><b>denotation</b><br>127:2, 129:8 | <b>dental</b><br>13:10, 13:20,<br>14:1, 32:11,<br>32:13, 32:16,<br>39:21, 40:5,<br>40:9, 40:17,<br>41:1, 121:14,<br>136:8<br><b>dep</b><br>148:3<br><b>department</b><br>15:10, 15:20,<br>24:20, 24:21,<br>26:13, 26:20,<br>26:22, 27:4,<br>27:8, 27:20,<br>27:21, 33:15,<br>34:19, 36:18,<br>38:2<br><b>depending</b><br>13:13, 67:4<br><b>deponent</b><br>147:1, 148:4,<br>149:19<br><b>depos</b><br>144:13, 144:14,<br>144:17, 144:21,<br>144:27<br><b>deposed</b><br>8:13<br><b>deposition</b><br>1:28, 2:4, 6:4,<br>6:20, 7:20,<br>10:16, 22:16,<br>24:3, 113:10,<br>140:20, 141:1,<br>142:5, 143:3,<br>144:3, 144:17,<br>144:18, 144:25,<br>145:7, 145:8,<br>145:9, 145:14,<br>145:16, 147:5<br><b>describe</b><br>24:2, 94:13<br><b>describes</b><br>81:4, 125:1,<br>125:6, 131:10,<br>132:12, 134:16 |
| <b>D</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>danger</b><br>78:3, 78:6<br><b>dash</b><br>130:14<br><b>data</b><br>137:5, 138:2<br><b>date</b><br>23:12, 147:18,<br>148:3<br><b>dates</b><br>38:22<br><b>daughter's</b><br>136:16<br><b>day</b><br>60:21, 141:7,                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>describing</b><br>81:4<br><b>description</b><br>6:5, 12:6,<br>12:15, 56:22,<br>135:5, 135:22<br><b>design</b><br>13:8, 13:18,<br>15:3, 15:7,<br>36:22, 37:1<br><b>designated</b><br>132:22<br><b>designing</b><br>13:22, 17:13,<br>17:19, 18:14,<br>19:6<br><b>desired</b><br>134:8<br><b>despite</b><br>91:8<br><b>detail</b><br>132:13<br><b>detailed</b><br>19:10, 79:18,<br>95:14<br><b>details</b><br>92:21<br><b>determining</b><br>135:19, 136:7,<br>136:13<br><b>develop</b><br>17:7, 19:1,<br>27:9, 33:8<br><b>developing</b><br>19:2, 19:17,<br>30:2, 39:15<br><b>development</b><br>15:3, 15:8,<br>15:14, 15:17,<br>24:11, 29:21,<br>33:16, 34:20,<br>36:12, 39:14,<br>87:18<br><b>device</b><br>20:2<br><b>devices</b><br>16:22<br><b>diacid</b><br>49:10, 49:15, | 50:2, 52:10,<br>53:6<br><b>diacids</b><br>50:4, 50:8,<br>50:22<br><b>dicarboxylic</b><br>51:14, 51:15,<br>53:16, 53:17,<br>53:22, 54:1,<br>54:12, 54:13,<br>57:22<br><b>differ</b><br>66:18, 67:4<br><b>differences</b><br>74:18<br><b>different</b><br>13:4, 15:18,<br>15:21, 18:3,<br>19:4, 20:1,<br>20:5, 20:21,<br>25:21, 33:3,<br>34:10, 34:19,<br>34:21, 41:4,<br>41:22, 42:10,<br>46:3, 47:15,<br>48:1, 48:13,<br>48:21, 49:21,<br>50:3, 50:4,<br>50:21, 50:22,<br>52:3, 53:4,<br>57:14, 61:17,<br>61:18, 62:22,<br>63:12, 64:15,<br>64:18, 65:7,<br>66:11, 66:16,<br>70:5, 79:12,<br>86:7, 89:12,<br>89:19, 93:21,<br>117:13, 118:4,<br>120:1, 120:21,<br>121:17, 122:20,<br>123:8, 132:15<br><b>differentiate</b><br>44:7<br><b>differently</b><br>65:22<br><b>difficult</b><br>25:5 | <b>diffusion</b><br>80:7, 80:16,<br>82:8, 83:19,<br>84:13, 85:3,<br>85:21<br><b>diol</b><br>49:10, 49:14,<br>50:1, 51:15,<br>52:10, 53:5,<br>53:17, 54:1,<br>54:13, 57:22<br><b>diols</b><br>50:3, 50:8,<br>50:21<br><b>direct</b><br>46:9, 47:3,<br>72:6, 73:8,<br>73:22, 74:11,<br>75:18, 77:15,<br>79:15, 84:17,<br>85:6, 87:4,<br>89:6, 90:7,<br>95:2, 95:12,<br>96:6, 98:20,<br>109:8, 111:14,<br>112:10, 115:4,<br>115:22, 117:19,<br>120:11, 122:4,<br>124:5, 127:9,<br>130:22<br><b>directed</b><br>55:19<br><b>direction</b><br>27:10, 35:6,<br>64:22, 134:8<br><b>directions</b><br>64:15<br><b>director</b><br>23:18, 24:17,<br>26:12, 26:17<br><b>disadvantages</b><br>91:3<br><b>disagree</b><br>81:15, 81:20<br><b>disclosure</b><br>144:10<br><b>discount</b><br>144:29 | <b>discuss</b><br>55:7, 75:12,<br>95:17, 137:6,<br>140:12, 140:16<br><b>discussed</b><br>57:1, 63:20,<br>74:13, 78:21,<br>96:10, 102:13,<br>105:6, 129:21<br><b>discussing</b><br>56:14, 73:2,<br>73:11, 88:13,<br>108:19, 110:8<br><b>discussion</b><br>55:18, 56:1,<br>56:18, 58:12,<br>63:18, 72:20,<br>79:6, 79:18,<br>91:15, 91:18,<br>91:22, 94:5,<br>94:18, 95:14,<br>140:15<br><b>dismissed</b><br>25:13<br><b>dispose</b><br>20:20<br><b>disposed</b><br>68:6, 118:14,<br>118:19, 120:3,<br>124:20<br><b>dissertation</b><br>38:16, 63:21<br><b>distance</b><br>133:22, 134:3<br><b>division</b><br>138:5<br><b>doctor</b><br>45:22<br><b>document</b><br>113:15, 116:17,<br>123:6<br><b>documents</b><br>123:22, 141:2,<br>141:20, 141:22,<br>142:4, 142:5<br><b>doing</b><br>15:12, 27:20,<br>28:13, 29:14, |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 29:20, 34:9,<br>35:19, 36:20,<br>36:22, 37:15,<br>87:19, 88:6<br><b>domestic</b><br>24:9<br><b>done</b><br>29:3, 61:18,<br>79:18<br><b>down</b><br>26:19, 26:22,<br>98:8, 98:12,<br>126:6, 128:11<br><b>dr</b><br>7:11, 7:19,<br>8:11, 8:13, 9:8,<br>9:14, 10:4,<br>10:19, 11:8,<br>11:17, 11:21,<br>12:5, 12:8,<br>12:12, 12:15,<br>12:21, 13:3,<br>14:9, 14:12,<br>14:21, 18:1,<br>21:8, 22:19,<br>23:2, 37:5,<br>40:12, 41:9,<br>49:12, 51:8,<br>57:4, 59:2,<br>60:6, 62:2,<br>64:2, 67:15,<br>68:11, 69:11,<br>71:21, 72:12,<br>75:21, 76:4,<br>79:7, 79:22,<br>80:4, 80:6,<br>80:15, 80:20,<br>82:7, 83:18,<br>88:14, 90:21,<br>91:19, 92:6,<br>95:8, 96:9,<br>97:4, 97:11,<br>100:16, 101:19,<br>103:11, 103:20,<br>105:14, 107:17,<br>108:18, 112:22,<br>113:14, 116:5,<br>116:16, 117:2, | 119:14, 121:13,<br>123:21, 128:1,<br>130:18, 131:6,<br>134:12, 136:21,<br>137:19, 140:8,<br>140:10, 140:19,<br>142:2, 142:11,<br>142:19<br><b>drafted</b><br>57:8, 58:4<br><b>drafting</b><br>55:11<br><b>draw</b><br>64:12<br><b>duly</b><br>7:6, 145:7<br><b>dunner</b><br>2:7, 3:5, 3:12,<br>144:15, 145:18<br><b>during</b><br>14:17, 26:1,<br>29:5, 30:14,<br>30:16, 31:9,<br>140:11<br><hr/> <b>E</b> <hr/> <b>e-b-n-e-s-a-j-j--</b><br><b>a-d</b><br>81:3<br><b>e-mail</b><br>3:10, 3:18,<br>4:10, 4:12<br><b>each</b><br>12:7, 51:13,<br>53:15, 87:2,<br>87:11, 89:3,<br>89:9, 89:13,<br>90:5, 131:9,<br>139:12<br><b>earlier</b><br>7:16, 70:17,<br>71:21, 113:4,<br>115:17<br><b>early</b><br>108:13<br><b>easier</b><br>24:4, 131:20<br><b>eat</b><br>108:10 | <b>ebnesajjad</b><br>81:3<br><b>education</b><br>18:22<br><b>efficient</b><br>27:2<br><b>eight</b><br>42:9<br><b>either</b><br>50:7, 142:20<br><b>elastic</b><br>68:22<br><b>elastomer</b><br>68:7, 104:14,<br>106:17, 110:20,<br>118:5, 120:22,<br>122:21<br><b>elastomers</b><br>111:1<br><b>else</b><br>47:20, 61:8,<br>91:21, 141:9<br><b>embodied</b><br>117:4, 119:8<br><b>embodiments</b><br>126:7, 128:12<br><b>embody</b><br>97:16<br><b>employed</b><br>146:3<br><b>employee</b><br>88:3<br><b>enable</b><br>35:14<br><b>encompasses</b><br>100:17, 100:22,<br>103:12<br><b>encouraged</b><br>28:14<br><b>ended</b><br>30:7, 35:3<br><b>engage</b><br>29:10<br><b>engaging</b><br>29:8<br><b>engineering</b><br>18:16, 36:22<br><b>enjoyed</b><br>17:21 | <b>enough</b><br>36:18, 43:2<br><b>ensure</b><br>11:13<br><b>entire</b><br>11:12, 16:3<br><b>entirely</b><br>137:7<br><b>entitled</b><br>83:15, 85:13<br><b>environment</b><br>18:12<br><b>equipment</b><br>27:16, 30:22,<br>35:18, 36:2,<br>79:4<br><b>errata</b><br>148:1<br><b>error</b><br>60:22, 61:16<br><b>errors</b><br>61:6<br><b>escaped</b><br>60:19<br><b>especially</b><br>25:11<br><b>esq</b><br>3:9, 3:17, 4:9,<br>4:11<br><b>ester</b><br>52:20, 53:1<br><b>esterified</b><br>51:14, 52:10,<br>53:17, 54:1,<br>54:13<br><b>et</b><br>40:2<br><b>evaluating</b><br>92:3<br><b>even</b><br>16:17, 19:21,<br>21:1, 40:12,<br>42:11, 58:20,<br>75:13, 86:10,<br>87:21, 109:19,<br>136:20<br><b>ever</b><br>7:19, 73:5, |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 89:1<br><b>every</b><br>37:6<br><b>everybody</b><br>37:1<br><b>everything</b><br>11:16, 16:14,<br>38:5<br><b>evidence</b><br>70:20, 81:21,<br>82:1<br><b>ex</b><br>134:18, 134:22,<br>135:12<br><b>exactly</b><br>81:4<br><b>examination</b><br>5:5, 7:9<br><b>examined</b><br>7:7<br><b>example</b><br>64:19, 128:2,<br>128:17<br><b>except</b><br>96:14, 96:17<br><b>exception</b><br>147:7<br><b>excuse</b><br>89:5<br><b>exerting</b><br>132:20, 133:10<br><b>exhibit</b><br>6:5, 6:7, 6:12,<br>6:15, 6:20,<br>10:16, 10:22,<br>11:4, 22:16,<br>22:21, 23:2,<br>23:17, 28:5,<br>38:18, 40:3,<br>70:14, 71:13,<br>113:10, 113:13,<br>116:14, 116:20,<br>119:12, 119:15,<br>142:8<br><b>exhibits</b><br>6:1, 6:22,<br>142:6<br><b>exist</b><br>21:1 | <b>existence</b><br>50:7<br><b>exists</b><br>24:16, 109:12<br><b>expected</b><br>8:6<br><b>experience</b><br>13:8, 13:13,<br>13:17, 13:22,<br>14:3, 14:10,<br>16:5, 17:21,<br>20:12, 21:17,<br>23:15, 23:17,<br>24:18, 24:19,<br>25:17, 25:20,<br>37:4, 40:13,<br>40:16, 73:4,<br>86:18, 88:21,<br>94:19, 94:20,<br>96:1, 135:19,<br>136:7, 136:13,<br>136:16<br><b>expert</b><br>29:11, 29:15,<br>85:14, 96:1<br><b>expertise</b><br>15:16, 17:4,<br>17:7, 20:8<br><b>expires: —</b><br>149:23<br><b>explain</b><br>60:13, 88:16<br><b>explanation</b><br>81:8, 81:9<br><b>explore</b><br>95:22<br><b>explorer</b><br>3:13<br><b>exposed</b><br>25:18<br><b>expressed</b><br>77:17, 77:20,<br>80:18, 80:19<br><b>extent</b><br>26:3, 34:6,<br>139:14<br><b>extremely</b><br>15:17, 36:3, | 79:2, 86:4<br><b>extruding</b><br>92:7, 96:19<br><b>extrusion</b><br>35:17<br><hr/> <b>F</b> <hr/> <b>fact</b><br>19:9, 30:5,<br>52:19, 83:7,<br>83:8, 88:14,<br>91:8, 139:7<br><b>faculty</b><br>27:8, 28:14,<br>38:10<br><b>fall</b><br>112:19<br><b>falls</b><br>88:1, 139:20<br><b>familiar</b><br>20:19, 42:14,<br>43:9, 113:14,<br>116:16, 119:14<br><b>farabow</b><br>2:6, 3:4, 3:11,<br>144:15, 145:18<br><b>feature</b><br>130:20<br><b>felt</b><br>13:11, 57:19<br><b>few</b><br>36:14, 111:10<br><b>fewer</b><br>134:8<br><b>fiber</b><br>39:14<br><b>fibers</b><br>39:15<br><b>field</b><br>15:18, 15:20,<br>15:22, 18:2,<br>19:11, 19:13,<br>20:7, 85:10<br><b>fields</b><br>15:19, 18:19,<br>18:21, 20:5<br><b>fifth</b><br>4:5 | <b>fighting</b><br>25:15<br><b>figure</b><br>124:9, 124:15,<br>125:8, 125:16,<br>129:19<br><b>file</b><br>1:35<br><b>filed</b><br>11:18, 13:14,<br>14:13, 138:7<br><b>filings</b><br>142:6<br><b>film</b><br>20:9, 20:22,<br>21:4, 24:12,<br>34:11, 35:11,<br>35:21, 36:9,<br>36:17, 73:20,<br>92:7, 96:19<br><b>films</b><br>20:17, 30:21,<br>31:1, 31:3,<br>31:4, 33:16,<br>33:19, 34:2,<br>34:5, 34:8,<br>34:11, 34:15,<br>34:20, 35:9,<br>35:10, 35:20,<br>36:5, 36:6,<br>36:8, 37:11,<br>37:14, 41:5,<br>73:17<br><b>final</b><br>59:13<br><b>financial</b><br>144:28<br><b>financially</b><br>146:5<br><b>find</b><br>147:8<br><b>finish</b><br>9:4, 96:16<br><b>finnegan</b><br>2:6, 3:4, 3:11,<br>144:15, 145:18<br><b>firms</b><br>29:15 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>first</b><br>7:6, 18:5,<br>23:17, 28:4,<br>38:14, 39:9,<br>39:12, 47:11,<br>47:12, 49:15,<br>60:16, 65:17,<br>70:6, 76:22,<br>95:3, 104:9,<br>106:9, 106:10,<br>118:13, 120:2,<br>120:3, 121:18,<br>123:10, 124:21,<br>137:22<br><b>five-minute</b><br>108:15, 142:16<br><b>flexible</b><br>23:19, 23:22,<br>24:8<br><b>flexural</b><br>70:9, 71:1<br><b>flip</b><br>102:3<br><b>focus</b><br>15:7, 34:18,<br>34:22<br><b>focused</b><br>15:12, 16:2,<br>30:18<br><b>foil</b><br>21:2<br><b>following</b><br>144:9<br><b>follows</b><br>7:7<br><b>food</b><br>26:13, 26:20,<br>26:21, 27:4,<br>32:1, 32:6,<br>108:10<br><b>force</b><br>132:20, 133:10<br><b>forced</b><br>9:1<br><b>forces</b><br>131:11<br><b>foregoing</b><br>147:4 | <b>forgot</b><br>22:14<br><b>formed</b><br>18:8, 46:3,<br>47:14, 48:1,<br>48:12, 48:20,<br>49:10, 51:12,<br>51:13, 53:15,<br>53:21, 54:11,<br>62:22, 63:12,<br>68:5, 68:7<br><b>forming</b><br>78:14, 88:22,<br>92:9, 93:10,<br>129:17<br><b>formula</b><br>65:22<br><b>forth</b><br>145:7<br><b>fortunate</b><br>30:12<br><b>found</b><br>50:20<br><b>foundation</b><br>42:6, 43:6,<br>44:2, 44:12,<br>45:14, 49:18,<br>51:4, 51:21,<br>52:16, 53:8,<br>54:3, 64:4,<br>66:22, 67:8,<br>72:6, 73:8,<br>74:11, 75:18,<br>76:19, 78:8,<br>85:5<br><b>four</b><br>9:10, 10:14,<br>10:21, 38:14,<br>39:9, 64:11,<br>109:1<br><b>fourth</b><br>39:11, 118:3,<br>118:9, 118:15,<br>118:19, 120:17,<br>120:21, 121:5,<br>122:12, 122:15,<br>122:20, 123:2<br><b>friday</b><br>1:31, 7:1, | 145:20, 147:6<br><b>front</b><br>10:22, 21:10,<br>123:22<br><b>fuel</b><br>32:7<br><b>full</b><br>7:13, 49:2,<br>49:3, 74:3<br><b>fulton</b><br>144:5<br><b>fun</b><br>25:16<br><b>functional</b><br>19:7<br><b>fundamental</b><br>19:5<br><b>fundamentally</b><br>18:5<br><b>funny</b><br>65:15<br><b>further</b><br>45:2, 118:3,<br>121:15, 134:7,<br>142:20, 145:12,<br>145:16, 146:1<br><hr/> <b>G</b><br><hr/> <b>ga</b><br>1:33, 2:10<br><b>garrett</b><br>2:7, 3:5, 3:12,<br>144:15, 145:18<br><b>gas</b><br>31:8<br><b>gave</b><br>16:6, 26:7,<br>48:8, 56:6<br><b>general</b><br>47:20, 48:9,<br>62:17, 63:7,<br>63:21, 67:12,<br>75:6, 85:18,<br>86:4, 92:20,<br>93:1, 96:19,<br>129:17, 132:14<br><b>generally</b><br>47:17 | <b>generate</b><br>131:12<br><b>gentleman</b><br>27:3<br><b>gentlemen</b><br>61:20<br><b>geometric</b><br>66:4<br><b>geometrically</b><br>66:1<br><b>georgia</b><br>1:30, 2:8, 7:1,<br>28:6, 144:3,<br>144:9, 144:12,<br>145:4, 145:19<br><b>germany</b><br>33:21<br><b>getting</b><br>44:14, 58:7,<br>87:16<br><b>give</b><br>9:17, 53:13,<br>63:21, 76:10,<br>81:7, 113:7<br><b>given</b><br>54:7, 85:13,<br>144:29, 145:10<br><b>gives</b><br>125:20, 127:18<br><b>go</b><br>8:15, 11:4,<br>18:20, 19:2,<br>19:4, 33:14,<br>36:14, 37:5,<br>45:1, 56:1,<br>64:14, 67:19,<br>76:14, 126:6,<br>131:2, 134:8,<br>142:18<br><b>goes</b><br>19:6, 20:8,<br>80:22<br><b>going</b><br>17:16, 18:11,<br>18:20, 22:20,<br>26:18, 27:14,<br>27:15, 30:6,<br>34:13, 45:2, |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 46:14, 58:21,<br>67:10, 83:17,<br>84:5, 95:13,<br>107:16, 108:3,<br>113:7, 116:13,<br>119:11, 134:9,<br>134:10<br><b>good</b><br>7:11, 7:12,<br>25:17, 25:20,<br>30:12, 32:9,<br>37:3, 59:4,<br>66:2, 83:1,<br>139:22, 140:1,<br>141:15<br><b>goodrich</b><br>4:4<br><b>grab</b><br>137:19<br><b>graduate</b><br>37:22, 38:11<br><b>granted</b><br>19:9<br><b>graphite</b><br>39:14<br><b>greater</b><br>44:9, 70:9,<br>71:1, 103:8,<br>133:5<br><b>greatly</b><br>17:3<br><b>greenville</b><br>28:15<br><b>group</b><br>34:9, 36:22,<br>42:22, 43:1,<br>64:16, 64:17,<br>64:20<br><b>guess</b><br>16:16, 32:6,<br>34:1, 65:1,<br>69:6, 69:12,<br>112:2, 136:15<br><b>guide</b><br>16:8, 17:5,<br>17:8<br><b>guiding</b><br>15:13 | <b>guys</b><br>9:22, 141:3<br><hr/> <b>H</b><br><hr/> <b>hall</b><br>27:1<br><b>hand</b><br>22:19, 113:7,<br>116:13, 119:11,<br>146:8<br><b>happen</b><br>16:17, 91:17<br><b>happened</b><br>38:7, 59:20<br><b>happens</b><br>36:13, 78:10,<br>93:20<br><b>happy</b><br>9:6, 107:18,<br>107:20<br><b>hard</b><br>68:5, 70:8,<br>70:21, 71:5,<br>98:9, 99:16,<br>100:18, 100:22,<br>102:5, 103:12,<br>103:17, 110:8,<br>112:16, 114:1,<br>114:5, 114:18,<br>114:22, 115:13,<br>115:18, 124:18,<br>124:20, 125:1,<br>125:21, 126:8,<br>126:9, 126:10,<br>126:14, 127:13,<br>127:20, 128:2,<br>128:4, 128:6,<br>129:3<br><b>head</b><br>33:15, 34:20,<br>42:12, 97:8,<br>132:11<br><b>heading</b><br>70:7, 105:16,<br>105:19, 105:22,<br>106:5, 138:4<br><b>heard</b><br>66:3, 110:22 | <b>heat</b><br>35:17, 95:10,<br>96:4<br><b>heavily</b><br>18:15, 35:13<br><b>held</b><br>2:5<br><b>helpful</b><br>12:1, 50:17,<br>98:21<br><b>helping</b><br>27:13, 38:10<br><b>henderson</b><br>2:6, 3:4, 3:11,<br>144:15, 145:18<br><b>here</b><br>8:3, 9:9, 9:18,<br>24:6, 29:18,<br>35:15, 36:14,<br>44:15, 46:12,<br>46:14, 49:6,<br>49:7, 52:2,<br>55:18, 56:15,<br>57:6, 61:6,<br>65:16, 72:10,<br>74:13, 75:12,<br>76:14, 77:6,<br>78:21, 79:6,<br>80:20, 84:11,<br>88:13, 90:15,<br>90:20, 93:3,<br>100:2, 105:19,<br>106:1, 133:20,<br>144:13<br><b>hereby</b><br>145:4, 147:3<br><b>hereinbefore</b><br>145:7<br><b>hereunto</b><br>146:8<br><b>high</b><br>22:13<br><b>high-temperature</b><br>22:12, 34:8<br><b>highest</b><br>25:18<br><b>himself</b><br>80:22, 81:6, | 81:14, 83:6,<br>83:7<br><b>history</b><br>139:16<br><b>hoechst</b><br>30:5, 31:2,<br>34:3, 34:4<br><b>hold</b><br>29:16<br><b>holding</b><br>85:13<br><b>homopolymer</b><br>41:16, 41:17<br><b>hour</b><br>58:22, 107:16<br><b>howarth</b><br>3:17<br><b>howarth@finnegan</b><br>3:18<br><b>htpe</b><br>22:3<br><b>hud</b><br>21:2<br><b>human</b><br>26:21<br><b>hundreds</b><br>110:16, 110:18,<br>111:5<br><b>hydrogen</b><br>64:20<br><hr/> <b>I</b><br><hr/> <b>idea</b><br>65:20<br><b>identified</b><br>6:21, 10:17,<br>22:17, 113:11<br><b>illustrated</b><br>97:16<br><b>implication</b><br>48:18<br><b>important</b><br>13:11, 39:17,<br>43:3, 43:18,<br>79:7, 81:10,<br>81:11, 132:18<br><b>impose</b><br>102:14, 102:22, |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 103:4, 104:16,<br>104:22, 105:8,<br>107:2, 107:6,<br>107:12<br><b>improve</b><br>131:13<br><b>improved</b><br>131:18, 132:3,<br>133:4, 133:15,<br>136:22<br><b>in-person</b><br>141:18<br><b>inappropriate</b><br>45:1<br><b>inc</b><br>1:12, 145:13<br><b>include</b><br>56:19, 124:18,<br>125:12, 125:17,<br>128:3, 128:13,<br>128:18<br><b>included</b><br>25:13, 56:21<br><b>includes</b><br>35:10, 75:21,<br>85:17, 140:15<br><b>including</b><br>91:5, 132:3,<br>135:15<br><b>inconsistent</b><br>60:16<br><b>increase</b><br>135:15<br><b>independent</b><br>91:21, 97:17,<br>109:22, 117:3,<br>119:8, 137:15<br><b>index</b><br>6:1<br><b>indicates</b><br>126:20, 127:2<br><b>indicating</b><br>130:19<br><b>indications</b><br>126:13<br><b>individual</b><br>41:13, 44:4,<br>134:1 | <b>individuals</b><br>25:12, 141:10<br><b>industries</b><br>24:10, 29:4,<br>29:9<br><b>industry</b><br>20:10, 25:21,<br>28:2, 28:12,<br>29:5, 29:17,<br>30:13, 36:13,<br>39:13, 40:13<br><b>information</b><br>13:12, 68:16<br><b>initiation</b><br>78:19<br><b>installed</b><br>35:15<br><b>instead</b><br>50:9, 92:7,<br>93:10<br><b>instruct</b><br>127:5<br><b>instruction</b><br>127:11<br><b>intending</b><br>106:1<br><b>intention</b><br>62:1<br><b>inter</b><br>9:10<br><b>interact</b><br>18:11<br><b>interacted</b><br>35:13<br><b>interest</b><br>31:10<br><b>interested</b><br>34:7, 146:5<br><b>interesting</b><br>34:12<br><b>interfered</b><br>78:17<br><b>international</b><br>24:9<br><b>interpretation</b><br>103:10, 105:12,<br>112:12<br><b>invention</b><br>124:10, 124:17, | 130:20<br><b>invested</b><br>36:2<br><b>involve</b><br>93:10<br><b>involved</b><br>17:13, 18:14<br><b>involves</b><br>18:5, 18:6,<br>18:8, 18:9<br><b>involving</b><br>86:18<br><b>ipr</b><br>1:18, 1:19,<br>1:20, 1:21,<br>10:5, 10:8,<br>10:9, 10:21,<br>11:18, 116:15,<br>139:9<br><b>isomer</b><br>64:7, 66:19<br><b>isomerism</b><br>65:20, 66:3,<br>66:4<br><b>isomers</b><br>64:3<br><b>isotactic</b><br>65:5<br><b>issue</b><br>10:20, 16:18,<br>18:13, 46:11,<br>47:1, 47:2,<br>48:7, 52:1,<br>54:17, 60:3,<br>60:5, 61:22,<br>85:16, 86:10<br><b>issued</b><br>138:12<br><b>issues</b><br>16:20, 17:1,<br>17:19, 91:9<br><b>item</b><br>29:18<br><b>itself</b><br>101:4<br><hr/> <b>J</b> <hr/> <b>journal</b><br>37:7 | <b>judicial</b><br>144:9<br><b>justified</b><br>35:15, 75:5<br><hr/> <b>K</b> <hr/> <b>keep</b><br>134:10<br><b>kimmel</b><br>1:29, 2:5, 5:3,<br>6:3, 6:13, 6:16,<br>6:20, 7:5, 7:11,<br>7:15, 7:19,<br>8:11, 8:13, 9:8,<br>9:14, 10:4,<br>10:16, 10:19,<br>11:8, 11:17,<br>11:21, 14:9,<br>14:12, 14:21,<br>18:1, 21:8,<br>22:16, 22:19,<br>23:2, 37:5,<br>40:12, 41:9,<br>51:8, 59:2,<br>60:6, 62:2,<br>64:2, 67:15,<br>68:11, 69:11,<br>71:21, 76:4,<br>80:4, 92:6,<br>97:4, 97:11,<br>100:16, 101:19,<br>103:11, 103:20,<br>105:14, 107:17,<br>108:18, 112:22,<br>113:10, 113:14,<br>116:5, 116:16,<br>117:2, 119:14,<br>121:13, 123:21,<br>128:1, 130:18,<br>131:6, 134:12,<br>136:21, 137:19,<br>140:8, 140:10,<br>140:19, 142:11,<br>142:19, 144:5,<br>145:6, 145:17,<br>147:3, 147:17,<br>148:4<br><b>kind</b><br>29:15, 38:8, |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 39:10, 79:7,<br>95:14, 121:5<br><b>kinds</b><br>17:4, 20:4,<br>31:6, 32:8,<br>33:11, 34:5,<br>34:8, 42:10,<br>46:4, 47:15,<br>48:1, 48:13,<br>48:21, 49:21,<br>62:22, 63:12,<br>79:4, 88:8,<br>89:19<br><b>knew</b><br>27:5<br><b>know</b><br>8:1, 8:13,<br>8:14, 8:17, 9:1,<br>9:5, 12:2, 16:4,<br>16:11, 16:13,<br>16:14, 16:16,<br>16:20, 17:5,<br>17:7, 17:12,<br>17:14, 17:17,<br>18:15, 18:17,<br>19:8, 19:20,<br>20:8, 20:11,<br>20:20, 21:4,<br>25:15, 26:4,<br>27:16, 27:22,<br>28:13, 28:15,<br>29:14, 29:21,<br>30:6, 32:4,<br>32:8, 33:22,<br>35:8, 36:12,<br>37:16, 37:20,<br>37:21, 38:4,<br>38:8, 38:11,<br>39:18, 41:7,<br>42:9, 44:16,<br>44:18, 46:12,<br>46:17, 47:1,<br>49:6, 52:2,<br>61:6, 61:15,<br>61:19, 62:19,<br>63:17, 63:18,<br>65:14, 66:6,<br>67:12, 68:12, | 72:10, 73:17,<br>74:1, 74:12,<br>77:19, 78:21,<br>79:1, 79:19,<br>81:4, 85:20,<br>86:5, 87:6,<br>87:20, 88:1,<br>88:3, 89:22,<br>90:12, 95:16,<br>96:13, 97:4,<br>97:6, 103:16,<br>107:21, 108:11,<br>109:17, 109:18,<br>109:20, 110:18,<br>111:6, 132:11,<br>133:2, 134:5,<br>134:21<br><b>knowing</b><br>97:10<br><b>knowledge</b><br>69:5, 71:18,<br>87:17, 87:22,<br>114:7, 135:21<br><b>kyle</b><br>3:17, 3:18<br><hr/> <b>L</b> <hr/> <b>lab</b><br>19:2<br><b>label</b><br>125:20<br><b>labeled</b><br>113:18, 130:4,<br>130:8, 130:10,<br>130:13<br><b>labels</b><br>125:21, 126:1,<br>129:1, 129:2<br><b>laboratories</b><br>18:17, 18:18<br><b>laboratory</b><br>35:16<br><b>laminated</b><br>114:19, 115:1,<br>123:10, 128:4,<br>128:7, 128:20,<br>129:15, 129:16,<br>129:17 | <b>lamination</b><br>24:13, 35:17,<br>72:14, 73:1,<br>73:2, 74:19,<br>75:5, 75:8,<br>78:3, 78:11,<br>78:22, 81:2,<br>91:3, 91:11,<br>91:16, 92:2,<br>92:3, 92:8,<br>92:10, 92:17,<br>93:3, 93:18,<br>94:14, 94:21,<br>97:1<br><b>language</b><br>130:18<br><b>largest</b><br>21:19<br><b>last</b><br>11:3, 11:5,<br>15:6, 15:9,<br>60:21, 113:18,<br>116:19<br><b>later</b><br>131:17<br><b>law</b><br>29:15<br><b>layer</b><br>68:5, 70:8,<br>70:22, 71:5,<br>71:10, 71:18,<br>74:7, 80:9,<br>92:12, 92:13,<br>98:9, 98:13,<br>99:13, 99:16,<br>99:19, 99:22,<br>100:3, 100:7,<br>100:14, 100:18,<br>101:1, 101:8,<br>102:5, 102:8,<br>102:16, 103:13,<br>103:17, 104:9,<br>104:12, 104:18,<br>106:9, 106:10,<br>106:15, 106:16,<br>106:21, 107:3,<br>109:3, 109:6,<br>109:21, 110:4, | 110:8, 110:12,<br>110:20, 111:10,<br>112:17, 114:1,<br>114:5, 114:18,<br>114:22, 115:14,<br>115:19, 117:12,<br>117:16, 118:3,<br>118:9, 118:13,<br>118:14, 118:15,<br>118:19, 119:21,<br>120:1, 120:2,<br>120:3, 120:4,<br>120:17, 120:21,<br>121:1, 121:5,<br>121:15, 121:17,<br>121:18, 122:1,<br>122:12, 122:15,<br>122:20, 123:2,<br>123:7, 123:9,<br>123:10, 124:19,<br>124:20, 124:21,<br>124:22, 125:1,<br>125:21, 126:8,<br>126:10, 126:14,<br>127:13, 127:20,<br>128:3, 128:4,<br>128:14, 128:18,<br>129:3, 129:10,<br>130:10<br><b>layers</b><br>68:4, 68:6,<br>68:13, 73:19,<br>76:2, 76:5,<br>76:8, 78:16,<br>78:17, 79:12,<br>80:7, 83:20,<br>84:14, 85:3,<br>85:22, 86:19,<br>87:2, 87:10,<br>88:12, 89:2,<br>89:9, 89:12,<br>90:4, 92:12,<br>94:22, 99:1,<br>99:4, 99:7,<br>99:9, 100:1,<br>100:5, 100:10,<br>101:11, 101:15,<br>101:17, 102:11, |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 103:1, 103:4,<br>103:6, 103:15,<br>103:16, 103:18,<br>104:6, 105:1,<br>105:4, 105:5,<br>105:9, 107:6,<br>107:13, 111:19,<br>112:4, 112:7,<br>112:16, 114:2,<br>114:6, 114:19,<br>115:2, 115:14,<br>115:19, 120:8,<br>123:14, 124:19,<br>125:21, 126:1,<br>126:9, 128:3,<br>128:7, 128:14,<br>128:18, 128:19,<br>129:4, 129:14,<br>129:18, 130:1<br><b>lcr</b><br>1:34, 146:15<br><b>ldpe</b><br>22:5<br><b>lead</b><br>80:6, 80:16,<br>83:19, 84:13,<br>85:21<br><b>leading</b><br>82:8<br><b>leads</b><br>85:2<br><b>learn</b><br>17:5<br><b>learned</b><br>17:17, 17:18,<br>17:19, 31:3,<br>85:9, 88:3<br><b>learning</b><br>37:3<br><b>least</b><br>37:21, 51:10,<br>74:5, 103:16,<br>105:4, 109:22,<br>114:2, 115:14,<br>115:19, 117:3,<br>119:7, 128:14,<br>132:21<br><b>leave</b><br>46:14, 61:20, | 90:1<br><b>left</b><br>28:12, 29:5,<br>29:17, 35:3<br><b>left-hand</b><br>69:18<br><b>legal-related</b><br>29:14<br><b>length</b><br>43:2, 44:4,<br>44:9, 44:10<br><b>less</b><br>133:6<br><b>let's</b><br>24:4, 49:6,<br>65:1, 108:1,<br>142:15<br><b>level</b><br>12:20, 13:2,<br>13:5, 41:9<br><b>levels</b><br>25:18<br><b>licensed</b><br>2:10<br><b>limit</b><br>101:14<br><b>limitations</b><br>102:15, 103:4<br><b>limited</b><br>112:4, 136:16<br><b>line</b><br>36:17, 36:19,<br>37:6, 68:2,<br>68:3, 73:15,<br>73:16, 124:6,<br>124:11, 124:15,<br>126:7, 127:14,<br>127:16, 128:1,<br>128:11, 130:2,<br>130:4<br><b>liners</b><br>19:20, 19:22<br><b>lines</b><br>131:17<br><b>linkage</b><br>52:20, 53:1<br><b>linked</b><br>41:14 | <b>list</b><br>24:18, 28:4,<br>32:16, 37:8,<br>39:20, 40:1,<br>42:11, 93:3,<br>127:12<br><b>listed</b><br>10:22, 138:18,<br>147:7<br><b>lists</b><br>26:12<br><b>literal</b><br>112:11<br><b>litigation</b><br>144:30<br><b>little</b><br>70:4, 88:10,<br>95:15, 108:12,<br>126:6, 133:12<br><b>llc</b><br>1:6<br><b>llp</b><br>2:7, 3:5, 3:12,<br>144:15, 145:18<br><b>ln</b><br>148:6, 148:8,<br>148:10, 148:12,<br>148:14, 148:16,<br>148:18, 148:20,<br>149:2, 149:4,<br>149:6, 149:8,<br>149:10, 149:12,<br>149:14<br><b>located</b><br>99:22<br><b>logical</b><br>27:19, 66:7<br><b>long</b><br>39:19, 41:12,<br>41:14, 74:2,<br>87:21, 132:20,<br>133:11, 136:17,<br>136:20, 141:16<br><b>longer</b><br>133:15<br><b>look</b><br>24:4, 45:16,<br>49:19, 67:18, | 67:21, 69:11,<br>70:6, 78:9,<br>81:2, 98:6,<br>105:18, 114:8,<br>115:12, 117:8,<br>118:1, 118:12,<br>119:18, 120:15,<br>121:12, 122:8,<br>122:19, 123:5,<br>128:1, 128:11,<br>131:3, 132:16,<br>135:7, 137:22,<br>138:21<br><b>looked</b><br>31:7, 142:3<br><b>looking</b><br>31:6, 33:4,<br>33:11, 50:18,<br>76:13, 102:19<br><b>lot</b><br>15:11, 15:15,<br>15:18, 15:21,<br>16:12, 17:17,<br>17:18, 19:15,<br>22:9, 22:11,<br>26:4, 27:20,<br>30:7, 30:10,<br>31:13, 33:3,<br>35:14, 35:19,<br>37:17, 39:18,<br>41:10, 141:2,<br>141:20<br><b>lots</b><br>110:17, 110:18<br><b>lower</b><br>12:20<br><b>lunch</b><br>108:3, 108:6,<br>140:2<br><hr/> <b>M</b> <hr/> <b>machine</b><br>74:4, 92:11<br><b>macro</b><br>17:1<br><b>made</b><br>11:15, 34:5,<br>41:13, 41:17, |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 41:20, 59:9,<br>62:7, 79:11,<br>95:4, 97:5,<br>97:10, 112:7,<br>134:18, 144:24<br><b>major</b><br>32:18, 34:4<br><b>make</b><br>20:18, 21:10,<br>27:13, 31:3,<br>33:10, 40:22,<br>46:18, 49:14,<br>49:16, 51:18,<br>52:4, 52:12,<br>53:3, 55:22,<br>59:8, 59:15,<br>60:7, 60:9,<br>60:14, 62:18,<br>63:7, 67:3,<br>68:13, 86:11,<br>86:12, 89:1,<br>93:18, 94:3,<br>95:8, 95:20,<br>97:1, 104:17,<br>109:3, 109:6,<br>124:8, 127:6,<br>136:10, 144:9<br><b>makes</b><br>50:8, 52:21,<br>88:14, 93:20<br><b>making</b><br>19:19, 20:2,<br>20:16, 36:17,<br>58:4, 73:15,<br>74:8, 79:9,<br>81:9, 83:3,<br>117:4, 117:5<br><b>man</b><br>25:13<br><b>manage</b><br>25:4<br><b>management</b><br>35:12<br><b>manager</b><br>34:14, 34:19,<br>35:1, 36:5<br><b>managing</b><br>33:22 | <b>manufacture</b><br>13:8, 13:18,<br>24:13<br><b>manufacturing</b><br>14:1, 24:14,<br>35:7<br><b>many</b><br>7:22, 8:14,<br>18:3, 18:9,<br>21:6, 21:18,<br>25:20, 42:2,<br>73:19, 101:15,<br>109:5, 109:18,<br>110:12, 111:3,<br>111:17, 111:18<br><b>march</b><br>9:1<br><b>marked</b><br>113:13, 116:14,<br>119:12<br><b>market</b><br>20:15, 21:4<br><b>marketing</b><br>19:3, 35:8,<br>35:13<br><b>marriage</b><br>146:3<br><b>match</b><br>136:1, 136:5,<br>136:12, 136:13<br><b>material</b><br>18:9, 31:12,<br>33:5, 68:6,<br>68:8, 68:21,<br>69:1, 112:16,<br>128:14, 132:4,<br>132:15, 133:15<br><b>materials</b><br>15:14, 15:16,<br>18:6, 18:7,<br>19:2, 19:17,<br>88:8, 127:13,<br>127:19, 127:20,<br>129:18, 138:19,<br>139:8<br><b>matt</b><br>141:7<br><b>matter</b><br>48:4, 84:22, | 85:18, 141:19,<br>146:6<br><b>maybe</b><br>45:15, 61:7,<br>61:14, 71:8<br><b>mean</b><br>13:17, 19:16,<br>20:8, 21:18,<br>23:8, 33:5,<br>36:17, 37:13,<br>38:1, 38:5,<br>39:9, 42:7,<br>43:11, 44:13,<br>50:13, 51:22,<br>52:17, 56:13,<br>56:15, 56:22,<br>57:12, 58:19,<br>60:14, 67:9,<br>67:11, 72:8,<br>72:10, 79:16,<br>79:19, 86:3,<br>87:5, 87:13,<br>87:15, 89:17,<br>93:6, 94:11,<br>98:22, 106:5,<br>109:10, 111:17,<br>112:11, 133:1,<br>134:4, 134:5,<br>139:1<br><b>meaning</b><br>129:2<br><b>means</b><br>20:17, 44:3,<br>46:3, 47:14,<br>47:22, 62:22,<br>63:11, 88:16,<br>105:4, 129:17<br><b>meant</b><br>48:19<br><b>measure</b><br>133:21<br><b>measuring</b><br>14:10<br><b>mechanical</b><br>18:16<br><b>medical</b><br>16:22, 20:2<br><b>medley</b><br>4:11, 141:6 | <b>meet</b><br>141:9, 143:1<br><b>meeting</b><br>141:12<br><b>members</b><br>38:10<br><b>mentioned</b><br>10:6, 18:1,<br>19:12, 22:10,<br>30:17, 43:13,<br>50:15, 55:14,<br>58:16, 62:6,<br>62:11, 63:8,<br>64:2, 70:17,<br>86:18, 100:3,<br>110:19, 133:15,<br>136:4, 141:10,<br>141:12<br><b>mentoring</b><br>17:3<br><b>merge</b><br>26:19<br><b>met</b><br>7:16, 141:3,<br>141:16<br><b>method</b><br>79:9, 113:22,<br>114:17, 117:5,<br>117:12, 118:2,<br>118:13<br><b>michael</b><br>4:9<br><b>micro</b><br>16:21<br><b>microfilm</b><br>21:2<br><b>microphones</b><br>16:14<br><b>middle</b><br>9:3, 102:4,<br>130:10<br><b>might</b><br>24:3, 31:12,<br>65:10, 90:5,<br>113:6, 144:24<br><b>miller</b><br>31:13<br><b>million</b><br>35:4, 35:16 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>miscellaneous</b><br>34:2<br><b>mischaracterizes</b><br>84:1<br><b>mislabeled</b><br>106:7<br><b>misstates</b><br>61:4, 74:22,<br>81:18, 91:13<br><b>mixed</b><br>59:22<br><b>mixing</b><br>80:7, 83:20,<br>84:14, 85:3,<br>85:21<br><b>modulus</b><br>70:9, 71:1<br><b>molecular</b><br>80:7, 80:16,<br>82:8, 83:19,<br>84:13, 85:2,<br>85:21<br><b>molecule</b><br>64:21, 65:9,<br>65:21, 66:9,<br>66:10, 66:18<br><b>molecules</b><br>41:13, 66:12<br><b>moment</b><br>12:1<br><b>money</b><br>33:10<br><b>monomer</b><br>41:18, 41:21,<br>43:1, 44:5,<br>46:4, 49:22,<br>51:12, 51:13,<br>52:4, 52:5,<br>52:6, 52:8,<br>53:15, 67:2,<br>67:3, 67:5<br><b>monomers</b><br>41:13, 42:18,<br>45:11, 46:6,<br>46:18, 47:15,<br>48:2, 48:4,<br>48:13, 48:14,<br>48:21, 49:22, | 53:21, 54:11,<br>63:1, 63:13,<br>64:10<br><b>months</b><br>86:6<br><b>more</b><br>27:1, 34:13,<br>41:20, 46:3,<br>47:15, 48:12,<br>48:21, 49:21,<br>50:11, 50:12,<br>50:14, 58:10,<br>62:22, 63:12,<br>69:2, 83:17,<br>99:3, 99:7,<br>99:9, 100:5,<br>101:11, 101:17,<br>102:11, 103:6,<br>103:9, 103:16<br><b>morning</b><br>7:11, 7:12<br><b>most</b><br>17:15, 25:6,<br>37:20, 38:1,<br>89:7, 96:19<br><b>movement</b><br>14:10, 131:12,<br>136:8<br><b>moving</b><br>92:10, 134:6<br><b>mrosato@wsgr</b><br>4:10<br><b>much</b><br>20:12, 20:19,<br>25:16, 27:17,<br>29:12, 37:14<br><b>multi</b><br>73:15<br><b>multifunctional</b><br>30:1<br><b>multilayer</b><br>12:7, 30:21,<br>31:1, 31:4,<br>72:3, 73:5,<br>73:15, 73:16,<br>73:19, 74:8,<br>79:11, 85:22,<br>89:2, 89:13, | 90:5, 93:11,<br>97:17, 101:12,<br>101:16, 104:5,<br>111:11, 118:3,<br>119:20, 120:16,<br>121:14, 121:15,<br>122:12, 124:9,<br>124:16, 124:17,<br>125:11, 125:16,<br>128:13, 129:20,<br>131:10, 131:22,<br>139:12<br><b>multiple</b><br>111:20, 126:8,<br>129:18<br><b>must</b><br>42:9, 45:7<br><hr/> <b>N</b> <hr/> <b>n</b><br>126:10, 126:14,<br>126:19, 128:19<br><b>name</b><br>7:13, 7:16,<br>28:10, 28:20,<br>28:22, 147:17,<br>148:2<br><b>naturally</b><br>15:11<br><b>nature</b><br>92:20, 93:1<br><b>nd</b><br>146:9<br><b>necessarily</b><br>20:14, 37:13<br><b>necessary</b><br>79:21, 86:10,<br>94:2<br><b>need</b><br>8:22, 9:2, 9:5,<br>9:22, 12:2,<br>30:11, 32:9,<br>36:14, 61:18,<br>72:20, 79:5,<br>113:6, 134:9,<br>134:10<br><b>needed</b><br>27:6 | <b>never</b><br>19:8<br><b>new</b><br>3:6, 27:4,<br>29:21, 30:2,<br>33:15, 34:20,<br>92:11, 107:19<br><b>next</b><br>26:22, 29:18,<br>71:7, 98:12,<br>102:3, 107:18,<br>133:14, 147:7<br><b>nice</b><br>143:1<br><b>non-packaging</b><br>31:21, 35:10<br><b>nonetheless</b><br>40:15<br><b>nos</b><br>1:18, 1:22,<br>6:8, 6:20<br><b>notary</b><br>149:23<br><b>note</b><br>57:16<br><b>noted</b><br>35:15<br><b>nothing</b><br>43:18, 83:8,<br>88:13, 115:5,<br>115:9<br><b>noting</b><br>60:3, 61:21<br><b>novel</b><br>130:20<br><b>nowhere</b><br>90:19<br><b>number</b><br>29:1, 37:6,<br>43:19, 103:4,<br>103:8, 105:1,<br>107:6, 111:8,<br>111:9, 126:20,<br>127:2, 129:9,<br>140:10<br><b>numbered</b><br>147:4<br><b>numbers</b><br>125:20, 126:2, |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 130:14, 142:9<br><b>numeric</b><br>126:13<br><b>nutrition</b><br>26:14, 26:22<br><b>nw</b><br>145:19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 109:7, 110:13,<br>111:13, 112:9,<br>115:3, 115:21,<br>117:18, 120:10,<br>121:9, 121:20,<br>122:3, 123:16,<br>125:4, 126:15,<br>127:8, 128:9,<br>129:5, 129:11,<br>130:16, 130:21,<br>133:7<br><b>objection</b><br>32:22, 40:18,<br>44:1, 44:19,<br>45:13, 46:8,<br>53:7, 73:7,<br>78:7, 87:3<br><b>obligation</b><br>88:2<br><b>obviously</b><br>111:19<br><b>occurred</b><br>145:17<br><b>of</b><br>149:21<br><b>off-track</b><br>136:1, 136:4,<br>136:8<br><b>office</b><br>1:1, 9:12<br><b>offices</b><br>2:6, 144:14,<br>145:17<br><b>oh</b><br>34:21, 37:13,<br>50:18, 76:14,<br>99:7, 117:1,<br>142:14<br><b>okay</b><br>8:20, 9:17,<br>11:3, 45:21,<br>46:5, 50:15,<br>60:13, 61:14,<br>63:9, 63:10,<br>64:22, 65:5,<br>65:19, 67:17,<br>67:22, 71:21,<br>97:11, 99:7, | 99:12, 101:21,<br>109:16, 113:9,<br>113:19, 114:16,<br>117:10, 121:19,<br>124:4, 124:7,<br>124:13, 126:6,<br>137:21, 142:10,<br>142:14<br><b>on-line</b><br>141:8, 141:18<br><b>on-track</b><br>135:15, 135:20,<br>136:1, 136:4<br><b>once</b><br>18:8<br><b>one</b><br>10:15, 13:4,<br>14:6, 15:19,<br>16:15, 18:22,<br>20:15, 22:14,<br>23:6, 30:19,<br>30:20, 33:14,<br>34:13, 36:12,<br>36:16, 39:12,<br>40:16, 41:17,<br>41:20, 42:22,<br>55:14, 58:10,<br>59:8, 59:11,<br>64:20, 75:20,<br>79:12, 79:17,<br>83:17, 86:8,<br>112:2, 112:19,<br>115:16, 126:10,<br>139:7<br><b>only</b><br>30:19, 30:20,<br>51:18, 68:20,<br>72:11, 92:19,<br>96:9, 97:6,<br>100:3, 127:11<br><b>open</b><br>101:18<br><b>operating</b><br>1:6<br><b>operators</b><br>36:19<br><b>opine</b><br>40:22 | <b>opining</b><br>41:2<br><b>opinion</b><br>74:19, 77:17,<br>77:20, 80:19,<br>112:20, 119:6<br><b>opinions</b><br>88:22<br><b>opportunity</b><br>16:7<br><b>opposite</b><br>65:11<br><b>oral</b><br>40:2<br><b>order</b><br>17:5, 17:7,<br>35:14, 48:4,<br>86:7, 86:11,<br>103:15, 103:18,<br>131:1<br><b>ordinary</b><br>12:6, 12:9,<br>12:13, 13:3,<br>19:8, 127:6<br><b>organic</b><br>78:13<br><b>organization</b><br>36:15, 37:2<br><b>organizing</b><br>27:12<br><b>orientation</b><br>100:9<br><b>oriented</b><br>35:13<br><b>orthodontic</b><br>13:10, 13:20,<br>39:21, 40:9,<br>131:10<br><b>orthodontist</b><br>132:22, 136:10<br><b>osswald</b><br>12:5, 12:21,<br>13:3, 49:12,<br>57:4, 72:12,<br>75:21, 79:7,<br>80:4, 80:6,<br>80:15, 80:20,<br>82:7, 83:18, |
| <b>oath</b><br>8:4<br><b>object</b><br>42:5, 43:5,<br>43:16, 44:11,<br>46:20, 47:18,<br>48:17, 49:17,<br>51:3, 51:20,<br>52:15, 54:2,<br>54:14, 55:1,<br>55:16, 56:9,<br>56:20, 57:10,<br>58:6, 58:17,<br>61:3, 63:3,<br>63:15, 64:4,<br>66:5, 66:13,<br>66:21, 67:7,<br>68:14, 72:5,<br>73:21, 74:10,<br>74:21, 75:9,<br>75:17, 76:18,<br>77:14, 77:21,<br>79:14, 80:12,<br>80:17, 81:17,<br>82:9, 82:20,<br>83:22, 84:15,<br>85:4, 86:1,<br>86:20, 87:14,<br>89:4, 89:5,<br>89:15, 90:6,<br>91:6, 91:12,<br>92:18, 93:5,<br>93:13, 93:22,<br>94:10, 95:1,<br>95:11, 96:5,<br>98:18, 99:17,<br>100:12, 101:2,<br>102:17, 104:19,<br>105:10, 107:8, | <b>O</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

169

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 88:14, 90:21,<br>91:19, 96:9<br><b>osswald's</b><br>12:8, 12:12,<br>12:15, 79:22,<br>95:8, 142:2<br><b>other</b><br>19:19, 21:16,<br>26:7, 32:3,<br>34:8, 38:10,<br>39:9, 55:13,<br>56:4, 56:5,<br>56:17, 57:7,<br>57:18, 61:8,<br>64:12, 64:20,<br>70:20, 87:2,<br>87:11, 89:3,<br>89:10, 89:13,<br>90:5, 97:9,<br>100:1, 100:10,<br>103:18, 112:7<br><b>others</b><br>22:9<br><b>otherwise</b><br>8:18, 146:5<br><b>ourselves</b><br>36:2<br><b>out</b><br>18:20, 19:4,<br>85:14, 130:2<br><b>outcome</b><br>146:5<br><b>outcomes</b><br>135:11<br><b>outline</b><br>107:19<br><b>outlined</b><br>29:22<br><b>outside</b><br>17:6, 17:9,<br>17:15, 46:9,<br>72:6, 73:8,<br>73:22, 74:11,<br>75:18, 76:19,<br>77:15, 79:15,<br>84:16, 85:5,<br>87:4, 89:5,<br>89:16, 90:7, | 95:2, 95:12,<br>96:6, 96:22,<br>109:8, 111:14,<br>112:10, 115:4,<br>115:22, 117:19,<br>120:11, 121:10,<br>122:4, 123:17,<br>127:9, 130:22<br><b>over</b><br>8:15, 15:6,<br>16:4, 21:6,<br>24:16, 85:9,<br>132:16, 132:20,<br>132:21, 133:22,<br>134:3<br><b>overlap</b><br>19:15<br><b>own</b><br>14:18, 39:4,<br>39:5, 92:4<br><b>owner</b><br>1:14, 4:3,<br>11:18<br><hr/> <b>P</b> <hr/> <b>package</b><br>15:3, 15:7,<br>15:13, 15:14,<br>16:13, 19:6,<br>20:2, 24:14,<br>38:6<br><b>packaged</b><br>32:9<br><b>packages</b><br>17:15, 18:11,<br>19:7, 31:9, 32:5<br><b>packaging</b><br>15:2, 15:10,<br>15:17, 16:2,<br>16:15, 16:22,<br>18:2, 18:10,<br>19:1, 19:9,<br>19:13, 19:19,<br>20:13, 20:14,<br>21:3, 21:17,<br>21:19, 23:19,<br>24:1, 24:8,<br>24:10, 24:20, | 24:22, 26:13,<br>26:14, 26:20,<br>27:5, 27:8,<br>29:4, 29:9,<br>30:18, 30:19,<br>31:17, 31:20,<br>31:22, 32:1,<br>32:3, 34:14,<br>35:9, 37:12,<br>38:2, 38:3,<br>40:14, 40:22<br><b>page</b><br>5:5, 6:5,<br>10:22, 11:4,<br>11:5, 11:22,<br>14:22, 23:17,<br>24:5, 28:4,<br>37:21, 38:13,<br>38:18, 38:19,<br>39:10, 45:19,<br>51:9, 67:16,<br>67:20, 68:1,<br>69:12, 70:6,<br>75:5, 97:11,<br>97:13, 98:8,<br>98:21, 99:2,<br>99:5, 101:19,<br>102:3, 103:20,<br>104:4, 104:8,<br>105:14, 105:15,<br>105:18, 113:1,<br>113:18, 114:9,<br>114:15, 116:8,<br>116:19, 116:20,<br>116:21, 117:9,<br>119:1, 119:17,<br>123:6, 124:3,<br>124:8, 129:19,<br>131:7, 134:12,<br>135:7, 137:22,<br>147:7<br><b>pages</b><br>11:5, 40:3,<br>69:14, 147:4<br><b>paper</b><br>39:17, 64:12<br><b>paperboard</b><br>17:18 | <b>papers</b><br>9:14<br><b>paragraph</b><br>11:22, 12:2,<br>12:5, 12:16,<br>12:18, 14:22,<br>24:5, 45:19,<br>45:21, 47:5,<br>47:10, 48:10,<br>50:15, 50:16,<br>51:9, 53:12,<br>55:12, 55:15,<br>56:7, 56:19,<br>57:9, 58:5,<br>59:11, 59:12,<br>59:17, 60:4,<br>60:5, 60:11,<br>60:18, 60:22,<br>61:11, 62:16,<br>62:20, 67:15,<br>67:18, 67:21,<br>68:1, 70:14,<br>70:19, 71:13,<br>80:3, 80:5,<br>81:16, 82:7,<br>82:17, 86:12,<br>91:5, 92:6,<br>93:17, 94:8,<br>97:12, 97:15,<br>97:22, 98:7,<br>101:22, 106:6,<br>113:1, 116:6,<br>117:2, 118:22,<br>131:6, 131:9,<br>131:18, 134:15,<br>135:4, 135:8,<br>135:9, 136:21,<br>140:16<br><b>paragraphs</b><br>137:6<br><b>paren</b><br>51:14, 51:15<br><b>part</b><br>15:9, 32:17,<br>32:18, 32:20,<br>36:15, 45:21,<br>51:8, 67:19,<br>95:19, 127:3, |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

PLANET DEPOS  
888.433.3767 | WWW.PLANETDEPOS.COM

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>133:14, 141:16<br/><b>partes</b><br/>9:10<br/><b>particular</b><br/>31:2, 48:14,<br/>100:9<br/><b>particularly</b><br/>18:9, 19:17<br/><b>parties</b><br/>144:28, 146:2,<br/>146:4<br/><b>party</b><br/>144:22, 144:29,<br/>145:12<br/><b>patent</b><br/>1:1, 1:3, 1:14,<br/>1:22, 4:3, 6:7,<br/>6:8, 9:11,<br/>11:17, 40:22,<br/>41:2, 69:17,<br/>70:1, 70:4,<br/>70:7, 98:6,<br/>99:12, 99:15,<br/>99:21, 100:17,<br/>100:22, 101:7,<br/>101:10, 101:15,<br/>102:1, 102:5,<br/>102:7, 102:10,<br/>102:13, 102:14,<br/>102:21, 103:3,<br/>103:7, 103:12,<br/>103:14, 104:2,<br/>104:5, 104:9,<br/>104:13, 104:16,<br/>104:22, 105:7,<br/>105:16, 105:19,<br/>106:3, 106:6,<br/>106:8, 106:14,<br/>106:20, 107:1,<br/>107:5, 107:11,<br/>113:3, 113:8,<br/>116:11, 116:13,<br/>116:17, 117:4,<br/>117:9, 118:2,<br/>119:3, 119:11,<br/>119:15, 122:9,<br/>122:16, 123:15,<br/>123:22, 125:9,</p> | <p>131:9, 137:19,<br/>137:22, 138:7,<br/>138:11, 138:12,<br/>138:14, 138:18,<br/>139:3, 139:7,<br/>139:9, 139:13,<br/>139:19, 139:20<br/><b>patent's</b><br/>119:7<br/><b>patents</b><br/>10:20, 10:21,<br/>12:7, 37:17,<br/>37:19, 97:18,<br/>98:1, 105:7,<br/>108:19, 109:1,<br/>130:19, 131:4,<br/>139:8, 139:13,<br/>139:17<br/><b>pathway</b><br/>58:3, 58:16<br/><b>pathways</b><br/>55:14, 56:4,<br/>56:5, 56:17,<br/>57:7, 57:18<br/><b>patient</b><br/>14:7, 14:8<br/><b>patient's</b><br/>131:13<br/><b>patients</b><br/>135:10<br/><b>patrick</b><br/>4:11<br/><b>pause</b><br/>59:7, 108:16,<br/>140:4, 140:6,<br/>142:17<br/><b>people</b><br/>25:5, 27:11,<br/>30:1, 32:6, 34:1<br/><b>percent</b><br/>21:4<br/><b>perfect</b><br/>10:19<br/><b>perform</b><br/>133:22, 134:2,<br/>134:4<br/><b>performance</b><br/>131:18, 132:3,</p> | <p>132:4, 132:19,<br/>133:4, 133:15,<br/>134:17, 135:16,<br/>135:20, 137:1,<br/>137:11<br/><b>performed</b><br/>71:22<br/><b>performing</b><br/>14:3, 14:5,<br/>52:12<br/><b>perhaps</b><br/>86:19<br/><b>period</b><br/>30:14, 30:16,<br/>132:20, 132:21<br/><b>permeated</b><br/>41:7<br/><b>permutation</b><br/>112:19<br/><b>permutations</b><br/>111:10, 112:7<br/><b>person</b><br/>12:6, 12:9,<br/>12:13, 19:8,<br/>27:19, 127:6,<br/>133:2<br/><b>personal</b><br/>73:4, 94:19,<br/>94:20<br/><b>pet</b><br/>21:12, 21:14,<br/>21:17, 62:7,<br/>62:9<br/><b>petg</b><br/>22:7, 62:12<br/><b>petitioner</b><br/>1:8, 3:3<br/><b>pg</b><br/>148:6, 148:8,<br/>148:10, 148:12,<br/>148:14, 148:16,<br/>148:18, 148:20,<br/>149:2, 149:4,<br/>149:6, 149:8,<br/>149:10, 149:12,<br/>149:14<br/><b>pharmaceutical</b><br/>30:8</p> | <p><b>phenomenon</b><br/>78:20<br/><b>phrase</b><br/>100:4<br/><b>picture</b><br/>50:1<br/><b>pilot</b><br/>36:17, 36:19<br/><b>place</b><br/>78:16, 99:22,<br/>100:3<br/><b>plane</b><br/>64:13<br/><b>planet</b><br/>144:13, 144:14,<br/>144:17, 144:21,<br/>144:27<br/><b>plastic</b><br/>19:17, 19:19,<br/>20:10, 20:18,<br/>21:9, 31:11,<br/>62:6<br/><b>plastics</b><br/>16:2, 16:3,<br/>16:5, 17:11,<br/>20:9, 22:12,<br/>29:4, 29:9,<br/>30:3, 30:18,<br/>41:6<br/><b>please</b><br/>7:13, 8:17,<br/>8:22, 9:5, 11:3,<br/>11:21, 14:21,<br/>48:16, 67:16,<br/>67:19, 75:2,<br/>100:20, 101:20,<br/>103:20, 106:4,<br/>112:22, 113:17,<br/>116:5, 116:19,<br/>117:8, 118:22,<br/>119:17, 120:15,<br/>121:12, 122:9,<br/>124:2, 131:7,<br/>134:13, 135:8,<br/>137:20<br/><b>plurality</b><br/>114:18, 115:1<br/><b>plus</b><br/>25:18, 36:19,</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 81:22<br><b>pmedley@wsgr</b><br>4:12<br><b>point</b><br>14:6, 16:4,<br>64:21, 72:1,<br>75:1, 78:19,<br>82:12, 83:5,<br>86:11, 101:5,<br>108:10, 131:4,<br>139:5, 140:1,<br>140:11<br><b>pointed</b><br>12:18, 51:8,<br>51:11<br><b>pointing</b><br>45:22<br><b>points</b><br>79:17, 94:3,<br>95:7, 95:19,<br>96:22<br><b>poly</b><br>21:12<br><b>polycarbonate</b><br>22:1, 61:7<br><b>polyester</b><br>20:17, 21:4,<br>34:6, 35:11,<br>36:5, 36:6,<br>36:8, 36:9,<br>36:10, 36:17,<br>37:11, 37:14,<br>46:2, 46:4,<br>47:14, 47:15,<br>47:20, 49:4,<br>49:5, 49:9,<br>49:14, 49:21,<br>49:22, 51:10,<br>51:12, 51:19,<br>52:12, 52:21,<br>53:4, 53:13,<br>53:21, 54:11,<br>55:12, 58:4,<br>58:5, 62:3,<br>62:9, 62:21,<br>63:1<br><b>polyesters</b><br>56:4, 56:6, | 56:18, 57:8,<br>111:18<br><b>polyethylene</b><br>21:12, 21:20<br><b>polymer</b><br>13:9, 13:19,<br>21:10, 21:15,<br>21:19, 31:2,<br>41:4, 41:11,<br>41:12, 41:21,<br>46:18, 47:22,<br>48:5, 48:15,<br>49:5, 49:9,<br>49:11, 51:12,<br>62:12, 63:11,<br>65:6, 65:8,<br>67:3, 67:4,<br>70:8, 70:22,<br>71:9, 71:18,<br>73:6, 85:3,<br>85:22, 89:2,<br>98:13, 99:3,<br>99:7, 99:9,<br>99:16, 100:5,<br>102:11, 103:17,<br>104:6, 106:9,<br>106:10, 106:15,<br>106:16, 107:2,<br>109:2, 109:12,<br>109:15, 110:3,<br>112:7, 114:1,<br>114:5, 114:18,<br>114:19, 115:2,<br>115:13, 115:19,<br>119:22, 120:2,<br>120:17, 120:20,<br>120:22, 121:16,<br>121:17, 121:18,<br>124:19, 124:20,<br>124:21, 125:21,<br>126:1, 126:9,<br>127:13, 128:3,<br>128:4, 128:7,<br>128:13, 128:18,<br>128:19<br><b>polymeric</b><br>127:19, 128:14<br><b>polymerization</b><br>51:1, 52:13, | 53:3, 53:20,<br>54:10, 57:21,<br>58:3<br><b>polymerizations</b><br>52:18, 54:18<br><b>polymerize</b><br>67:6<br><b>polymerized</b><br>49:11<br><b>polymers</b><br>16:5, 17:11,<br>21:14, 21:16,<br>40:14, 40:16,<br>40:21, 41:10,<br>41:12, 68:12,<br>80:9, 109:5,<br>109:18, 111:9,<br>111:11, 112:8,<br>132:17<br><b>polypropylene</b><br>34:6, 64:19,<br>65:6<br><b>polystyrene</b><br>22:14<br><b>polyurethane</b><br>68:7, 68:22,<br>104:13, 106:17,<br>110:20, 110:22,<br>118:5, 120:22,<br>122:21, 135:2<br><b>poor</b><br>97:2<br><b>portfolio</b><br>31:3<br><b>portion</b><br>51:11, 127:18<br><b>posita</b><br>13:7<br><b>position</b><br>23:18, 25:3,<br>25:7, 25:9,<br>25:14, 26:12,<br>27:17, 28:4,<br>29:16, 33:6,<br>33:14, 34:13,<br>36:4, 36:12,<br>40:12, 82:12,<br>82:15, 83:11, | 84:5, 84:6<br><b>positioning</b><br>131:10, 131:13<br><b>positions</b><br>25:6<br><b>possibility</b><br>77:13<br><b>possible</b><br>132:21, 133:11,<br>133:12<br><b>potential</b><br>129:10<br><b>practical</b><br>89:7<br><b>practice</b><br>109:13<br><b>prefer</b><br>107:21<br><b>preferable</b><br>94:21<br><b>preparation</b><br>142:5<br><b>prepare</b><br>140:19, 140:22<br><b>prepared</b><br>23:6<br><b>preparing</b><br>14:18<br><b>present</b><br>24:15, 28:5,<br>101:11, 101:15,<br>103:5, 124:10,<br>124:16<br><b>presentations</b><br>40:2, 40:6<br><b>presented</b><br>39:16<br><b>president</b><br>28:6<br><b>pretty</b><br>101:18<br><b>primarily</b><br>37:11<br><b>principle</b><br>85:1, 109:9,<br>109:11<br><b>principles</b><br>85:15 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>printed</b><br/>31:7</p> <p><b>prior</b><br/>99:5, 105:18,<br/>137:6, 139:8</p> <p><b>priority</b><br/>138:11, 139:13</p> <p><b>probably</b><br/>8:14, 65:13,<br/>66:7</p> <p><b>problems</b><br/>81:5</p> <p><b>procedure</b><br/>61:19</p> <p><b>proceeding</b><br/>119:13</p> <p><b>proceedings</b><br/>9:11, 10:5,<br/>10:14, 10:21,<br/>11:19, 23:7,<br/>23:9, 40:2,<br/>40:5, 147:6</p> <p><b>process</b><br/>19:22, 20:1,<br/>36:4, 36:20,<br/>53:5, 74:9,<br/>76:17, 79:2,<br/>79:3, 85:1,<br/>85:2, 85:8,<br/>85:19, 86:17,<br/>87:1, 87:11,<br/>89:1, 89:14,<br/>91:4, 91:19,<br/>92:4, 92:7,<br/>92:20, 93:2,<br/>93:12, 93:20,<br/>95:16, 96:2,<br/>129:18</p> <p><b>processes</b><br/>41:6, 71:22,<br/>75:16, 78:2,<br/>91:10, 95:10</p> <p><b>processing</b><br/>13:9, 13:19</p> <p><b>product</b><br/>24:11, 36:21,<br/>97:5</p> <p><b>products</b><br/>18:10, 30:2,</p> | <p>34:5</p> <p><b>professor</b><br/>24:17</p> <p><b>program</b><br/>26:13</p> <p><b>prohibited</b><br/>144:18</p> <p><b>project</b><br/>16:11</p> <p><b>projects</b><br/>16:8, 17:12,<br/>39:12</p> <p><b>properties</b><br/>31:5, 32:10,<br/>33:7, 35:21,<br/>43:2, 66:18,<br/>67:4, 70:1,<br/>71:4, 71:10,<br/>71:17, 80:8,<br/>132:5, 132:8,<br/>132:10</p> <p><b>property</b><br/>132:17</p> <p><b>proposes</b><br/>123:19</p> <p><b>proprietary</b><br/>33:6, 37:16,<br/>87:17</p> <p><b>proprietorship</b><br/>28:19</p> <p><b>prosecution</b><br/>139:16</p> <p><b>prototyping</b><br/>24:11</p> <p><b>provide</b><br/>8:4, 8:10,<br/>49:13, 79:21,<br/>81:21, 144:16,<br/>144:22</p> <p><b>provided</b><br/>12:6, 49:20,<br/>55:8</p> <p><b>provides</b><br/>24:9, 81:22</p> <p><b>providing</b><br/>99:8, 100:4</p> <p><b>psi</b><br/>70:10, 71:1</p> | <p><b>public</b><br/>149:23</p> <p><b>publications</b><br/>37:7, 37:11,<br/>37:20, 38:15,<br/>38:17, 39:3,<br/>39:20, 40:1,<br/>40:6</p> <p><b>publish</b><br/>37:14, 37:17</p> <p><b>published</b><br/>40:2</p> <p><b>publishing</b><br/>37:18</p> <p><b>purchasing</b><br/>19:3</p> <p><b>pure</b><br/>29:12</p> <p><b>purported</b><br/>96:1</p> <p><b>purpose</b><br/>63:20</p> <p><b>purposes</b><br/>23:6, 23:9</p> <p><b>pursuant</b><br/>144:7</p> <p><b>put</b><br/>11:15, 17:16,<br/>38:6, 41:3,<br/>49:6, 57:3,<br/>57:4, 82:17,<br/>84:8, 84:12,<br/>85:16, 111:7</p> <p><b>pvc</b><br/>21:21</p> <hr/> <p style="text-align: center;"><b>Q</b></p> <hr/> <p><b>qualified</b><br/>40:22</p> <p><b>question</b><br/>8:19, 9:3,<br/>23:11, 25:9,<br/>44:22, 45:10,<br/>46:5, 54:5,<br/>54:9, 54:21,<br/>54:22, 56:3,<br/>57:13, 57:17,<br/>58:2, 58:14,</p> | <p>67:12, 67:19,<br/>68:11, 69:7,<br/>69:8, 71:7,<br/>71:17, 73:10,<br/>73:17, 75:6,<br/>77:12, 78:5,<br/>82:5, 83:17,<br/>86:4, 86:9,<br/>86:15, 88:4,<br/>88:11, 89:18,<br/>90:4, 90:13,<br/>93:15, 94:14,<br/>95:5, 95:22,<br/>96:3, 100:19,<br/>109:20, 111:17,<br/>112:13, 115:16,<br/>125:14, 131:2</p> <p><b>questions</b><br/>7:18, 8:17,<br/>22:20, 55:3,<br/>90:17, 91:9,<br/>142:12, 142:20</p> <p><b>quick</b><br/>75:10</p> <p><b>quit</b><br/>84:2</p> <p><b>quite</b><br/>17:1, 59:20,<br/>77:7, 111:10</p> <p><b>quote</b><br/>68:18, 80:5,<br/>80:6, 81:2,<br/>81:15, 83:2,<br/>131:10, 131:11,<br/>131:13</p> <p><b>quoted</b><br/>82:6, 83:14,<br/>83:18, 84:19,<br/>96:9</p> <hr/> <p style="text-align: center;"><b>R</b></p> <hr/> <p><b>r&amp;d</b><br/>35:7, 36:15,<br/>37:1</p> <p><b>ran</b><br/>29:20, 86:17,<br/>87:1</p> <p><b>range</b><br/>24:10, 37:22,</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

173

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 38:9, 133:16,<br>133:19<br><b>ranged</b><br>20:22<br><b>ranging</b><br>38:22<br><b>rates</b><br>144:28<br><b>rather</b><br>36:21<br><b>reach</b><br>137:16<br><b>reaching</b><br>138:15<br><b>react</b><br>64:11<br><b>reacted</b><br>49:10, 50:2<br><b>reaction</b><br>51:13, 53:16,<br>53:22, 54:12,<br>57:21<br><b>read</b><br>12:1, 12:4,<br>12:17, 60:20,<br>77:5, 124:6,<br>131:19, 135:22,<br>137:12, 137:16,<br>141:2, 141:20,<br>142:5, 147:4,<br>148:6, 148:8,<br>148:10, 148:12,<br>148:14, 148:16,<br>148:18, 148:20,<br>149:2, 149:4,<br>149:6, 149:8,<br>149:10, 149:12,<br>149:14<br><b>reading</b><br>71:8, 116:2,<br>131:21<br><b>reads</b><br>148:6, 148:8,<br>148:10, 148:12,<br>148:14, 148:16,<br>148:18, 148:20,<br>149:2, 149:4,<br>149:6, 149:8, | 149:10, 149:12,<br>149:14<br><b>ready</b><br>12:3, 86:14<br><b>real</b><br>64:13<br><b>realized</b><br>59:13<br><b>really</b><br>9:4, 15:16,<br>16:7, 16:8,<br>20:1, 26:4,<br>31:10, 35:4,<br>36:12, 67:10,<br>72:15, 134:7,<br>139:5, 139:6<br><b>reason</b><br>8:9, 59:14,<br>88:5, 148:6,<br>148:8, 148:10,<br>148:12, 148:14,<br>148:16, 148:18,<br>148:20, 149:2,<br>149:4, 149:6,<br>149:8, 149:10,<br>149:12, 149:14<br><b>recall</b><br>32:13, 32:15,<br>76:4, 76:11,<br>76:13, 108:21<br><b>recited</b><br>115:2, 115:20,<br>117:16, 118:9,<br>118:19, 120:8,<br>121:5, 122:1,<br>122:15, 123:3,<br>123:14<br><b>recites</b><br>104:5, 123:7<br><b>recollection</b><br>72:18, 76:9<br><b>recommending</b><br>91:20<br><b>record</b><br>6:22, 7:14,<br>10:8, 10:17,<br>22:17, 38:7,<br>77:3, 113:11, | 142:6, 145:10<br><b>rectangle</b><br>130:4, 130:8<br><b>reedy</b><br>28:5, 28:9,<br>28:16, 28:17<br><b>refer</b><br>64:9, 106:1,<br>126:14, 132:2,<br>135:4, 136:21<br><b>references</b><br>125:8<br><b>referencing</b><br>125:16<br><b>referral</b><br>144:24<br><b>referred</b><br>21:8, 62:15,<br>66:4, 111:1,<br>129:14<br><b>referring</b><br>17:10, 18:4,<br>38:17, 52:9,<br>127:16, 129:4,<br>132:9, 133:5,<br>133:20, 141:5<br><b>refers</b><br>129:9<br><b>reflect</b><br>61:10<br><b>refresh</b><br>76:9<br><b>regard</b><br>88:1<br><b>regarded</b><br>39:16<br><b>regarding</b><br>9:9, 82:7,<br>96:2, 101:8,<br>101:15, 127:6,<br>133:14, 136:22,<br>137:10, 138:15<br><b>regular</b><br>50:9<br><b>regulations</b><br>144:8<br><b>rejected</b><br>79:8 | <b>rejects</b><br>75:22<br><b>related</b><br>38:3, 39:12,<br>138:1, 146:1<br><b>relating</b><br>39:20<br><b>relative</b><br>100:1, 100:10<br><b>relaxation</b><br>132:4, 132:8,<br>132:10, 132:12,<br>132:14, 133:1,<br>133:3, 133:5,<br>133:6, 133:12<br><b>relevant</b><br>46:13, 56:14,<br>56:18, 57:2,<br>57:19, 58:11,<br>63:19, 78:22,<br>95:7<br><b>relied</b><br>14:12, 91:20<br><b>rely</b><br>137:6<br><b>relying</b><br>13:13, 88:21<br><b>remember</b><br>16:17, 16:18,<br>32:12, 32:20,<br>58:20, 62:4,<br>69:2, 74:3,<br>74:5, 97:8,<br>110:9, 138:20<br><b>reorganization</b><br>30:6<br><b>repeat</b><br>125:13<br><b>repeating</b><br>51:12<br><b>rephrase</b><br>50:20<br><b>reported</b><br>1:32<br><b>reporter</b><br>2:9, 2:10,<br>2:11, 144:12,<br>144:23, 144:34, |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

PLANET DEPOS  
888.433.3767 | WWW.PLANETDEPOS.COM

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

174

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 145:1, 145:3,<br>146:13<br><b>reporting</b><br>144:8, 144:16,<br>144:22, 144:23<br><b>representative</b><br>40:15, 144:13<br><b>represented</b><br>145:13<br><b>reproduce</b><br>12:8, 98:7,<br>136:1<br><b>reproduced</b><br>100:2, 108:20<br><b>require</b><br>13:7, 86:5,<br>93:2, 99:15,<br>99:21, 100:8,<br>104:9, 106:21<br><b>requirements</b><br>31:12<br><b>requires</b><br>18:2, 48:14,<br>92:8, 98:9,<br>98:13, 99:13,<br>102:5, 102:8,<br>102:10, 106:9,<br>106:14, 122:11<br><b>research</b><br>15:13, 24:8,<br>25:22, 26:4,<br>34:2, 34:9,<br>36:5, 36:20,<br>36:21, 37:15,<br>37:16, 39:6,<br>39:8, 39:13<br><b>researchers</b><br>37:17<br><b>resin</b><br>20:10, 36:10<br><b>resins</b><br>20:17<br><b>respectively</b><br>128:20<br><b>respects</b><br>25:20<br><b>response</b><br>11:18 | <b>responsibilities</b><br>16:1, 25:2<br><b>responsibility</b><br>16:1, 27:7,<br>27:11, 27:12,<br>35:5, 36:16<br><b>responsible</b><br>34:1, 35:4<br><b>rest</b><br>38:15<br><b>reston</b><br>3:15<br><b>restriction</b><br>105:1, 105:8,<br>107:2, 107:6,<br>107:12<br><b>restrictions</b><br>102:22, 104:17,<br>109:2<br><b>result</b><br>65:1, 137:2,<br>137:11, 137:14<br><b>resulted</b><br>38:15<br><b>results</b><br>135:3, 137:5<br><b>retire</b><br>30:12<br><b>retired</b><br>27:22, 30:9<br><b>retirement</b><br>15:1<br><b>review</b><br>9:11, 11:12,<br>39:11, 75:11,<br>135:3<br><b>reviewed</b><br>11:17, 14:17,<br>135:5<br><b>reviewing</b><br>59:13<br><b>right</b><br>19:9, 19:14,<br>29:6, 29:19,<br>36:13, 37:8,<br>39:1, 43:15,<br>45:6, 45:12,<br>46:1, 47:6, | 47:17, 50:10,<br>53:6, 53:18,<br>60:9, 60:11,<br>62:7, 63:9,<br>64:3, 65:12,<br>65:17, 65:18,<br>66:12, 70:2,<br>70:14, 71:2,<br>71:5, 74:16,<br>75:8, 77:8,<br>82:16, 86:19,<br>91:11, 92:17,<br>93:4, 94:16,<br>98:1, 98:4,<br>98:17, 99:2,<br>99:5, 99:10,<br>99:13, 100:10,<br>100:14, 101:12,<br>102:11, 104:14,<br>109:3, 110:4,<br>110:12, 110:20,<br>111:3, 111:12,<br>111:22, 112:1,<br>112:4, 112:8,<br>112:17, 113:4,<br>113:15, 115:20,<br>116:11, 117:15,<br>118:10, 118:20,<br>119:4, 119:15,<br>120:9, 121:6,<br>122:2, 122:16,<br>123:3, 123:15,<br>124:14, 125:2,<br>125:9, 125:12,<br>125:21, 126:14,<br>127:21, 128:7,<br>129:15, 130:11,<br>135:20, 136:5,<br>136:9, 136:14,<br>137:8, 139:20<br><b>right-hand</b><br>69:19, 70:13<br><b>ring-opening</b><br>52:13, 52:18,<br>53:3, 53:20,<br>54:10, 54:17,<br>57:20, 58:3<br><b>risk</b><br>74:7, 75:15, | 76:16, 78:14<br><b>river</b><br>28:5, 28:9,<br>28:16, 28:17<br><b>robert</b><br>1:29, 2:5, 5:3,<br>6:13, 6:16, 7:5,<br>7:15, 144:5,<br>145:6, 145:17,<br>147:3, 147:17,<br>148:4<br><b>role</b><br>26:17, 27:9,<br>31:19, 33:20<br><b>roles</b><br>25:2<br><b>rolls</b><br>92:10<br><b>rooted</b><br>18:15, 19:10<br><b>rosati</b><br>4:4<br><b>roswell</b><br>28:6<br><b>route</b><br>57:20<br><b>row</b><br>70:6, 71:7,<br>98:8, 99:2,<br>102:4<br><b>rules</b><br>8:14, 144:7<br><b>running</b><br>35:2, 36:19<br><hr/> <b>S</b> <hr/> <b>said</b><br>14:12, 30:11,<br>32:4, 32:5,<br>48:8, 53:1,<br>56:13, 58:9,<br>60:7, 60:11,<br>62:17, 63:17,<br>63:18, 77:1,<br>81:14, 81:19,<br>81:20, 84:19,<br>85:10, 86:21,<br>90:21, 96:9, |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

175

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>96:21, 97:22,<br/>98:4, 101:9,<br/>109:21, 117:1,<br/>133:8, 134:5,<br/>141:20<br/><b>sales</b><br/>19:3, 35:7<br/><b>same</b><br/>10:13, 10:14,<br/>13:2, 13:5,<br/>19:18, 20:3,<br/>27:21, 30:5,<br/>40:8, 64:22,<br/>65:8, 65:21,<br/>71:7, 77:12,<br/>81:5, 114:9,<br/>114:15, 115:12,<br/>117:13, 118:4,<br/>120:1, 120:21,<br/>121:17, 122:20,<br/>123:8, 124:8,<br/>129:2, 136:12<br/><b>sandwiches</b><br/>140:3<br/><b>satisfactory</b><br/>81:7<br/><b>say</b><br/>12:19, 13:16,<br/>17:9, 27:18,<br/>35:9, 42:20,<br/>48:12, 52:8,<br/>57:6, 58:2,<br/>58:10, 60:14,<br/>60:18, 61:1,<br/>61:11, 65:17,<br/>72:15, 78:3,<br/>78:10, 82:3,<br/>90:21, 92:6,<br/>93:17, 96:14,<br/>96:17, 109:11,<br/>110:16, 112:12,<br/>117:3, 134:3<br/><b>saying</b><br/>81:1, 83:18,<br/>90:11, 90:12,<br/>108:7<br/><b>says</b><br/>12:5, 28:5,</p> | <p>33:15, 34:14,<br/>42:18, 47:13,<br/>51:11, 62:20,<br/>63:5, 68:3,<br/>70:8, 72:12,<br/>80:4, 88:16,<br/>99:3, 99:6,<br/>99:8, 100:4,<br/>100:6, 100:7,<br/>101:17, 103:6,<br/>103:15, 104:11,<br/>105:3, 105:16,<br/>106:6, 118:12,<br/>121:13, 124:9,<br/>126:7, 126:17,<br/>128:2, 128:17,<br/>132:1, 135:9,<br/>137:13, 138:1,<br/>138:5<br/><b>sc</b><br/>1:29, 2:5, 5:3,<br/>6:14, 6:17, 7:5,<br/>144:5, 145:6,<br/>145:17, 147:3,<br/>147:17, 148:4<br/><b>scale</b><br/>16:21, 17:2<br/><b>science</b><br/>15:2, 15:10,<br/>19:1, 24:20,<br/>24:22, 26:13,<br/>26:20, 26:21,<br/>27:6, 27:8,<br/>38:2, 85:18<br/><b>sciences</b><br/>26:14<br/><b>scientific</b><br/>84:22, 85:15<br/><b>scientifically</b><br/>19:10<br/><b>scientist</b><br/>27:5<br/><b>scope</b><br/>16:7, 17:4,<br/>43:11, 45:3,<br/>46:9, 49:18,<br/>52:16, 53:8,<br/>72:6, 73:8,</p> | <p>73:22, 74:11,<br/>75:18, 76:19,<br/>77:15, 78:8,<br/>79:15, 84:16,<br/>85:6, 87:4,<br/>87:14, 89:6,<br/>89:16, 89:20,<br/>90:7, 90:14,<br/>94:4, 95:2,<br/>95:12, 96:6,<br/>109:8, 111:14,<br/>112:10, 115:4,<br/>115:22, 117:19,<br/>120:11, 121:10,<br/>122:4, 123:17,<br/>127:9, 130:22<br/><b>seattle</b><br/>4:7<br/><b>second</b><br/>39:10, 49:15,<br/>60:15, 95:5,<br/>99:2, 100:4,<br/>104:12, 106:15,<br/>106:16, 113:17,<br/>117:16, 118:14,<br/>120:3, 121:1,<br/>122:1, 124:21,<br/>135:10<br/><b>secondary</b><br/>138:15<br/><b>secrecy</b><br/>88:2<br/><b>section</b><br/>24:3, 75:4,<br/>75:11, 107:19,<br/>125:8, 125:15,<br/>138:1<br/><b>see</b><br/>10:11, 12:10,<br/>12:22, 15:4,<br/>23:20, 24:4,<br/>26:15, 28:7,<br/>33:17, 34:16,<br/>49:6, 51:16,<br/>63:2, 65:2,<br/>68:1, 68:9,<br/>68:10, 69:15,<br/>69:20, 69:21,</p> | <p>70:11, 70:12,<br/>71:11, 71:15,<br/>75:11, 79:5,<br/>80:10, 92:14,<br/>97:19, 97:20,<br/>98:8, 98:10,<br/>98:14, 99:8,<br/>101:22, 102:2,<br/>102:4, 104:1,<br/>104:4, 105:15,<br/>106:12, 106:18,<br/>113:20, 113:22,<br/>114:3, 114:20,<br/>115:13, 117:6,<br/>117:11, 117:14,<br/>118:6, 118:16,<br/>119:9, 120:5,<br/>120:6, 120:18,<br/>121:2, 121:13,<br/>122:11, 122:22,<br/>123:7, 123:11,<br/>123:12, 124:13,<br/>125:18, 126:4,<br/>126:11, 128:2,<br/>128:15, 128:21,<br/>129:20, 130:1,<br/>130:6, 130:7,<br/>131:15, 131:19,<br/>132:1, 132:6,<br/>133:17, 134:15,<br/>134:19, 135:9,<br/>135:17, 137:3,<br/>138:1, 138:4,<br/>138:9<br/><b>seems</b><br/>82:1<br/><b>semester</b><br/>16:11<br/><b>send</b><br/>38:6<br/><b>sense</b><br/>59:16, 60:8,<br/>60:9, 60:14<br/><b>sentence</b><br/>47:11, 47:12,<br/>48:19, 60:16,<br/>62:20, 68:2,<br/>92:16, 93:17,</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

PLANET DEPOS  
888.433.3767 | WWW.PLANETDEPOS.COM

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>94:8, 94:17,<br/>131:19, 132:2,<br/>133:14, 135:10,<br/>135:14<br/><b>sentences</b><br/>59:21, 60:16,<br/>61:10<br/><b>separately</b><br/>92:9<br/><b>serve</b><br/>78:18<br/><b>service</b><br/>24:8<br/><b>served</b><br/>20:15, 21:5<br/><b>services</b><br/>24:11, 24:12,<br/>144:16, 144:22<br/><b>serving</b><br/>26:1<br/><b>session</b><br/>141:17<br/><b>set</b><br/>28:11, 31:5,<br/>31:15, 35:17,<br/>130:2, 134:6,<br/>145:7, 146:8<br/><b>setting</b><br/>41:9<br/><b>setup</b><br/>53:4<br/><b>seven</b><br/>42:9<br/><b>several</b><br/>69:14, 128:3,<br/>128:18<br/><b>sheet</b><br/>72:4, 73:6,<br/>74:8, 79:11,<br/>85:22, 86:18,<br/>89:2, 89:13,<br/>90:5, 93:11,<br/>99:3, 99:8,<br/>100:4, 101:12,<br/>101:16, 103:5,<br/>104:6, 105:1,<br/>107:7, 111:11,<br/>118:3, 119:20,</p> | <p>120:16, 121:15,<br/>122:12, 124:17,<br/>125:11, 125:17,<br/>129:20, 148:1<br/><b>sheets</b><br/>13:9, 13:19,<br/>92:9<br/><b>ship</b><br/>17:16<br/><b>shorthand</b><br/>2:11, 145:1<br/><b>should</b><br/>8:9, 59:9,<br/>61:7, 81:1,<br/>132:22, 148:6,<br/>148:8, 148:10,<br/>148:12, 148:14,<br/>148:16, 148:18,<br/>148:20, 149:2,<br/>149:4, 149:6,<br/>149:8, 149:10,<br/>149:12, 149:14<br/><b>shouldn't</b><br/>55:7<br/><b>showed</b><br/>135:11<br/><b>shown</b><br/>119:6, 124:17<br/><b>shows</b><br/>124:9, 124:15<br/><b>side</b><br/>15:17, 64:16,<br/>65:8<br/><b>sides</b><br/>65:11<br/><b>signature</b><br/>11:6, 11:15,<br/>149:19<br/><b>signature-mig2k</b><br/>144:31<br/><b>signature-plkal</b><br/>146:10<br/><b>signed</b><br/>147:16<br/><b>significant</b><br/>43:2, 44:4,<br/>135:15<br/><b>significantly</b><br/>135:11</p> | <p><b>silent</b><br/>99:18, 101:4,<br/>101:7<br/><b>similar</b><br/>102:1, 104:1,<br/>115:16<br/><b>similarly</b><br/>128:12<br/><b>simple</b><br/>87:7<br/><b>simultaneously</b><br/>92:7, 96:20<br/><b>since</b><br/>23:15<br/><b>single</b><br/>106:9, 106:10,<br/>106:15, 106:16,<br/>119:21, 119:22,<br/>120:2, 120:17,<br/>120:20, 121:16,<br/>121:18<br/><b>singular</b><br/>120:22<br/><b>sir</b><br/>9:19, 11:6,<br/>82:5, 83:14,<br/>127:17, 142:22<br/><b>sitting</b><br/>21:9, 57:6,<br/>84:11<br/><b>six</b><br/>42:9<br/><b>skill</b><br/>12:7, 12:9,<br/>12:13, 12:20,<br/>13:3, 13:5,<br/>18:2, 19:12,<br/>127:6, 133:2<br/><b>skills</b><br/>15:18, 18:6,<br/>18:7, 19:18,<br/>40:15<br/><b>small</b><br/>134:7<br/><b>smarttrack</b><br/>97:5, 112:15<br/><b>soft</b><br/>68:6, 68:7,</p> | <p>71:9, 71:18,<br/>98:13, 100:17,<br/>100:18, 100:22,<br/>101:1, 102:8,<br/>103:12, 103:13,<br/>103:17, 112:16,<br/>124:19, 124:21,<br/>125:1, 126:1,<br/>128:13, 128:17,<br/>129:4, 129:10,<br/>129:14<br/><b>sold</b><br/>35:21<br/><b>soldier</b><br/>107:18<br/><b>sole</b><br/>28:19<br/><b>solely</b><br/>71:19<br/><b>solvent</b><br/>78:13<br/><b>some</b><br/>7:17, 13:11,<br/>17:7, 32:6,<br/>33:2, 33:10,<br/>34:6, 41:9,<br/>42:3, 59:14,<br/>59:21, 61:2,<br/>61:6, 61:7,<br/>61:18, 64:10,<br/>64:16, 71:22,<br/>73:1, 78:12,<br/>87:22, 98:1,<br/>108:9, 110:19,<br/>126:7, 128:12,<br/>129:18, 142:3<br/><b>somehow</b><br/>38:2<br/><b>someone</b><br/>27:6, 72:3<br/><b>someplace</b><br/>49:7<br/><b>something</b><br/>8:2, 17:16,<br/>27:5, 38:6,<br/>41:20, 43:9,<br/>61:8, 61:17,<br/>62:17, 84:7,</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 109:10<br><b>sometimes</b><br>29:1, 87:7,<br>87:8<br><b>sonsini</b><br>4:4<br><b>soon</b><br>28:11, 28:12<br><b>sorry</b><br>46:22, 50:20,<br>56:10, 61:5,<br>80:13, 82:22,<br>87:15, 114:11,<br>114:12, 122:10,<br>125:5, 125:13,<br>130:7<br><b>sort</b><br>38:12, 78:12,<br>78:20, 130:2<br><b>sorts</b><br>19:18<br><b>sound</b><br>65:12<br><b>sounds</b><br>25:6, 101:18<br><b>source</b><br>69:4<br><b>speak</b><br>14:15, 131:17<br><b>special</b><br>31:11, 35:21,<br>88:7<br><b>specialists</b><br>15:21<br><b>specialty</b><br>17:6, 17:10,<br>17:11, 34:15,<br>35:9, 40:14<br><b>species</b><br>41:14, 44:5,<br>52:5, 52:6, 52:8<br><b>specific</b><br>20:5, 45:18,<br>57:20, 58:15,<br>68:3, 68:15,<br>69:3, 88:11,<br>91:18, 99:22,<br>100:13 | <b>specifically</b><br>19:14, 46:11,<br>74:3, 78:20<br><b>specification</b><br>127:4, 127:5,<br>127:18, 128:6<br><b>specified</b><br>127:3<br><b>specifies</b><br>120:20<br><b>specify</b><br>93:19, 110:11<br><b>spent</b><br>20:9, 22:9,<br>33:21, 73:1<br><b>sponsored</b><br>16:12<br><b>st</b><br>68:4, 68:13,<br>69:18, 70:1,<br>70:4, 70:21,<br>97:5, 97:10,<br>97:16, 97:22,<br>99:1, 112:15,<br>114:5, 114:22,<br>115:18, 117:5,<br>117:15, 118:8,<br>118:18, 119:8,<br>120:7, 121:4,<br>121:22, 122:14,<br>123:2, 123:13,<br>134:18, 135:11,<br>137:1, 139:19<br><b>stack</b><br>123:22<br><b>stamping</b><br>21:2<br><b>standard</b><br>12:21, 23:5,<br>23:8, 41:6<br><b>standing</b><br>92:4<br><b>start</b><br>28:13<br><b>started</b><br>65:17<br><b>starting</b><br>68:2 | <b>starts</b><br>127:14<br><b>state</b><br>7:13, 15:1,<br>53:15, 76:7,<br>97:15, 119:6,<br>131:9, 134:15,<br>135:14, 144:3,<br>145:4<br><b>state-of-the</b><br>73:16<br><b>state-of-the-art</b><br>30:22, 73:15<br><b>stated</b><br>51:6, 57:18,<br>93:7<br><b>statement</b><br>72:16, 75:22,<br>81:15, 82:6,<br>82:17, 83:3,<br>83:9, 83:10,<br>83:14, 83:21,<br>88:15<br><b>statements</b><br>11:14, 98:3,<br>137:7<br><b>states</b><br>1:1, 6:7,<br>98:22, 114:17,<br>115:13, 117:11,<br>118:2, 119:20,<br>120:16, 122:19,<br>125:11, 125:16,<br>127:19, 128:6,<br>128:12, 139:11<br><b>stenographic</b><br>1:28, 2:4<br><b>step</b><br>26:18<br><b>stereochemistry</b><br>64:9, 65:9<br><b>still</b><br>18:16, 20:13,<br>24:16, 29:8,<br>29:10, 39:16,<br>52:4, 52:19,<br>87:21, 87:22,<br>123:21 | <b>stop</b><br>26:4, 49:2,<br>49:3<br><b>stopping</b><br>140:1<br><b>strain</b><br>132:15<br><b>strategic</b><br>27:9, 27:16,<br>27:17, 35:6<br><b>street</b><br>2:7, 3:13,<br>145:19<br><b>stress</b><br>132:4, 132:8,<br>132:10, 132:12,<br>132:14, 132:15,<br>132:16, 133:1,<br>133:3, 133:4,<br>133:5, 133:6,<br>133:12<br><b>strike</b><br>59:16<br><b>striking</b><br>61:17<br><b>strongly</b><br>135:15<br><b>structurally</b><br>66:11<br><b>structure</b><br>41:3, 48:15,<br>52:13, 66:15,<br>124:10, 124:16,<br>124:18, 125:12,<br>125:17<br><b>structures</b><br>50:22<br><b>student</b><br>39:7<br><b>students</b><br>16:9, 16:10,<br>17:5, 18:19,<br>19:4, 27:14,<br>37:22, 38:11<br><b>study</b><br>86:6, 134:17,<br>135:3<br><b>subject</b><br>20:19, 20:21, |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 37:10, 45:17,<br>55:6, 55:18,<br>67:10, 94:2<br><b>subjects</b><br>75:20<br><b>sublayers</b><br>126:14, 126:21,<br>127:7, 129:4,<br>129:10, 130:13,<br>130:20<br><b>submit</b><br>10:13<br><b>submitted</b><br>9:10, 9:18,<br>10:5, 23:13<br><b>subscribed</b><br>149:20<br><b>substance</b><br>11:12, 140:12<br><b>substitute</b><br>47:19<br><b>successful</b><br>30:4, 36:3<br><b>suitable</b><br>79:9, 92:10,<br>109:15, 110:3,<br>110:6, 127:12,<br>127:19<br><b>suite</b><br>3:14, 4:6,<br>145:19<br><b>summarize</b><br>12:16, 65:19<br><b>summarizing</b><br>55:20<br><b>superior</b><br>135:11<br><b>support</b><br>70:20, 94:7,<br>94:16<br><b>supporting</b><br>34:9, 80:21<br><b>supports</b><br>81:22<br><b>suppose</b><br>52:2<br><b>supposed</b><br>90:16 | <b>sure</b><br>11:16, 42:11,<br>45:7, 49:8,<br>59:5, 59:20,<br>60:19, 62:18,<br>100:21, 124:8,<br>125:15<br><b>surprising</b><br>137:1, 137:11,<br>137:13<br><b>surrounding</b><br>112:16<br><b>sustaining</b><br>22:13<br><b>switching</b><br>44:10<br><b>sworn</b><br>7:6, 145:7,<br>149:20<br><b>synthesis</b><br>55:13, 56:4,<br>56:5, 56:17,<br>57:7, 57:18,<br>57:20, 58:15<br><b>systems</b><br>86:7 | 82:12, 83:11,<br>84:4, 140:10,<br>145:9, 147:5<br><b>taking</b><br>20:4, 41:4,<br>144:17<br><b>talk</b><br>41:1, 45:5,<br>74:15, 74:18,<br>75:7, 78:1,<br>95:17, 139:15<br><b>talked</b><br>23:15, 26:6,<br>44:15, 45:17,<br>57:19, 62:14,<br>72:10, 89:21,<br>109:1, 110:7,<br>112:3, 113:4<br><b>talking</b><br>16:21, 16:22,<br>19:16, 41:10,<br>62:3, 76:4,<br>129:3<br><b>talks</b><br>51:10, 68:20,<br>71:9, 91:2,<br>139:16<br><b>tanks</b><br>31:8<br><b>tanya</b><br>1:32, 2:8,<br>144:33, 145:3,<br>146:12<br><b>tape</b><br>21:2<br><b>task</b><br>134:2<br><b>tasks</b><br>133:22, 134:4<br><b>taught</b><br>15:2, 55:19,<br>55:21<br><b>tax</b><br>29:1<br><b>teach</b><br>35:22<br><b>teaches</b><br>117:21, 122:18 | <b>teaching</b><br>15:10, 15:12,<br>23:16, 24:7,<br>24:19, 26:1,<br>26:5, 26:6,<br>26:8, 26:9<br><b>team</b><br>27:13, 29:20,<br>30:1, 33:22,<br>36:20<br><b>teams</b><br>16:11<br><b>technical</b><br>29:12, 29:13<br><b>technology</b><br>1:12, 20:3,<br>30:3, 33:10,<br>57:1, 63:19,<br>145:13<br><b>teeth</b><br>131:14, 134:6,<br>135:20<br><b>tell</b><br>8:7, 8:18,<br>63:8, 85:2,<br>93:9, 103:14,<br>115:10<br><b>tells</b><br>118:11<br><b>temperatures</b><br>22:13<br><b>tense</b><br>24:15<br><b>terephthalate</b><br>21:13<br><b>term</b><br>45:5, 45:9,<br>47:5, 47:9,<br>47:10, 48:9,<br>90:10, 129:17<br><b>terms</b><br>27:15, 53:4,<br>64:8, 66:14,<br>85:11, 88:11,<br>88:12, 92:19,<br>92:21, 93:10,<br>93:11, 94:22,<br>96:19, 111:7, |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>T</b>                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>table</b><br>21:9, 69:13,<br>69:17, 102:1,<br>104:1, 105:15,<br>105:22<br><b>tadros</b><br>55:21, 57:2,<br>58:12, 63:20<br><b>take</b><br>9:2, 9:4, 9:5,<br>12:1, 19:9,<br>27:7, 33:9,<br>59:2, 67:20,<br>84:6, 107:16,<br>107:20, 108:1,<br>108:2, 108:14,<br>109:13, 138:21,<br>140:4, 142:15<br><b>taken</b><br>7:20, 24:16,                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

179

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 129:3<br><b>test</b><br>85:9<br><b>testified</b><br>7:7, 71:21<br><b>testify</b><br>9:9<br><b>testimony</b><br>8:4, 8:7, 8:10,<br>47:3, 62:19,<br>72:7, 84:1,<br>85:11, 91:13,<br>140:12, 145:10,<br>147:5<br><b>testing</b><br>24:10<br><b>tests</b><br>132:13<br><b>text</b><br>10:14, 11:5,<br>71:8, 124:5,<br>125:8, 139:1<br><b>th</b><br>2:7, 145:19,<br>147:6<br><b>thank</b><br>7:16, 9:20,<br>22:22, 59:6,<br>140:9, 142:11,<br>142:19, 142:21,<br>142:22<br><b>thanks</b><br>10:2<br><b>the</b><br>149:21<br><b>therefore</b><br>78:18, 100:8<br><b>thereof</b><br>127:21, 147:9<br><b>thereupon</b><br>7:4, 143:3<br><b>thermoformable</b><br>13:9, 13:19<br><b>thermoforming</b><br>19:22, 20:1,<br>24:14, 41:5<br><b>thermoplastic</b><br>68:7, 68:22, | 104:13, 106:16,<br>110:20, 110:22,<br>118:4, 120:21,<br>122:21, 135:2<br><b>theses</b><br>38:16<br><b>thicker</b><br>130:2<br><b>thing</b><br>35:12, 38:12,<br>61:16, 107:18,<br>112:2, 134:10<br><b>things</b><br>17:4, 19:7,<br>27:21, 32:8,<br>33:3, 34:8,<br>35:16, 36:13,<br>38:1, 38:5,<br>38:8, 38:9,<br>39:18, 64:12,<br>93:3, 93:18,<br>111:7<br><b>think</b><br>11:4, 14:5,<br>25:7, 40:7,<br>44:21, 44:22,<br>45:18, 45:19,<br>46:13, 49:7,<br>50:16, 51:11,<br>59:20, 61:2,<br>61:5, 61:6,<br>63:4, 63:16,<br>65:3, 65:10,<br>65:13, 65:16,<br>65:18, 69:1,<br>73:9, 84:18,<br>88:1, 90:9,<br>92:1, 93:18,<br>95:6, 96:20,<br>107:15, 135:1,<br>135:22, 136:20<br><b>thinking</b><br>106:2<br><b>thinks</b><br>19:8<br><b>third</b><br>39:10, 60:15,<br>68:3, 98:8, | 99:13, 99:16,<br>99:19, 99:22,<br>100:3, 100:6,<br>100:7, 100:14,<br>102:15, 104:17,<br>106:21, 107:2,<br>109:3, 109:6,<br>109:21, 110:4,<br>111:10, 111:19,<br>117:12, 118:14,<br>119:21, 119:22,<br>120:4, 121:15,<br>121:17, 123:7,<br>123:9<br><b>thought</b><br>27:1, 31:12,<br>57:1, 58:11,<br>84:8, 84:12,<br>86:19<br><b>three</b><br>33:21, 57:13,<br>68:13, 74:5,<br>86:19, 87:2,<br>87:10, 99:1,<br>99:3, 99:7,<br>99:9, 100:5,<br>101:11, 101:17,<br>102:11, 103:1,<br>103:6, 103:8,<br>103:16, 104:6,<br>105:3, 105:4,<br>112:4, 126:9,<br>130:1<br><b>three-dimensional</b><br>64:14, 66:15<br><b>three-layer</b><br>68:4, 98:16,<br>112:15, 118:8,<br>124:18, 125:12,<br>125:17, 129:20<br><b>through</b><br>13:18, 26:12,<br>30:6, 30:17,<br>33:15, 37:5,<br>38:22, 54:12,<br>60:20, 61:18,<br>77:5, 131:3,<br>147:4 | <b>time</b><br>8:22, 9:2,<br>14:6, 14:18,<br>22:10, 26:1,<br>26:5, 29:5,<br>30:5, 30:12,<br>31:9, 34:12,<br>35:3, 36:9,<br>58:10, 67:20,<br>71:9, 73:1,<br>74:2, 83:17,<br>87:19, 87:21,<br>132:16, 132:21,<br>134:7, 136:17,<br>140:1<br><b>times</b><br>7:22, 8:14,<br>57:14, 76:22<br><b>title</b><br>69:17<br><b>titled</b><br>75:4<br><b>tn</b><br>1:34, 2:10<br><b>today</b><br>7:18, 8:3,<br>8:11, 9:9, 9:15,<br>41:10, 57:6,<br>84:6, 84:11,<br>140:11, 140:20,<br>141:1<br><b>together</b><br>41:4, 41:14,<br>49:10, 50:2,<br>53:6, 111:7,<br>128:4, 128:20,<br>129:15<br><b>told</b><br>73:14<br><b>ton</b><br>16:15<br><b>tons</b><br>16:18<br><b>took</b><br>30:10<br><b>tooth</b><br>14:10, 131:12,<br>132:20, 133:10, |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

PLANET DEPOS  
888.433.3767 | WWW.PLANETDEPOS.COM

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>136:8<br/><b>top</b><br/>42:12, 97:8,<br/>112:6, 130:4,<br/>132:11<br/><b>totally</b><br/>96:22<br/><b>towards</b><br/>35:13, 55:19<br/><b>tpus</b><br/>111:1, 111:3,<br/>111:8, 111:18<br/><b>trademark</b><br/>1:1, 9:11<br/><b>training</b><br/>18:20, 41:8<br/><b>trans</b><br/>64:3, 64:8,<br/>65:4, 65:11,<br/>65:18, 66:11,<br/>66:19, 67:2,<br/>67:5<br/><b>transcript</b><br/>6:23, 148:1<br/><b>transcription</b><br/>147:9<br/><b>transport</b><br/>16:19<br/><b>transportation</b><br/>17:20, 18:14<br/><b>treated</b><br/>135:10, 135:12<br/><b>tremendously</b><br/>17:21<br/><b>trial</b><br/>1:3, 14:6,<br/>137:5<br/><b>trials</b><br/>14:4<br/><b>truck</b><br/>38:7<br/><b>true</b><br/>65:13, 136:12,<br/>145:9, 147:8<br/><b>truth</b><br/>8:7<br/><b>try</b><br/>27:15, 63:8</p> | <p><b>trying</b><br/>25:4, 33:8,<br/>45:8, 47:8,<br/>48:11, 61:11,<br/>82:3, 86:11,<br/>94:3, 95:7,<br/>95:20, 96:22,<br/>134:6<br/><b>turn</b><br/>11:3, 11:21,<br/>14:21, 62:17,<br/>67:15, 97:11,<br/>101:19, 103:20,<br/>104:8, 105:14,<br/>112:22, 113:6,<br/>113:17, 116:5,<br/>116:19, 118:22,<br/>119:17, 124:2,<br/>129:19, 131:6,<br/>134:12, 135:7<br/><b>twenty</b><br/>8:1<br/><b>two</b><br/>11:5, 38:16,<br/>46:3, 47:14,<br/>48:1, 48:12,<br/>48:20, 49:20,<br/>50:3, 50:4,<br/>50:7, 50:8,<br/>50:11, 50:12,<br/>50:13, 50:21,<br/>50:22, 62:22,<br/>63:12, 64:18,<br/>68:6, 92:12,<br/>100:1, 100:10,<br/>112:16, 114:2,<br/>114:6, 115:14,<br/>115:19, 120:8,<br/>123:13, 124:9,<br/>124:19, 126:9,<br/>128:14<br/><b>tx</b><br/>1:33, 2:11<br/><b>type</b><br/>41:17, 41:20,<br/>42:22, 43:1,<br/>79:3, 135:1<br/><b>types</b><br/>32:3, 33:19,</p> | <p>109:5, 110:12,<br/>111:3<br/><b>typical</b><br/>38:11<br/><b>typo</b><br/>105:22</p> <hr/> <p><b>U</b></p> <hr/> <p><b>uh-huh</b><br/>53:2, 125:22<br/><b>unbounded</b><br/>129:9<br/><b>under</b><br/>8:4, 23:16,<br/>24:18, 28:11,<br/>36:7, 55:5,<br/>70:7, 88:2,<br/>138:4, 144:18<br/><b>understand</b><br/>8:3, 8:6, 8:16,<br/>8:17, 8:19, 9:7,<br/>45:8, 45:9,<br/>47:8, 48:11,<br/>55:2, 60:3,<br/>61:21, 78:1,<br/>82:15, 93:14,<br/>133:3, 136:2,<br/>139:12<br/><b>understanding</b><br/>9:8, 9:13,<br/>10:20, 11:2,<br/>13:7, 18:10,<br/>19:5, 19:18,<br/>55:20, 57:2,<br/>71:4, 85:8,<br/>85:15, 90:15,<br/>100:16, 100:21,<br/>103:11, 105:21,<br/>138:10, 138:13<br/><b>understood</b><br/>14:9, 30:16,<br/>43:21, 44:7,<br/>69:11<br/><b>undertake</b><br/>72:20<br/><b>undesirable</b><br/>93:19<br/><b>undisclosed</b><br/>103:18</p> | <p><b>unexpected</b><br/>137:1, 137:11,<br/>137:14<br/><b>unique</b><br/>31:5, 33:7<br/><b>united</b><br/>1:1, 6:7<br/><b>units</b><br/>51:13<br/><b>university</b><br/>23:16, 24:18,<br/>25:9, 25:19<br/><b>unspecified</b><br/>103:19, 110:1,<br/>111:18<br/><b>until</b><br/>15:1, 26:11,<br/>27:22, 29:7,<br/>60:20<br/><b>unwilling</b><br/>90:3, 90:9,<br/>93:9<br/><b>updated</b><br/>23:9, 23:12<br/><b>updating</b><br/>23:10<br/><b>use</b><br/>13:9, 13:19,<br/>16:2, 23:5,<br/>29:1, 35:22,<br/>47:5, 47:9,<br/>67:5, 72:13,<br/>72:14, 72:22,<br/>75:4, 75:13,<br/>81:1, 95:10,<br/>96:4, 110:5,<br/>127:6<br/><b>useful</b><br/>29:2<br/><b>using</b><br/>19:6, 19:16,<br/>19:17, 24:12,<br/>73:4, 73:20,<br/>74:8, 78:11,<br/>97:5, 97:10,<br/>129:16, 130:20<br/><b>usual</b><br/>144:27</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                 |                                                                                                                                                                |                                                                                                                                                                                                    |                                                                                                                            |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>usually</b><br>17:16, 61:16                                                  | 51:18, 59:19,<br>76:1, 88:20,<br>97:6, 97:9,<br>146:4                                                                                                          | 83:9, 83:15,<br>84:12, 85:2,<br>85:20, 97:4,<br>97:8, 97:10,<br>139:19                                                                                                                             | 34:22, 35:15,<br>35:19, 36:1,<br>36:14, 37:1,<br>37:15, 37:21,<br>87:18, 88:10,<br>140:3                                   |
| <b>v</b>                                                                        |                                                                                                                                                                |                                                                                                                                                                                                    |                                                                                                                            |
| <b>variables</b><br>79:4                                                        | <b>ways</b><br>33:8, 52:3,<br>126:6                                                                                                                            | <b>whichever</b><br>12:17                                                                                                                                                                          | <b>worked</b><br>20:16, 21:5,<br>21:16, 21:21,<br>31:7, 31:8,<br>31:9, 32:5,<br>32:7, 33:3,<br>62:6, 62:11,<br>84:7, 84:11 |
| <b>variations</b><br>79:3                                                       | <b>we're</b><br>9:2, 20:4,<br>20:18, 41:9,<br>44:13, 85:13,<br>87:16, 88:12,<br>95:13, 102:19,<br>124:8, 129:16                                                | <b>whole</b><br>16:11, 18:13,<br>30:6, 35:10,<br>41:7, 54:17                                                                                                                                       |                                                                                                                            |
| <b>variety</b><br>18:6, 24:14,<br>86:6                                          |                                                                                                                                                                | <b>wide</b><br>24:10, 38:8,<br>101:18                                                                                                                                                              |                                                                                                                            |
| <b>vary</b><br>67:13                                                            |                                                                                                                                                                | <b>wide-ranging</b><br>31:15, 38:4                                                                                                                                                                 |                                                                                                                            |
| <b>verhoven-page</b><br>1:32, 2:9,<br>144:33, 145:3,<br>146:12                  | <b>we've</b><br>58:21, 77:2,<br>107:15, 140:10                                                                                                                 | <b>willing</b><br>91:9, 93:19                                                                                                                                                                      |                                                                                                                            |
| <b>version</b><br>59:13                                                         | <b>wednesday</b><br>141:16, 141:18                                                                                                                             | <b>wilson</b><br>4:4                                                                                                                                                                               |                                                                                                                            |
| <b>virginia</b><br>3:15                                                         | <b>welcome</b><br>140:8                                                                                                                                        | <b>win</b><br>25:10                                                                                                                                                                                |                                                                                                                            |
| <b>viscoelastic</b><br>132:17                                                   | <b>went</b><br>20:10, 30:15,<br>39:12, 142:2                                                                                                                   | <b>winding</b><br>92:9                                                                                                                                                                             |                                                                                                                            |
| <b>vitae</b><br>6:15                                                            | <b>weren't</b><br>37:18, 110:5                                                                                                                                 | <b>wire</b><br>136:18, 136:19                                                                                                                                                                      |                                                                                                                            |
| <b>vs</b><br>1:10                                                               | <b>whatever</b><br>29:14                                                                                                                                       | <b>within</b><br>15:20, 19:13,<br>80:9, 112:20,<br>139:20, 145:4                                                                                                                                   |                                                                                                                            |
| <b>w</b>                                                                        |                                                                                                                                                                | <b>without</b><br>25:9, 83:3                                                                                                                                                                       |                                                                                                                            |
| <b>want</b><br>25:12, 67:18,<br>72:13, 89:9,<br>108:2, 132:19,<br>133:9, 133:11 | <b>wherein</b><br>106:10, 106:15,<br>114:1, 114:18,<br>117:12, 118:2,<br>118:13, 119:21,<br>119:22, 120:2,<br>121:14, 121:16,<br>123:9                         | <b>word</b><br>61:16, 75:13                                                                                                                                                                        |                                                                                                                            |
| <b>wanted</b><br>60:18, 61:1,<br>62:18, 69:7,<br>72:22                          | <b>whereof</b><br>146:8                                                                                                                                        | <b>words</b><br>59:21                                                                                                                                                                              |                                                                                                                            |
| <b>washington</b><br>3:7, 4:7                                                   | <b>whether</b><br>46:17, 46:22,<br>47:1, 48:5,<br>48:13, 54:8,<br>55:13, 56:3,<br>57:17, 58:15,<br>66:19, 67:4,<br>77:12, 78:5,<br>82:5, 82:16,<br>83:4, 83:8, | <b>work</b><br>13:12, 13:16,<br>13:18, 15:7,<br>15:12, 16:9,<br>16:10, 18:18,<br>18:20, 19:1,<br>19:2, 22:11,<br>28:21, 29:11,<br>29:14, 29:15,<br>30:17, 31:13,<br>31:19, 32:19,<br>32:21, 34:18, |                                                                                                                            |
| <b>waste</b><br>71:9                                                            |                                                                                                                                                                |                                                                                                                                                                                                    |                                                                                                                            |
| <b>water</b><br>16:13, 21:9,<br>21:11, 62:7,<br>78:14                           |                                                                                                                                                                |                                                                                                                                                                                                    |                                                                                                                            |
| <b>way</b><br>36:1, 43:8,                                                       |                                                                                                                                                                |                                                                                                                                                                                                    |                                                                                                                            |

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

182

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>wrote</b><br>10:15, 11:10,<br>24:6, 24:15,<br>37:17, 39:15,<br>43:12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 20:9, 21:7,<br>33:21, 36:14,<br>85:9, 86:6<br><b>yen</b><br>14:13, 70:16<br><b>yep</b><br>105:20<br><b>yes-or-no</b><br>68:11, 69:7<br><b>yesterday</b><br>141:7, 141:17,<br>141:18<br><b>york</b><br>3:6<br><b>yourself</b><br>11:9, 85:14                                                                                                                                                                                        | 106:14, 106:20,<br>107:1, 107:5,<br>107:11, 119:3,<br>119:7, 119:11,<br>119:14, 122:8,<br>122:15, 123:15                                                                                                                                                                                                                                                                                                                                                                                                              | <b>126</b><br>67:16, 67:18,<br>68:1<br><b>127</b><br>97:12, 97:15<br><b>128</b><br>98:7, 113:1<br><b>13</b><br>138:5<br><b>136</b><br>101:22<br><b>137</b><br>116:6, 116:7,<br>117:2<br><b>138</b><br>106:6, 118:22<br><b>14</b><br>122:8, 122:11,<br>122:15, 138:7,<br>144:19<br><b>1400</b><br>145:19<br><b>142</b><br>59:12, 60:11,<br>60:12, 60:22,<br>61:22, 140:16<br><b>143</b><br>147:5<br><b>145</b><br>134:15<br><b>146</b><br>135:22<br><b>147</b><br>135:8<br><b>148</b><br>136:21, 137:10<br><b>15</b><br>119:17, 122:19,<br>123:3, 144:19<br><b>150,000</b><br>70:10, 71:1<br><b>16</b><br>70:14, 70:20,<br>116:20, 116:21,<br>119:17, 123:6<br><b>17</b><br>1:31, 2:1, 2:7,<br>7:1, 71:14, |
| <b>Y</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>\$</b>                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>yeah</b><br>12:18, 20:11,<br>21:18, 22:11,<br>22:13, 25:7,<br>26:3, 28:22,<br>29:10, 31:18,<br>36:3, 36:11,<br>38:14, 39:8,<br>40:4, 41:12,<br>42:7, 43:11,<br>44:13, 44:21,<br>46:10, 50:13,<br>50:18, 50:19,<br>51:22, 53:19,<br>54:16, 55:17,<br>57:12, 58:9,<br>59:3, 60:12,<br>60:15, 61:9,<br>63:5, 64:8,<br>65:13, 65:14,<br>65:18, 67:9,<br>72:8, 74:1,<br>74:4, 74:12,<br>75:4, 75:10,<br>76:13, 76:14,<br>77:16, 79:16,<br>84:19, 86:3,<br>87:5, 89:17,<br>90:1, 91:14,<br>93:6, 93:7,<br>106:5, 106:7,<br>108:10, 111:15,<br>112:1, 115:5,<br>116:1, 117:20,<br>120:6, 121:3,<br>126:16, 131:1,<br>132:11, 133:21,<br>136:15, 136:19,<br>141:4, 141:14 | <b>\$2</b><br>35:16<br><b>\$50</b><br>35:4<br><b>0</b><br><b>000819</b><br>10:9<br><b>00818</b><br>1:18, 10:9<br><b>00819</b><br>1:19<br><b>00820</b><br>1:20, 10:9<br><b>00821</b><br>1:21, 10:10<br><b>08</b><br>2:2, 7:2,<br>145:21<br><b>090</b><br>104:2, 104:5,<br>104:9, 104:13,<br>104:16, 104:22,<br>105:7, 105:16,<br>116:10, 116:13,<br>116:17, 117:4,<br>117:9, 118:1<br><b>091</b><br>105:19, 106:3,<br>106:6, 106:8, | <b>10,973,613</b><br>1:22, 6:11<br><b>1001</b><br>6:7, 6:21,<br>113:10, 113:13,<br>116:14, 116:20,<br>119:12, 119:15<br><b>11</b><br>108:8, 114:8,<br>114:13, 114:14,<br>114:17<br><b>11,154,384</b><br>1:23<br><b>11,648,090</b><br>1:24, 6:9<br><b>11,648,091</b><br>1:25, 6:10<br><b>110</b><br>80:3, 80:6,<br>82:18, 86:12,<br>91:5<br><b>112</b><br>92:6, 93:17,<br>94:8, 96:18<br><b>113</b><br>6:11<br><b>116</b><br>76:14, 77:6,<br>77:10, 78:10<br><b>12</b><br>131:7, 140:5<br><b>12254</b><br>1:33, 146:14 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>years</b><br>15:6, 16:4,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

PLANET DEPOS  
888.433.3767 | WWW.PLANETDEPOS.COM

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

183

|                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 145:19, 145:20,<br>147:6, 148:3<br><b>1790</b><br>1:33, 144:35,<br>146:14<br><b>18</b><br>124:3, 124:6,<br>124:11, 124:15<br><b>1875</b><br>3:13<br><b>19</b><br>115:12, 115:20<br><b>1964</b><br>38:22<br><b>1971</b><br>38:22<br><b>1985</b><br>36:5<br><b>1987</b><br>34:13, 36:5<br><b>1991</b><br>33:15, 34:14<br><b>1994</b><br>30:16, 33:15<br><b>1998</b><br>30:7, 30:17<br><b>1999</b><br>28:5, 29:4 | 26:12, 26:18<br><b>2012</b><br>138:7<br><b>2014</b><br>6:12, 6:21,<br>10:16, 11:1,<br>11:4<br><b>2015</b><br>6:15, 6:21,<br>22:16, 22:21,<br>23:2, 23:17,<br>28:5, 38:18,<br>40:3<br><b>2016</b><br>70:14, 71:13<br><b>20190</b><br>3:15<br><b>202</b><br>3:8, 4:8<br><b>2022</b><br>23:18, 26:12<br><b>2025</b><br>1:18, 1:19,<br>1:20, 1:21,<br>10:9, 10:10<br><b>2026</b><br>1:31, 2:1, 7:1,<br>145:20, 146:9,<br>147:6, 148:3,<br>149:21<br><b>203</b><br>3:16<br><b>21</b><br>12:1, 113:18,<br>123:5, 123:7,<br>123:14, 124:3,<br>129:20<br><b>22</b><br>6:17, 15:6,<br>124:19, 126:2,<br>128:18, 128:19,<br>130:5, 146:9<br><b>24</b><br>36:19, 124:19,<br>125:21, 126:9,<br>126:10, 126:13,<br>126:14, 126:19,<br>130:10 | <b>2428</b><br>3:16<br><b>25</b><br>21:4, 51:9,<br>131:6, 131:9,<br>131:18<br><b>26</b><br>8:1, 45:19,<br>124:19, 126:2,<br>128:18, 128:19,<br>130:8<br><b>27</b><br>8:1<br><b>271</b><br>2:7, 145:19<br><b>28</b><br>8:1, 143:4,<br>145:21<br><hr/> <b>3</b> <hr/> <b>30</b><br>20:9, 21:6,<br>68:4, 68:13,<br>69:18, 70:1,<br>70:4, 70:21,<br>97:5, 97:10,<br>97:16, 97:22,<br>99:1, 108:8,<br>112:15, 114:5,<br>114:22, 115:18,<br>117:5, 117:15,<br>118:8, 118:18,<br>119:8, 120:7,<br>121:4, 121:22,<br>122:14, 123:2,<br>123:13, 134:18,<br>134:22, 135:11,<br>135:12, 137:1,<br>139:19, 140:5<br><b>30363</b><br>145:20<br><b>37</b><br>144:19<br><b>384</b><br>102:1, 102:4,<br>102:7, 102:10,<br>102:14, 102:21,<br>103:3, 103:12, | 103:14, 105:7<br><b>39</b><br>11:22, 12:2,<br>12:5, 127:14,<br>127:16<br><b>3m</b><br>139:10<br><hr/> <b>4</b> <hr/> <b>4000</b><br>3:8<br><b>408</b><br>3:8<br><b>41</b><br>12:16, 12:18,<br>128:2<br><b>4413</b><br>3:7<br><b>470,681</b><br>138:5<br><b>49</b><br>50:16, 51:6,<br>51:9, 53:12,<br>55:12, 55:15,<br>56:7, 56:19,<br>57:9, 58:5,<br>63:19<br><hr/> <b>5</b> <hr/> <b>50</b><br>45:19, 45:21,<br>47:5, 47:10,<br>48:10, 49:20,<br>50:15, 62:16,<br>62:20, 63:19<br><b>51</b><br>126:7<br><b>5100</b><br>4:6<br><b>52</b><br>128:11<br><b>57</b><br>75:6<br><b>571</b><br>3:16<br><hr/> <b>6</b> <hr/> <b>60</b><br>16:4, 85:9 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

PLANET DEPOS  
888.433.3767 | WWW.PLANETDEPOS.COM

Transcript of Robert M. Kimmel, Sc.D.  
Conducted on April 17, 2026

184

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>6023</b><br/>3:15<br/><b>613</b><br/>69:17, 69:22,<br/>70:4, 70:7,<br/>98:6, 99:12,<br/>99:15, 99:21,<br/>100:17, 100:22,<br/>101:7, 101:10,<br/>101:14, 102:13,<br/>103:7, 105:7,<br/>113:3, 113:8,<br/>123:21, 137:19,<br/>138:10<br/><b>628319</b><br/>1:35<br/><b>630</b><br/>139:9<br/><b>66</b><br/>67:16<br/><b>67</b><br/>67:20, 68:1,<br/>69:12, 69:13,<br/>97:13, 98:21,<br/>99:2, 113:2<br/><b>68</b><br/>69:12, 70:6,<br/>98:8<br/><b>691</b><br/>138:14, 138:18,<br/>139:3, 139:7,<br/>139:13, 139:15,<br/>139:19, 139:20</p> | <p><b>8</b><br/><b>800</b><br/>3:14<br/><b>820</b><br/>116:14<br/><b>821</b><br/>119:12<br/><b>87</b><br/>134:12<br/><b>8800</b><br/>4:8<br/><b>9</b><br/><b>9</b><br/>2:2, 7:2,<br/>145:21<br/><b>9,655,691</b><br/>138:8, 138:12<br/><b>901</b><br/>3:6<br/><b>94</b><br/>29:20<br/><b>95</b><br/>11:5<br/><b>973</b><br/>4:8<br/><b>98</b><br/>29:20<br/><b>98104</b><br/>4:7<br/><b>991</b><br/>1:34, 146:15</p> |  |
| <p><b>7</b><br/><b>701</b><br/>4:5<br/><b>7036</b><br/>4:7<br/><b>71</b><br/>101:19<br/><b>72</b><br/>102:3<br/><b>76</b><br/>103:21, 116:8<br/><b>78</b><br/>105:18, 119:1<br/><b>79</b><br/>105:15</p>                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                      |  |