



Planet Depos®
We Make It *Happen™*

Transcript of Jason K. Stowers, Ph.D.

Date: October 11, 2024

Case: LAM Research Corp. -v- Inpria Corp. (PTAB)

Planet Depos

Phone: 888.433.3767 | **Email:** transcripts@planetdepos.com

www.planetdepos.com

Michigan #8598 | Nevada #089F | New Mexico #566

WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 LAM RESEARCH CORP.,

6 Petitioner,

7 v.

8 INPRIA CORP.,

9 Patent Owner.

10
11 Case No. IPR2024-00033

12
13 Patent No. 9,823,564

14
15
16
17 DEPOSITION OF JASON STOWERS, PH.D.

18 CORVALLIS, OREGON

19 FRIDAY, OCTOBER 11, 2024

20
21
22 REPORTED BY: CHRISTINE OLJACE, CSR-RPR-CRC

23 OREGON CSR NO. 05-0397

24
25 JOB NO.: 553533

1 DEPOSITION OF JASON STOWERS, PH.D.,
2 TAKEN ON BEHALF OF THE PETITIONER
3 IN CORVALLIS, OREGON, BEGINNING AT
4 9:55 A.M. AND ENDING AT 12:08 P.M.,
5 ON FRIDAY, OCTOBER 11, 2024, BEFORE
6 CHRISTINE OLJACE, CSR, RPR, CRC,
7 CERTIFIED SHORTHAND REPORTER NO. 05-0397.

8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

APPEARANCES

FOR THE PETITIONER, LAM RESEARCH CORP.:

MORGAN, LEWIS & BOCKIUS, LLP

BY: DION BREGMAN, ESQ.

1400 PAGE MILL ROAD

PALO ALTO, CALIFORNIA 94304

(650) 849-4400

- AND

MORGAN, LEWIS & BOCKIUS, LLP

BY: ALISON PATITUCCI, ESQ.

1701 MARKET STREET

PHILADELPHIA, PENNSYLVANIA 19103

(215) 963-5000

FOR THE PATENT OWNER, INPRIA CORP.:

PAUL HASTINGS LLP

BY: PAUL ANDERSON, ESQ.

600 TRAVIS STREET, 58TH FLOOR

HOUSTON, TEXAS 77002

(713) 860-7300

- AND

1

2

PAUL HASTINGS LLP

3

BY: MICHAEL WOLFE, ESQ.

4

2050 M STREET, NW

5

WASHINGTON, D.C. 20036

6

(202) 551-1700

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

INDEX

WITNESS.....PAGE

JASON STOWERS, PH.D.

EXAMINATION BY MR. BREGMAN 6

EXHIBITS: NONE OFFERED

1 CORVALLIS, OREGON

2 FRIDAY, OCTOBER 11, 2024, 9:55 A.M.

3

4 THE CERTIFIED STENOGRAPHER: Please
5 raise your right hand.

6

7 JASON STOWERS, PH.D.,
8 having been first duly sworn to testify the truth,
9 the whole truth, and nothing but the truth, was
10 examined and testified as follows:

11

12 EXAMINATION

13 BY MR. BREGMAN:

14 Q. Dr. Stowers, please can you state your
15 full name and address for the record?

16 A. My name is Jason Koby Stowers. I live at
17 805 Northwest Witham Drive here in Corvallis,
18 Oregon.

19 Q. Have you ever been deposed before?

20 A. No.

21 Q. Have you ever testified at a trial or
22 hearing before?

23 A. No.

24 Q. Do you understand that you are testifying
25 under oath today as if you were testifying in

1 court?

2 A. Yes.

3 Q. Do you understand that your -- my
4 questions and your answers will be recorded by the
5 court reporter?

6 A. Yes.

7 Q. When you answer a question, please
8 provide a verbal response as a nod or shake of the
9 head can't get recorded.

10 A. Correct.

11 Q. Please allow me time to finish asking my
12 question before you begin your answer. This will
13 also allow your counsel to object in the break
14 between my question and your answer. Let me know
15 if you don't understand a question, and I will
16 restate it.

17 If you want to take a break at any time,
18 just let me know. If we are in the middle of a
19 line of questions, I will ask that we finish that
20 line of questions first, and then we will take a
21 break.

22 Do you understand that you are required
23 to answer my questions to the best of your
24 ability?

25 A. Yes.

1 Q. Your counsel may object to my questions,
2 but unless you are instructed not to answer, you
3 must answer my questions. Do you understand that?

4 A. Yes.

5 Q. Is there any reason you cannot testify
6 truthfully and completely today?

7 A. No.

8 Q. Do you understand that you are not
9 allowed to discuss your testimony with your
10 counsel until the deposition is over?

11 A. Yes.

12 Q. What did you do to prepare for this
13 deposition?

14 A. So we had two prep sessions. We had a
15 Zoom meeting on Wednesday and then some -- couple
16 hours face-to-face yesterday.

17 Q. You met with counsel who's here with us
18 today?

19 A. On Wednesday I met with Paul, and then
20 yesterday I met with both of them.

21 Q. Okay. And for how long?

22 A. Not terribly long. A couple hours. And
23 then from about ten until about one-ish, I think,
24 yesterday.

25 Q. Did you look at any documents?

1 A. We looked at my declaration and the
2 attachments to that.

3 Q. I think we have got your declaration and
4 attachments here.

5 MR. BREGMAN: You guys don't need a
6 copy. Right? At least I hope not, because we
7 don't have one. Oh, we do have one?

8 MS. PATITUCCI: We do have one.

9 MR. ANDERSON: Perfect. Thank you.

10 MR. BREGMAN: Okay.

11 THE WITNESS: Thank you.

12 MR. ANDERSON: Appreciate it.

13 BY MR. BREGMAN:

14 Q. So you said you looked at the -- your
15 declaration and the exhibits thereto or
16 attachments thereto?

17 A. Yeah. A and B.

18 Q. What do you know about the proceeding
19 that brings us here today?

20 A. My general understanding is this is sort
21 of a side part of the larger lawsuit in which LAM
22 is trying to invalidate one of the patent claims
23 that we are filing against them on, and so this is
24 part of the patent sideshoot trying to validate
25 that claim.

1 Q. What do you mean by the larger lawsuit?

2 A. So Inpria is suing LAM over violation of
3 our patents.

4 Q. Were you involved in the decision to
5 assert Inpria's patents against LAM?

6 A. Not directly, but I am a part of
7 management of the company so in part, yes.

8 Q. So you mentioned LAM. That is LAM
9 Research?

10 A. Correct.

11 Q. And what do you know about LAM Research?

12 A. Generally, a large company. I know where
13 most of their business is, but it's a pretty big
14 company so I can't claim to know the majority of
15 what they do, only pieces of it.

16 Q. Who owns Inpria?

17 A. That is a complicated question. JSR
18 Corp. is our parent company, but then who owns JSR
19 Corp. is a more complicated question.

20 Q. What's the answer to that question?

21 A. They were recently acquired by JICC,
22 which -- it starts to get murky there. Somewhere
23 it's a Japanese bank. It's part of the
24 government. I don't fully understand.

25 Q. Okay. Were you aware there were

1 discussions with LAM and Inpria prior to Inpria's
2 purchase by JSR?

3 A. Yes.

4 Q. Were you involved in those discussions?

5 A. No.

6 Q. When did you first become aware of the
7 proceeding, this proceeding?

8 A. Can you be more specific?

9 Q. This -- are you familiar with the term
10 "IPR"?

11 A. Yes.

12 Q. Inter partes review?

13 A. Yes.

14 Q. Do you understand that is what we are
15 here to discuss today?

16 A. Yeah. That refers to the patent offshoot
17 of the main case.

18 Q. All right. So when did you first become
19 aware of the IPR?

20 A. I don't know the exact date. My
21 awareness of IP in the company has raised in the
22 last year, but in that last year, I think even
23 before LAM filed the IPR, I was aware that that
24 was probably coming.

25 Q. All right. But you are aware that LAM

1 and Inpria were in discussions prior to the
2 purchase by JSR. Right?

3 A. Yes.

4 Q. And you said you weren't involved in
5 those discussions?

6 A. I was not.

7 Q. Can you walk through your educational and
8 employment background starting with your
9 undergrad?

10 A. I received my undergraduate degree in
11 materials science engineering at the University of
12 Illinois at Urbana-Champaign, and then I came to
13 Oregon State University, where I got my master's
14 and Ph.D.

15 Q. And what did you get your Ph.D. in?

16 A. It is in --

17 Q. Well, let's do both. Sorry. Let's start
18 with your master's.

19 A. It's the same.

20 Q. Okay.

21 A. It was along the way, so they are
22 effectively the same. It was in inorganic
23 chemistry.

24 Q. And did you work in any particular lab at
25 Oregon State?

1 A. I was in the lab of Dr. Kezler.

2 Q. That is Douglas Kezler?

3 A. Correct.

4 Q. And then what did you do after your
5 Ph.D.?

6 A. Shortly thereafter, I started to work at
7 Inpria. There was a brief time in between where I
8 was a postdoc in Dr. Kezler's lab.

9 Q. And roundabout when did you finish your
10 Ph.D. and start at Inpria?

11 A. I started my Ph.D. in 2008, late 2008.
12 There is some -- wasn't able to officially
13 graduate until later in the year. Something --
14 technicality from the university that I don't
15 really remember, but when I -- in that gap in
16 between, I was -- that was when I said I was a
17 postdoc, so essentially Dr. Kezler was paying my
18 salary to continue to do R and D. And then I
19 started working for Inpria in -- it was either
20 June or July of 2009.

21 Q. What were you working on as a postdoc in
22 Dr. Kezler's lab?

23 A. It was a continuation of my Ph.D. work.

24 Q. Which was what?

25 A. So there were two main areas that we were

1 working on or that I was working on. One was
2 metal oxide photoresist, and then there was a
3 number of other things around deposition of other
4 oxides like molybdenum and then, through certain
5 means, converting those to chalcogenide materials.

6 MR. BREGMAN: Did you get that?

7 THE CERTIFIED STENOGRAPHER:

8 Chalcogenide materials.

9 THE WITNESS: It's sulfur and
10 selenium and tellurium-type materials.

11 BY MR. BREGMAN:

12 Q. Okay. Who in Dr. Kezler's lab were you
13 working with?

14 A. So we would work on -- depends exactly
15 which area you're talking about. For the
16 lithography, I was mostly working by myself, but I
17 was adapting material that someone else had
18 developed. So I would work with them on the base
19 material, but the lithography itself was work that
20 I did independently.

21 Q. Did the person who developed the material
22 were they also working in Dr. Kezler's lab?

23 A. Yes.

24 Q. Who was that?

25 A. So that material was first developed in a

1 project that Jeremy Anderson was working on.

2 Q. Is Jeremy Anderson an employee of Inpria
3 now?

4 A. No.

5 Q. Was he ever an employee of Inpria?

6 A. Yes.

7 Q. When was that?

8 A. I don't know the dates. Fairly early on.

9 Q. Okay. Did you collaborate with anyone
10 outside of Dr. Kezler's lab during your Ph.D. or
11 postdoc work?

12 A. Yes.

13 Q. With who?

14 A. So one of the things -- you know, we were
15 working in the -- it's not the largest university,
16 so we needed access to exposure tools, so we would
17 go to a number of different sites that had
18 exposure tools that we would then collaborate on
19 and share our results with.

20 Q. And which -- who were those companies?

21 A. So there's quite a few, and I don't know
22 that I can remember all of them. So I would
23 routinely drive to Eugene and work at the facility
24 called CAMCOR. That is where I did the majority
25 of my e-beam lithography.

1 And then our first -- for example, our
2 first EUV exposures were done while I was in
3 graduate school, and those were done at -- in
4 Switzerland at a place called the Paul Scherrer
5 Institute, or PSI. So that was a shift. That was
6 a block of exposure time that was donated to us by
7 someone at Intel.

8 Q. Okay. So you were working with Intel as
9 well?

10 A. Not directly. We brought our work to
11 them and said, hey, would you like to try to help
12 us with this, and that -- the way that they helped
13 was to provide the exposure time. We showed them
14 the results, but there wasn't a back and forth.

15 Q. What do you mean you brought your work to
16 them?

17 A. We presented our work and asked for
18 exposure time.

19 Q. I see. When you say you presented your
20 work, you did that while you were doing your
21 Ph.D.?

22 A. Yes.

23 Q. While you were doing your postdoc?

24 A. I don't know if the work continued into
25 that postdoc time, but I know that it existed

1 during my Ph.D. program.

2 Q. Do you know if there was some
3 nondisclosure agreement between Intel and Oregon
4 State?

5 A. Presumably. I know Intel probably
6 wouldn't allow it, and I am pretty sure Doug would
7 have been aware of things like that as well, but I
8 have no personal knowledge.

9 Q. So you mentioned two companies. What
10 about Lawrence Berkeley National Labs?

11 A. Yeah. So we would also -- I would also
12 spend some time down in Berkeley. That is where I
13 start -- I am uncertain about the specific time
14 frames, so my milestone that I have to remember --
15 so PSI, I brought my pregnant wife with me on that
16 trip, so I have a definitive timeline with that,
17 which is before February 2nd -- or February 7th of
18 2008. My infant son, I know, came to me -- came
19 to Berkeley with my wife, and so that was after.

20 Q. Okay.

21 A. But then we are starting to get into a
22 time frame where I am not sure exactly whether it
23 was after I graduated or before.

24 Q. Okay. What about Molecular Foundry?

25 A. Again, I did some time there as well. I

1 did some -- I believe and I am uncertain which
2 block that would fall under. Well, no. Sorry.
3 Molecular Foundry is Berkeley, so that is after
4 2008, February 2008. So it could have been either
5 side of that.

6 Q. So we mentioned -- we discussed CAMCOR,
7 PSI, Berkeley. Were there any other companies
8 that you showed your work to?

9 A. Yes, but I don't have a comprehensive
10 list.

11 Q. Any others that -- off the top of your
12 head?

13 A. I know we worked with SEMATECH, which
14 doesn't exist anymore, but SEMATECH was a
15 consortium in the industry. And so we did some
16 work -- we did some ArF, 193-nanometer wavelength
17 lithography in collaboration with some people at
18 SEMATECH.

19 Q. Where physically were they located?

20 A. At that time it was -- they were -- at
21 least some of those people were still in Austin.
22 That company was in -- consortium was in the
23 process of moving to New York, but we went and
24 worked with them while they were still in Austin.

25 Q. Any other companies that you showed your

1 work to?

2 A. Again, yes, but I don't -- I mean, I
3 would have to think for a while, or I would have
4 to go back and look at things that I don't have
5 prepared today.

6 Q. And the answer you gave me earlier about
7 the nondisclosure agreement, would the same answer
8 apply to all those other entities that we just
9 discussed?

10 A. Yes.

11 Q. Then you said you joined Inpria
12 immediately after your postdoc. When was that
13 again?

14 A. Again, that was somewhere June or July of
15 2009.

16 Q. And was -- I assume Inpria was an
17 existing entity by that point in time?

18 A. I believe so.

19 Q. Who was -- who was working there that you
20 knew before you joined?

21 A. I had met Andrew Grenville prior to that.

22 Q. Was Inpria a spinout out of your work or
23 any other work from Dr. Kezler's lab?

24 A. My work was a smaller part of it. It was
25 actually a larger focus based upon work that other

1 people had done.

2 Q. In Dr. Kezler's lab?

3 A. Yeah.

4 Q. Okay. What other work were they working
5 on?

6 A. So they were taking some of the same
7 basic materials, the spin-on metal oxide
8 resists -- or, sorry -- spin-on metal oxide
9 materials, and they were using them for their
10 functional properties and trying to apply them
11 towards display applications.

12 Q. And did any other Ph.D. students from
13 Dr. Kezler's lab join Inpria at the same time as
14 you?

15 A. We -- so I can say that one of the first
16 ones is Stephen Meyers, and he and I still argue
17 about who was first, and I actually don't think we
18 have settled that. But then there were quite a
19 few people from the Kezler group who had ended up
20 joining Inpria.

21 Q. Dr. Kezler never joined Inpria. Right?

22 A. I am uncertain. I believe he was part of
23 the company in some capacity, but you would
24 probably have to consult someone else to know
25 exactly the definition of that role.

1 Q. Did you do a job talk to Inpria before
2 you joined them about your work on your Ph.D., for
3 example?

4 A. I am not sure I understand the context.

5 Q. So my understanding is often Ph.D.
6 students will interview at companies, tell them
7 about the work they were doing at their Ph.D. in
8 hope of getting employed. Did you do something
9 like that to Inpria?

10 A. No. And, again, I was -- I think I was
11 the first employee, so it would have been a bit
12 small ground.

13 Q. Right. Right. Did Grenville come from
14 OSU?

15 A. No.

16 Q. Where did he come from?

17 A. His history is, just roughly, he worked
18 at Intel for a while. From Intel, he was assigned
19 to SEMATECH, and at one point he was the director
20 of lithography, I believe was his title, at
21 SEMATECH. And at some point he left that position
22 and he left Intel. He moved to Eugene, where his
23 wife was a professor or became a professor, and
24 sometime -- I don't know the timeline, sometime
25 after that is when he met Doug and Inpria was

1 started.

2 Q. Did you have any internships while you
3 were in graduate school?

4 A. Yes.

5 Q. Where was that?

6 A. At Intel.

7 Q. And do you remember when that was?

8 A. It went -- well, there were several of
9 them, so I don't know the exact dates.

10 Q. Does May 2002, June 2003, June 2004,
11 sound about right?

12 A. Again, since I am on the record, I don't
13 know for sure.

14 Q. But there were three different instances
15 where you worked for Intel?

16 A. There were more than three.

17 Q. How many were there?

18 A. Again, I would have to think about it for
19 a little while. It started as I was an
20 undergraduate.

21 Q. I see.

22 A. That is actually what brought me to
23 Oregon in the first place.

24 Q. How come you didn't go work for Intel
25 after graduate school?

1 A. I joined a start-up.

2 Q. What were you doing at Intel?

3 A. I had a lot of different jobs in
4 different groups while I was there. I first
5 started in an area called sort, which is where you
6 take a wafer and you want to know how all the
7 chips on that wafer work before you cut it up and
8 spend extra energy to package them up, so you test
9 them all on the wafer. I worked there for a
10 couple of years, and then one of the people that I
11 worked for there moved over to the EUV lithography
12 group. And so then I followed them to at what the
13 time was called components research at Intel, and
14 I interned in components research in the EUV
15 resist group.

16 Q. Did they have an EUV radiation source at
17 Intel?

18 A. I don't think they did at that time.

19 Q. And were you working on metal oxide
20 resists at Intel as well?

21 A. No.

22 Q. What were you working on there?

23 A. Different things around chemically
24 amplified resists.

25 MR. ANDERSON: Dion, can I interject

1 just a second?

2 MR. BREGMAN: Sure.

3 MR. ANDERSON: I want to make sure
4 the record is clear, and I am not sure if you
5 intended to say EUV or just UV in your previous
6 answer.

7 THE WITNESS: At Intel?

8 MR. ANDERSON: Yeah.

9 THE WITNESS: Which group?

10 MR. ANDERSON: Was it EUV?

11 THE WITNESS: It was EUV, yes.

12 MR. ANDERSON: I just wanted to make
13 sure.

14 BY MR. BREGMAN:

15 Q. Did Intel offer you a job after you
16 graduated?

17 A. I did not apply for a job after I
18 graduated.

19 Q. Did Intel sponsor any of your
20 dissertation research?

21 A. No.

22 Q. Did any other company sponsor your
23 dissertation research?

24 A. I'm uncertain. We would have to probably
25 ask Dr. Kezler about that.

1 Q. We're going to talk about one of your
2 other patents later, but somewhere in the patent
3 it says that there's -- partially funded by NSF.
4 Does that ring any bells?

5 A. It does, yes.

6 Q. So would NSF have funded at least some of
7 your work at Inpria?

8 A. I don't know.

9 Q. Did the NSF fund any other work in
10 Kezler's lab?

11 A. So I know at one point I worked work that
12 was funded by NSF. I think they did fund work in
13 Inpria through a SBIR, which I don't know what
14 those letters stand for, but we could -- you could
15 Google that.

16 Q. Was all of your research published in
17 your Ph.D. dissertation?

18 A. No.

19 Q. What wasn't published?

20 A. Well, there is lots of things you do in
21 graduate school. Some of it works, some of it
22 doesn't, so not all of it makes it into your
23 dissertation. It is just a fact of graduate
24 school. You would be pretty lucky if everything
25 you did made it into your dissertation.

1 Q. Did you present any of your research from
2 your dissertation to Intel?

3 A. Enough so that we could receive the
4 support of an EUV shift, yes.

5 Q. Did you ever work with Nizan Kenane?

6 A. I did not work with her directly.

7 Q. Do you know who she is?

8 A. Yes.

9 Q. What is your recollection of her?

10 A. She was an intern in -- I believe she
11 came from Dr. Kezler's group, and she worked in
12 the R and D group at the time.

13 Q. You've got a copy of your declaration in
14 front of you, Exhibit 2008. Want to just look
15 through it and make sure that that's your
16 declaration that you signed and submitted on
17 July 29, 2024?

18 A. It would appear so.

19 Q. And that is your signature on page 3?

20 A. It is.

21 Q. Is there anything you would like to
22 correct or clarify in that declaration?

23 A. Not that I am aware of.

24 Q. So in paragraph 1, you say, "I am the
25 vice president of technology at Inpria Corp."

1 What is -- what's the role of the vice
2 president of technology?

3 A. So my job as a vice president of
4 technology -- I own the R and D effort at Inpria
5 on metal oxide photoresists, so I manage that
6 organization. I set priorities. I also then
7 communicate, in some instances, to the customers
8 the progress of that R and D, where that R and D
9 is going. And then I am the voice of that, those
10 customers, back into the R and D organization.

11 Q. Are there other vice presidents of
12 technology at Inpria?

13 A. No.

14 Q. Who do you report to?

15 A. I report to Stephen Meyers.

16 Q. What's his title?

17 A. That is a good question. I think it's
18 CEO, but I have seen CEO, slash, president, so I
19 would have to check with him.

20 Q. Do you have a CTO?

21 A. No.

22 Q. So you're effectively like a chief
23 technical officer of Inpria?

24 A. In our corporate structure, I think they
25 have avoided having C-suites, C titles, so

1 possibly. Maybe I don't know the definition
2 exactly of what a CTO would do.

3 Q. What sorts -- remind me again. When you
4 joined, what were your various different titles
5 prior to vice president of technology?

6 A. I don't know what I started as. At one
7 point I became principal engineer. From principal
8 engineer I became director of product integration.
9 And then after that, I became vice president of
10 product integration, and then to the title I have
11 today of vice president of technology.

12 Q. And were you working on photoresists the
13 whole time?

14 A. Yes. I will add there was some
15 additional stuff I was doing early on around
16 hardmasks, for example. There was -- initially,
17 there was a product around solar cell materials.

18 Q. Uh-huh.

19 A. But in all of that time, I was also doing
20 lithography.

21 Q. And the lithography work was an extension
22 of the work you did as -- in your Ph.D.?

23 A. Yes.

24 Q. Same or similar materials?

25 A. Yes.

1 Q. And what are those materials?

2 A. So you want to know all of the materials
3 that we have looked at with lithography?

4 Q. No. I mean at a high level. I don't
5 need every single one, but at a high level can you
6 generalize what they were?

7 A. There were versions of what we have
8 called HafSOx and ZircSOx. There were -- some of
9 those materials also turned into some of the
10 hardmask work, where you are basically just spin
11 coating metal oxide materials and not patterning
12 them. But at one point we transitioned away from
13 hafnium and zirconium materials, and we
14 transitioned to tin-based materials.

15 Q. The terms you just used, "HafSOx" and
16 "ZircSOx," were those terms you coined?

17 A. No. I think Jeremy is probably the first
18 person who used that, but I am not sure if he
19 originated -- if he was the origination of that.

20 Q. Remind me, who is Jeremy? What is the
21 last name?

22 A. Jeremy Anderson.

23 Q. Anderson.

24 So it was someone in Dr. Kezler's lab who
25 coined the term probably?

1 A. Yeah. And that is just a -- it's a
2 shortening of hafnium oxo hydroxide sulfates.

3 Q. Okay.

4 A. So they had hafnium, they had an oxygen,
5 and they had a sulfate, and it's a class of
6 materials, and so we shortened that, HafSOx.

7 Q. And is that the same thing for ZircSOx?

8 A. Correct. And just replace the hafnium
9 with zirconium.

10 Q. So the next paragraph you have in your
11 declaration, which is paragraph 2, you say, "I am
12 not receiving any additional compensation for my
13 testimony in this proceeding, and my employment is
14 not contingent in any way upon -- any way on my
15 testimony in this proceeding."

16 Do you see that?

17 A. I do.

18 Q. So you are being -- you are not being
19 paid anything over and above your normal salary to
20 testify here today. Right?

21 A. Correct.

22 Q. And did you have to use any personal time
23 or paid time off to testify today?

24 A. No.

25 Q. Do you hold any stock in Inpria?

1 A. No.

2 Q. Do you hold any stock in JSR?

3 A. No.

4 Q. Have you ever held any stock in Inpria or
5 JSR?

6 A. I owned -- at one point I had stock
7 options, and so in the exercising of those, I
8 believe I probably owned stock for a brief period,
9 but it would have been a very short period in the
10 process of selling the company.

11 Q. I see. So that -- you owned options, and
12 when JSR bought Inpria, you exercised your options
13 and effectively cashed out of those options at the
14 time of purchase by JSR. Right?

15 A. Yes.

16 Q. And what was the value of those options
17 when you exercised them?

18 A. I do not recall.

19 Q. Were they more than a hundred thousand
20 dollars?

21 A. Yes.

22 Q. Were they more than \$500,000?

23 A. So the option has a certain price.

24 Right? And so that is what I would have had to
25 spend. I mean, that is how options work. So I

1 don't know the value of the options. So it's a
2 separate question to say what was the value of the
3 stock at the time of the sale.

4 Q. What was the value of the stock at the
5 time of the sale?

6 A. I don't know what the stock price was,
7 but it was over \$500,000 when you combine all that
8 money.

9 Q. Was it over a million dollars?

10 A. It was.

11 Q. Was it over one and a half million
12 dollars?

13 A. It was.

14 Q. Was it over \$2 million?

15 A. Well, I am curious. Do we -- I mean, we
16 are getting into my financials. Is that --

17 Q. Yeah. I mean, you said you haven't been
18 compensated for providing testimony, so we are
19 trying to figure out whether you have any bias in
20 your testimony based on, you know, how much
21 financial obligation you have to -- to the
22 company, so it's relevant.

23 A. Okay.

24 Q. So if you --

25 A. Well, those are all exercised, and that

1 is done. I have no additional compensation based
2 upon -- so that statement is still true.

3 Q. Uh-huh.

4 A. I have no additional compensation for
5 being here today.

6 Q. So at this point, the only compensation
7 you have working for Inpria is your salary?

8 A. Correct.

9 Q. And how much do you get paid a year at
10 Inpria?

11 A. I believe my salary is 250,000,
12 approximately.

13 Q. And you said you don't hold any options
14 in JSR?

15 A. Correct.

16 Q. So there are no more options or stock in
17 Inpria or any of its parent entities that you own?

18 A. Correct. Not that I am aware of.

19 Q. It would be nice if there was some that
20 you are not aware of.

21 All right. Let's turn to paragraph 3.
22 You say you understand that U.S. Patent Number
23 9,823,564 -- and then parentheses, you say the
24 '564 patent -- "on which I am listed as a named
25 inventor has been challenged by LAM Research

1 Corporation" -- in parentheses LAM -- "in a
2 proceeding in the United States Patent and
3 Trademark office."

4 Do you see that?

5 A. I do.

6 Q. So we can refer to that patent as the
7 '564 patent. Are you okay with that?

8 A. Yes.

9 Q. What is your understanding of who
10 qualifies as an inventor of a patent?

11 A. I don't know if I know an official
12 qualification. It would just be my general
13 feeling of what's an inventor.

14 Q. What's that?

15 A. Someone who contributed substantially to
16 the idea of -- on which the patent is based.

17 Q. And there are also other named inventors
18 on the '564 patent. Right?

19 A. I believe so.

20 Q. And they include Alan Telecky, Doug
21 Kezler, Andrew Grenville. Right?

22 A. I believe so, yes, but we would have to
23 check the patent.

24 Q. When did you invent the subject matter of
25 the '564 patent?

1 A. I think we would have to be more
2 specific. And on top of that, I am not entirely
3 sure. I'm haven't read this patent in quite a
4 long time.

5 Q. You didn't look at it in preparation for
6 this deposition?

7 A. Sometime last year in discussion with
8 counsel, or maybe it was early this year, there
9 were some technical questions that we had with --
10 that we answered to counsel in discussions with
11 them, but that was reviewing certain sections of
12 it. I have not read it in its entirety in a long
13 time.

14 Q. And what do you mean by "has been
15 challenged by LAM Research"?

16 A. Again, that gets to my understanding of
17 what we're talking about here today, this IPR
18 review. So you are trying to -- one of the claims
19 that we are asserting against you, you are trying
20 to invalidate that patent.

21 Q. So when we are talking about the '564
22 patent and you being a named inventor, did you
23 have any input in drafting the application that
24 led to the '564 patent?

25 A. I don't believe so.

1 Q. Did you have any input on drafting or
2 handling the claims of the '564 patent?

3 A. I don't believe so.

4 Q. Did you have any input on the back and
5 forth correspondence with the United States patent
6 office related to the '564 patent?

7 A. No. And, you know, though I am in this
8 role of vice president of technology, that has
9 been since -- basically the last year. Prior to
10 that, I had very little to do with our IP stance
11 and our IP filing.

12 Q. Who ran that at Inpria?

13 A. It would have been -- and this is where I
14 don't know exactly what Dr. Kezler's title or
15 association with the company is, so you would have
16 to get that elsewhere. He was for some time
17 responsible for that.

18 The other person that is responsible
19 right now is Alan Telecky, and then I would say
20 Andrew Grenville also has played a role in that as
21 well as Stephen Meyers.

22 Q. Did you ever work with patent counsel
23 when they were dealing with your patent, this '564
24 patent?

25 A. No.

1 Q. So you didn't deal with the law firm of
2 Christensen Fonder Dardi & Herbert?

3 MR. ANDERSON: Objection. Form.
4 Objection. Asked and answered.

5 A. I know who Peter Dardi is, and I have had
6 a handful of conversations with him, but I
7 don't -- I have not participated in our IP filings
8 as a general rule.

9 BY MR. BREGMAN:

10 Q. So earlier you said an inventor is
11 someone who contributes, I believe, to the
12 invention. What was your -- the extent of your
13 contribution to this '564 patent?

14 A. Well, we would have to read over the
15 entirety of the patent if -- I mean, if you are
16 asking where specifically I contributed to that,
17 we would have to look over it to be exact.

18 Q. Do you have a general feeling for what
19 you contributed?

20 A. When Inpria was first founded -- we
21 talked about this earlier, where there was a group
22 of people who were focused on using materials for
23 their functional properties in display. At that
24 time, while they were doing that, I was
25 essentially the only person working on lithography

1 and using those same general set of materials in
2 lithography.

3 So I was responsible for advancing the
4 technology or my work was focused on expanding and
5 advancing the technology and bringing it to a more
6 useful place, so any of that work would have
7 contributed to this patent.

8 Q. Was some of the research and know-how
9 transferred from Oregon State to Inpria along with
10 you?

11 A. I think I had knowledge and know-how, and
12 that was one of the reasons I came to Inpria was
13 to bring that with me and continue developing it
14 while I was at Inpria, so I believe the answer is
15 yes.

16 Q. And when you were a grad student, were
17 you making the chemicals yourself, or did you buy
18 those chemicals?

19 A. I think both of those statements would be
20 true depending on how you looked at it. We were
21 buying chemicals, and then we would prepare things
22 and mix them for use.

23 Q. Do you recall where you were buying those
24 chemicals from?

25 MR. ANDERSON: Objection to form.

1 Objection to scope.

2 THE WITNESS: So proceed?

3 BY MR. BREGMAN:

4 Q. Yes.

5 A. So where were we buying chemicals?

6 Q. Yeah.

7 A. Supply houses. Alfa Aesar,
8 Sigma-Aldrich.

9 Q. These are all chemical manufacturers?

10 A. No. They are chemical --

11 Q. Distributors?

12 A. -- distributors, yeah.

13 Q. Do you know what Alan Telecky's
14 contribution to the '564 patent was?

15 MR. ANDERSON: Objection. Form.
16 Objection. It's outside the scope.

17 BY MR. BREGMAN:

18 Q. Yeah, proceed.

19 A. Again, we would have to look over the
20 document.

21 Q. Okay. And it goes the same for Doug
22 Kezler and Andrew Grenville?

23 A. Correct.

24 Q. Do you know any LAM employees?

25 A. I have met a few through the years.

1 Q. Do you recall their names?

2 A. I have met Rich Wise. I have met Nader
3 (phonetic), and I don't know his last name, but I
4 am sure you know the Nader I am probably talking
5 about. I have seen Tim Wise, but I don't know
6 that I have ever talked to him before. I have met
7 Anuja De Silva from both when she was at IBM and
8 now she's at LAM. We mentioned Nizan. I believe
9 she is at LAM still. I met her when she was at
10 Inpria.

11 And I would have to think beyond that of
12 who I really know. And there is a few people I
13 know that have come and gone from LAM recently,
14 but I don't know if they still work there.

15 Q. Let's turn to paragraph 4 of your
16 declaration. You say, "My doctoral thesis
17 includes a date of August 14, 2008."

18 Do you see that?

19 A. I do.

20 Q. What do you mean by "includes a date"?

21 A. We would have to look at my thesis.

22 MR. BREGMAN: Do you have the thesis?

23 A. So you want me to find that date?

24 BY MR. BREGMAN:

25 Q. Yeah. You said it includes a date, and I

1 want to know what you mean by "includes a date."

2 A. So here on what you have labeled as
3 page 5.

4 Q. Okay.

5 A. Also page 4.

6 Q. When you said "includes a date," it's got
7 a date printed on the thesis. Is that what you
8 mean?

9 A. Yes.

10 Q. And then you say, "That was the date I
11 presented my research to the thesis committee."

12 Do you see that?

13 A. Correct.

14 Q. When you say presented your research, do
15 you hand them a copy of your dissertation?

16 A. No.

17 Q. You just present it in a PowerPoint
18 presentation? How do you present it?

19 A. That would have been a PowerPoint
20 presentation, correct.

21 Q. And who was on the committee?

22 A. I can -- I think I remember most of them,
23 but I would have to -- it might tell me in here,
24 but -- I can list some of them, but I don't know
25 that I can list all of them.

1 Q. Okay.

2 A. Obviously Dr. Kezler.

3 Q. Uh-huh.

4 A. John Wager. I believe Michael Lerner.

5 And I think there were at least two others.

6 Q. Maybe Joe Karchesy -- Karchesy, something
7 like that?

8 A. That sounds familiar.

9 Q. K-a-r-c-h-e-s-y.

10 A. Yeah. I believe he was sort of the
11 outside-of-the-department representative on --
12 participating in the committee. I believe he was
13 from forestry or wood science. I don't remember
14 exactly.

15 Q. Also at Oregon State?

16 A. Yeah.

17 Q. And Philip Watson?

18 A. Yeah, Philip Watson. I couldn't remember
19 his last name.

20 Q. Okay. So you presented the contents of
21 your dissertation to the thesis committee on
22 August 14, 2008. Is that right?

23 MR. ANDERSON: Objection. Form.

24 A. Again, this is a very lengthy -- would
25 have been a very lengthy Word document. I

1 presented a presentation to them at that time.

2 BY MR. BREGMAN:

3 Q. Was anybody else present at your
4 presentation?

5 A. Yes. There were a few people there.

6 Q. Do you remember who was there?

7 A. I can remember a few people. My parents
8 came to town for that, and then there were various
9 people from my group there as well. Beyond that,
10 I don't recall.

11 Q. When you say your group, it's the group
12 you are working on at Oregon State?

13 A. The Kezler group, yes.

14 Q. Kezler group.

15 Was an invitation sent out more widely?

16 A. I think -- I don't know how it was
17 published, but other people were allowed to
18 attend.

19 Q. When you say "other people," anybody was
20 allowed to attend?

21 A. I don't know that any -- I don't know
22 what constraints would have been put on it.

23 Q. Who would know that?

24 A. Probably someone in the chemistry
25 department about what their normal process is.

1 Q. Had you given a copy of your thesis to
2 this group before your presentation?

3 A. No.

4 Q. Did you give them a copy of your thesis
5 dissertation to anybody else before your
6 presentation?

7 A. Again, this document didn't exist in its
8 entirety by August.

9 Q. What existed by August 14, 2008?

10 A. A PowerPoint presentation.

11 Q. Did you hand out copies of the PowerPoint
12 presentation?

13 A. I don't believe so.

14 Q. Did you present that PowerPoint
15 presentation to anybody else other than this
16 committee?

17 A. I don't think so.

18 Q. Not at a conference?

19 A. Again, that would have been a different
20 PowerPoint deck if I presented something at a
21 conference.

22 Q. Do you recall presenting something at a
23 conference that contained any part of your
24 research related to lithography from your
25 dissertation?

1 A. I presented some work at a conference in
2 Athens, but I don't recall the date of that.

3 Q. Was it in 2008?

4 A. Again, I don't recall. I am trying to
5 think if my son was born or not by that point, and
6 I don't really remember.

7 Q. Do you recall the name of that
8 conference?

9 A. It -- the letters were MNE, but I don't
10 remember what MNE stood for.

11 Q. Did you present your research at any
12 Oregon State chemistry department seminar?

13 MR. ANDERSON: Objection. Form.

14 BY MR. BREGMAN:

15 Q. Go ahead.

16 A. I don't recall giving that sort of
17 presentation.

18 Q. Did you present your research in
19 connection with any job interviews?

20 A. No.

21 Q. You go on to say the thesis document
22 itself was not actually completed until October
23 2008. Do you see that?

24 A. I do.

25 Q. What do you mean by "not actually

1 completed"?

2 A. Fully written.

3 Q. And that's the Word document you are
4 talking about?

5 A. Yeah.

6 Q. And did anything change between what you
7 presented to the committee in August 2008 and the
8 completed version in October 2008?

9 MR. ANDERSON: Objection. Form.

10 A. So what would have changed was certainly
11 the word count.

12 BY MR. BREGMAN:

13 Q. Did anything of substance change?

14 A. I don't think I was doing additional
15 research, but I am not certain if I was tying --
16 if there was anything I was tying up or not in
17 that time frame of a couple of months.

18 Q. So you go on to say, "After the document
19 was completed, I submitted it to the Oregon State
20 University library, also in October 2008."

21 Do you see that?

22 A. Yes.

23 Q. Did you -- and when you say you submitted
24 it, you mean the Word document. Right?

25 A. No. When you turn in your -- your

1 dissertation to the library, they want -- they are
2 going to bind it, right, into a book.

3 Q. A hard copy?

4 A. Yeah, a hard copy. So I had to submit
5 the actual paper that would then turn into the
6 hard copy.

7 So submitting it is like -- it was this
8 process that I remember -- because this was kind
9 of a milestone. Right? You had to go to printing
10 and mailing, and you get this -- they print it out
11 on "the" paper, because it's supposed to be a
12 library book, right, so it's got to be on the
13 right paper, type formatted, so there is a big
14 margin over here so they can bind it. And then
15 you get this paperboard box, and so there is this
16 white paperboard box, and that is physically what
17 was submitted.

18 Q. So that is handed to someone at the
19 library?

20 A. It would have been at the Kerr
21 Administration Building. This is another thing I
22 just -- like I remember the brick inside the Kerr
23 Administration Building and carrying this box in
24 and dropping this box off.

25 Q. And do they give you a record of that

1 submission or something?

2 A. Like a receipt?

3 Q. Yeah.

4 A. I don't believe they did. There was a
5 form that I had to fill out when I dropped it off.

6 Q. What was that form?

7 A. I don't have a copy of that form, but I
8 do recall having a, you know, box and having to
9 fill out a form as I turned it in.

10 Q. You later talk about an embargo. That's
11 not the same form?

12 A. I believe that is the same form.

13 Q. It's the same form.

14 You go on to say, "Oregon State
15 University library had a functionality allowing
16 theses to be restricted from public view for a set
17 period of time. They called this an embargo."

18 Do you see that?

19 A. Yeah.

20 Q. Can you tell me about that process that
21 you went through?

22 A. So the process is the process of turning
23 that in. There was a form, and there was -- this
24 was a section on the form. And so I filled in the
25 box, and, you know, as I go on to say, this is

1 what I was told to do essentially by my advisor.

2 Q. And you filled in the form asking for
3 what?

4 A. For an embargo.

5 Q. What do you mean by embargo?

6 A. So, again, my understanding and my
7 understanding from what I remember of the time was
8 that you could -- you know, it's not -- they don't
9 take it -- let's say that book that's bound, they
10 don't take it and they don't put it on the shelf
11 until after this embargo has elapsed, so
12 essentially it's not publicly available until
13 after that time has passed.

14 Q. And did they give you a copy of the
15 embargo form that you filled in to take back with
16 you?

17 A. As I also have no receipt, I also didn't
18 get a copy of that form.

19 Q. So you say you "do not recall the
20 appearance of the Oregon State University library
21 form for embargoes in 2008, but can recall that
22 the procedure for requesting an embargo for a
23 thesis was substantially the same as the steps
24 detailed on this website -- screenshot below, and
25 attached as Exhibit B -- except that the request

1 was made in paper form in 2008."

2 Do you see that?

3 A. So we are section 7?

4 Q. Right. Where is that?

5 MR. ANDERSON: Paragraph 9.

6 BY MR. BREGMAN:

7 Q. Paragraph 9. "I do not recall the
8 appearance" --

9 A. Correct.

10 Q. What do you mean by "substantially the
11 same as the steps detailed"?

12 A. I mean, would you like to go to that --

13 Q. Yes. I mean, you -- at the bottom of
14 paragraph 9, you have got part of a screenshot.
15 There are a whole bunch of pull-down menus. It's
16 obviously not going to be pull-down menus on a
17 paper copy. Right?

18 A. Yeah. So it would have been -- what I
19 believe -- what I remember is a form with a series
20 of check boxes on it, so essentially it's --
21 instead of drop-down menus to select and submit,
22 you are checking boxes for what you wanted on the
23 form.

24 Q. So the information that was being
25 collected on the form was essentially the same as

1 the information being collected through the web
2 portal that you show under paragraph 9 of your
3 Exhibit 2008?

4 A. Yes. I think it was showing that, you
5 know, that's the general process, but they are
6 collecting it through a online form instead of
7 through a paper form.

8 Q. Was there any information either in the
9 screenshots in paragraph 9 or on the paper form
10 that were not on the other?

11 A. I don't recall -- as we said, I don't
12 fully remember what the form looked like, so it's
13 hard for me to say what would have changed. That
14 was the general form. And, you know, it followed
15 the form of the form, but I can't be specific as
16 to what might be different now versus then.

17 Q. And you printed this information, which
18 is shown in attachment B. You went there and
19 printed it on the same day that you signed your
20 declaration. Right? July 29, 2024?

21 A. I don't know.

22 Q. So at the top, top left-hand corner of
23 the first page of attachment B where you see
24 the --

25 A. I see a date at the top of 7/29.

1 Q. Right. And that's the same date as you
2 signed this declaration on the bottom of your
3 page 3 of your declaration?

4 A. Yes.

5 Q. And you say, "There are four types of
6 visibility settings in ScholarArchives, though not
7 all are available in all situations."

8 A. Where did I say that? Oh, so the
9 university printout. That is what the university
10 says.

11 Q. Right. I see it there on the page 18
12 [sic] of 13 in the bottom left-hand corner.

13 A. Correct. I see it under "Introduction"
14 on that page.

15 Q. Do you know why not all of these settings
16 are available in all situations?

17 A. I do not.

18 Q. And which options do you remember being
19 available for your dissertation?

20 A. I don't remember, again, the form. I
21 remember why I was doing this and why I was
22 directed to do this by Dr. Kezler, but the
23 specifics of -- you know, again, you would have to
24 ask the university if any of these options have
25 changed in the last 16 years.

1 Q. And when you say you remember why you
2 were doing it and what Dr. Kezler had told you,
3 did he tell you that verbally, or is there some
4 written instructions to do that?

5 A. I don't recall. You know, in this
6 process of having this document, I am getting
7 feedback from him continuously, and as we get
8 towards the end, he is informing me of, you know,
9 what we normally -- what normally has to happen.

10 Q. Uh-huh.

11 A. And, you know, Doug -- even at that time,
12 Doug, you know -- I walk past Doug -- there is
13 this poster of Doug in the building that we have
14 our facility -- because it's also a university
15 building -- and so he has got his picture there,
16 and it says "Serial entrepreneur," which is --
17 even at this time he was already a serial
18 entrepreneur. So he kind of understood this
19 process of, you know, there might be something
20 valuable here so there is no cost to putting it
21 under an embargo, so let's put it under this
22 embargo and then protect this time, have a little
23 bit longer where it's not public so that if we
24 have to do any -- file any IP in that time frame,
25 we can.

1 Q. I see. And that period of time was one
2 year?

3 A. So in 2010, I understood that it was one
4 year.

5 Q. Why do you say in 2010? Did things
6 change?

7 A. Well, that's Attachment A.

8 Q. That says they're restricted, for
9 example, for two years. Is it the pull-down menu?
10 Is that what you are referring to? Oh, that's --
11 sorry -- attachment -- is that Attachment A or is
12 that Attachment --

13 A. So in Attachment A --

14 Q. I see.

15 A. Jason Stowers, in 2010, his understanding
16 was it was a one-year embargo.

17 Q. So while we're talking about that
18 document, which is Attachment A, can you tell me
19 what that is?

20 A. This was an email that I found that had
21 been saved in my email.

22 Q. Okay. Before we get into that document,
23 because that will take a while -- we have been
24 going about an hour. Do you want to take a little
25 break for 5, 10 minutes, and then we can pick it

1 up again?

2 A. Sure. Yeah.

3 Q. Okay.

4 (Recess: 10:53 to 11:05 a.m.)

5 BY MR. BREGMAN:

6 Q. So we were talking about -- before we
7 took the break, we started on this Attachment A to
8 your declaration, Exhibit 2008.

9 A. Yes. We were talking about one year
10 versus two years.

11 Q. Right. So can you tell me about that a
12 little bit?

13 A. Not a lot, really, other than in 2010, my
14 understanding was I had a one-year embargo on my
15 dissertation.

16 Q. You -- so this is from your recollection
17 of reading this in February 2010, it's your
18 recollection that back in 2008 you set a one-year
19 embargo on publication of your dissertation? Is
20 that right?

21 A. So my reading of this is that a year and
22 a half before I wrote this, I had a one-year
23 embargo -- approximately a year and a half, you
24 know. I -- that was my understanding at that
25 time. That is how I read my email.

1 Q. Did you remember that you had the
2 one-year embargo before you read this email to
3 refresh your recollection?

4 A. I remember having an embargo, which is
5 how this thing kind of got started, but I don't
6 know -- I probably would have guessed a one-year,
7 but I did not know concrete that I had a one-year
8 embargo.

9 Q. So is it fair to say you weren't sure, so
10 you went back and searched your emails?

11 A. That is how I found this email.
12 Basically I searched for the word "embargo," and I
13 found this email.

14 Q. And was this the only email that you have
15 found with the term "embargo" in it?

16 A. Yeah, it's the only email that I found
17 that had the word "embargo."

18 Q. And I can't tell from -- it just says
19 from Andrew Grenville to Jason Stowers, but I
20 don't see the email address because it's just a
21 name. What email account did you search for this?

22 A. This was on my Inpria email account. So
23 the Jason Stowers here would be
24 jkstowers@inpria.com.

25 Q. And I assume that the Andrew Grenville

1 email address was also from his Inpria email
2 account?

3 A. Yeah. So, you know, this was pretty old
4 email, and so we actually recently migrated over
5 from Google to Microsoft, and turned out I had --
6 my email was a problem because it was huge
7 compared to everyone else's, partly because I
8 didn't delete any emails. But this far back I
9 actually did delete some emails, and I kept emails
10 from specific people. That's what it looks like.
11 I did some criteria to save some emails. So I
12 don't have my sent emails so I didn't find two
13 instances of this, because I don't have the one I
14 sent, which is below it. I only have email from
15 Andrew Grenville.

16 Q. And when you say you moved from Google to
17 Microsoft, are you talking about from Gmail to
18 Microsoft?

19 A. Yeah. Yeah.

20 Q. And did -- were there any other emails in
21 this chain?

22 A. No.

23 Q. It was just your --

24 A. I think there was only this one, that
25 there wasn't another one that I replied back

1 beyond this.

2 Q. Did you search in -- did you have a
3 private email account at this time?

4 A. I did, and I still do.

5 Q. Did you search that email account?

6 A. I don't think I searched these terms at
7 this time.

8 Q. When you say "these terms," previously
9 you said you searched for the term "embargo."
10 Were there other terms you searched for?

11 A. Again, I don't recall searching my
12 personal email. I only searched my work email.

13 Q. And what terms did you use when you
14 searched your work email?

15 A. The word "dissertation," which there were
16 a few that popped up, but then the word "embargo"
17 is where this one popped up.

18 Q. So "dissertation" and "embargo" is what
19 you were looking for?

20 A. Yes.

21 Q. And this was the only email you found
22 with those terms in it?

23 A. Again, this was from the search for
24 "embargo." I will say that Microsoft search is
25 not the best in the world, surprisingly. But when

1 I searched for "embargo" that was the only way I
2 found this email. I didn't find it when I
3 searched for the word "dissertation." But I
4 also -- I'm not even certain that's the correct
5 spelling of dissertation, so that might also be a
6 reason why.

7 Q. So if we look at the email that Andrew
8 Grenville responded to, let's start with that
9 first. That was sent on February 23rd, 2010, at
10 9:14 p.m. from you. And you wrote, "FYI, my
11 dissertation is now past its one-year publication
12 embargo."

13 Do you see that?

14 A. Yes.

15 Q. And what exactly by that did you mean?

16 A. So, again, my understanding is that there
17 was an embargo, so prior to that one-year embargo
18 ending, a URL did not exist for my dissertation.
19 So now that it is one year past its publication
20 embargo, now a URL exists, and then I provide the
21 link to that URL.

22 Q. When you said the URL didn't exist, did
23 you look for a URL in that one-year period?

24 A. I don't recall if I did or didn't.

25 Q. By the time February 23rd, 2010, rolled

1 around, you went to look for it, and then you
2 found it, and you forwarded it to Andrew
3 Grenville. Right?

4 A. Yeah. And the way that I read this, this
5 was probably a follow-on to a verbal conversation
6 we had, and there was something that prompted me
7 to send this to him that was probably in a verbal
8 conversation. And so at least at that point in
9 time, I went and looked and saw that it was now
10 available.

11 Q. And then if we read underneath that URL,
12 it says, "Relevant magic sauce recipe is on
13 page 68."

14 Do you see that?

15 A. I do.

16 Q. What do you mean by "magic sauce recipe"?

17 A. I don't know.

18 Q. What do those terms mean to you today?

19 A. What context would I apply to those?

20 Q. Yeah.

21 A. Again, there was a conversation before
22 this, so "relevant," so that was relevant to some
23 conversation that we -- we were having. And then
24 magic sauce is basically how to do something. So
25 how to do something relative to something that we

1 were talking about earlier.

2 Q. And you don't call the chemicals you make
3 "sauce" generally?

4 A. No.

5 Q. So magic sauce is really a colloquial way
6 of saying the invention, the special thing,
7 something like that?

8 A. Yeah, or a joke. I don't remember. It
9 was quite a long time ago.

10 Q. And when you say it's on page 68, that is
11 page 68 of your dissertation?

12 A. From the context, that's what I would
13 understand.

14 Q. So if we look at your dissertation, which
15 you have with you as well, there are really two
16 different page numbers. There is the page number
17 of the PDF, which we have in the bottom right-hand
18 corner starting with page 1, which we added.
19 Right?

20 A. Yeah.

21 Q. And then we have got your page numbers
22 that are in the document that kind of start on
23 page -- where do they start? They start on sort
24 of page 17 of the -- 18 of the PDF. Top
25 right-hand corner you will see like a little

1 number 2, and then the numbers keep going. Top
2 right-hand corner there is a different number. So
3 why don't we start with looking at page 68 of the
4 PDF.

5 A. So your page 68, for lack of a better
6 term?

7 Q. Right. Right. So that is the page
8 number of the PDF which was the link that you had
9 sent to Andrew Grenville, and I am trying to
10 figure out is it that page 68 you are talking
11 about, or is it -- you will see that corresponds
12 to a page number in the top right-hand corner of
13 page 52, or is it the actual page 68, which is a
14 couple of pages further along?

15 A. You know --

16 MR. ANDERSON: Objection. Form.
17 Objection. Outside the scope of Dr. Stowers'
18 declaration.

19 BY MR. BREGMAN:

20 Q. So can you tell me what secret sauce you
21 are referring to in your email that you attached
22 to your declaration as being on page 68? Can you
23 look at those two pages, starting with page 68 in
24 the bottom right-hand corner, which is page 52 of
25 your dissertation, Exhibit Number 1008. If you

1 can look at those two pages for me, both page 68
2 bottom right-hand corner or page 68 top right-hand
3 corner, and tell me which of those pages you think
4 you were referring to in your email.

5 MR. ANDERSON: Objection. Form.
6 Objection. Outside the scope of Dr. Stowers'
7 declaration.

8 BY MR. BREGMAN:

9 Q. Go ahead.

10 A. So there is two distinct things, and
11 there is actually something on both of these two
12 pages.

13 Q. Okay. Which one do you want to start
14 with?

15 A. So we can start with the documents
16 Number 52 -- sorry -- 52, page 52 --

17 Q. Top right-hand corner?

18 A. -- your page 68 at the bottom.

19 Q. Okay.

20 A. That is describing, for lack of a better
21 term, a recipe.

22 Q. Okay.

23 A. Okay.

24 Q. Where is the recipe? So that is the
25 magic sauce recipe?

1 MR. ANDERSON: Objection. Form.
2 Objection. Outside the scope of Dr. Stowers'
3 declaration.

4 BY MR. BREGMAN:

5 Q. Go ahead.

6 A. So I'm just being clear. Let's talk
7 about what is on these two pages.

8 Q. Okay.

9 A. I am not saying which is which.

10 Q. Okay.

11 A. So there is a recipe on 52, slash, the
12 PDF 68.

13 Q. Okay.

14 A. But then we go to 68, slash, PDF 84,
15 we're basically laying out a rationale for why
16 these materials are important.

17 Q. And page 68 to the PDF is the only of
18 those two that actually contain a recipe. Is that
19 right?

20 MR. ANDERSON: Objection. Form.
21 Objection. Outside the scope of Dr. Stowers'
22 declaration.

23 BY MR. BREGMAN:

24 Q. Although the only ones that have a recipe
25 is page 68 of the PDF?

1 MR. ANDERSON: Same objections.

2 A. So the -- a chemical recipe does not
3 exist on page 68, slash, 84.

4 BY MR. BREGMAN:

5 Q. Okay.

6 A. But, again, 68, slash, 84 has a rationale
7 for the material.

8 Q. Okay. But page 52 -- 68 of the PDF, 52
9 of the numbered pages, that does have a recipe.
10 Right?

11 MR. ANDERSON: Objection. Form.
12 Objection. Outside the scope of Dr. Stowers'
13 declaration.

14 BY MR. BREGMAN:

15 Q. So page 68 of the PDF does have the
16 recipe?

17 MR. ANDERSON: Same objections.

18 BY MR. BREGMAN:

19 Q. Is that right?

20 MR. ANDERSON: Same objections.

21 A. Give me one second. Yes. 52, slash, 68
22 has a recipe.

23 Q. And what is that recipe?

24 MR. ANDERSON: Objection. Form.
25 Objection. Outside the scope of Dr. Stowers'

1 declaration.

2 I am trying to figure out how this is
3 relevant to the opinions that he is -- for
4 essentially the facts that he has put forth in his
5 declaration.

6 MR. BREGMAN: He relied on this
7 document.

8 MR. ANDERSON: Excuse me.

9 MR. BREGMAN: I need to understand
10 fully what --

11 MR. ANDERSON: He relied on what
12 document?

13 MR. BREGMAN: He relied on this
14 document, the dissertation. The dissertation
15 is -- inside his email, he talks about the secret
16 sauce. I need to know what he is talking about in
17 his email.

18 MR. ANDERSON: Where in his
19 declaration is he relying on his dissertation --

20 MR. BREGMAN: Do you want to tell him
21 not to answer, Paul? Because you can tell him not
22 to answer, and if you do that, that's fine. We
23 can call the board. I am not going to have an
24 argument about it.

25 MR. ANDERSON: I am not going to tell

1 him not to answer, but I am not going to let you
2 go into a bunch of questions about it --

3 MR. BREGMAN: Well, that is telling
4 him not to answer, so you've got a choice that --

5 MR. ANDERSON: No. I'm not going to
6 tell him not to answer. It's me telling you that
7 he is not going to go into technical details of
8 what's in this dissertation absent somebody at the
9 board telling me that that needs to happen because
10 look --

11 MR. BREGMAN: Okay. Let's call the
12 board. Let's call the board. Let's do it. Is
13 that what you want to do? Because I am asking him
14 about something he said in his declaration.

15 MR. ANDERSON: Where? Point me to --
16 in his declaration where he is relying on anything
17 that is technical within this dissertation.

18 MR. BREGMAN: He says right here my
19 dissertation is past its one-year publication
20 thing. Here it is. And the magic secret sauce is
21 on page 68.

22 MR. ANDERSON: Where in his
23 declaration that we are here cross-examining him
24 with today does he rely on that statement?

25 MR. BREGMAN: What do you mean rely

1 on it? He relies on this email, and I have got to
2 understand the context of the email. And I will
3 ask him about his email and what he meant by his
4 email. If you don't want to -- if you want to
5 tell him not to answer, that's fine. Let's ask
6 the board.

7 MR. ANDERSON: I didn't tell him not
8 to answer, but I'm not going to -- no. We are not
9 going to go down this line of questioning.

10 MR. BREGMAN: We are going to go down
11 this line of questioning.

12 MR. ANDERSON: No, we are not.

13 MR. BREGMAN: Then we are going to
14 call the board.

15 MR. ANDERSON: Then call the board.

16 MR. BREGMAN: Okay. Well, that's
17 what we are going to do.

18 (Recess: 11:20 to 11:31 a.m.)

19 BY MR. BREGMAN:

20 Q. So, Dr. Stowers, we were talking about
21 Attachment A to your exhibit. I believe it's
22 Exhibit Number 2008, and it was an email exchange
23 between yourself and Andrew Grenville. And you
24 sent an email. We were discussing that. And then
25 about that Andrew Grenville responded. And there

1 were a couple of names and places and companies in
2 there that we wanted to briefly ask you about, so
3 if you don't mind, we are going to jump into that.

4 So you said there -- you know, you said
5 "Relevant magic secret sauce recipe is on page
6 68." We talked about that briefly, and we are
7 going to deal with that later.

8 You then said, "Doug had me leave it
9 vague."

10 Do you see that?

11 A. Yeah.

12 Q. What do you mean by, "Doug had me leave
13 it vague?"

14 A. I don't know.

15 Q. And then at the -- Andrew Grenville
16 responded. He said, "Thanks for the heads-up. At
17 least that part is covered by the patent
18 application."

19 Do you see that?

20 A. I do.

21 Q. Is that the -- earlier we talked about
22 the '564 patent. Do you believe that the patent
23 application he was referring to is the application
24 that led to the '564 patent?

25 A. I don't know.

1 Q. This was in February 24th, February 24th,
2 2010. Just -- I will state for the record that
3 your patent that you filed, the '564 patent, the
4 earliest date on that is, I believe, June of 2010
5 your provisional application was filed, and this
6 was February, so obviously before that patent
7 application was filed.

8 Are you aware of any other patent
9 applications that were in process or filed that
10 Andrew Grenville could have been talking about?

11 A. Probably, yes.

12 Q. And those were patent applications that
13 listed you as an inventor?

14 A. I think so.

15 One of the other things that we were
16 doing at this time was exploring some solar cell
17 material options, and we were attempting to get a
18 ArF grant, which was like DARPA but for
19 national -- well, it wasn't NSF. But anyway, we
20 were trying to get a grant to develop some solar
21 cell materials, and that was also work that we
22 were developing at the same time, early in
23 Inpria's history, and that leveraged some of the
24 work on -- that were chalcogenides.

25 So chalcogenide materials were common and

1 there was a particular type of chalcogenide
2 material that we were trying to develop, basically
3 a deposition method for another solar cell
4 absorber.

5 Q. Were either of those materials described
6 on either of those pages 68 of your dissertation?

7 A. No.

8 MR. ANDERSON: Objection. Form.
9 Sorry.

10 BY MR. BREGMAN:

11 Q. So when you said your relevant secret
12 sauce is on page 68 and then Andrew Grenville
13 said, "At least that part is covered by the patent
14 application," is it your understanding that he was
15 referring to the secret sauce on page 68 --

16 MR. ANDERSON: Objection. Form.

17 BY MR. BREGMAN:

18 Q. -- that was covered by the patent
19 application?

20 MR. ANDERSON: Sorry.

21 Objection. Form.

22 A. It seems reasonable, but you probably
23 would need to ask Andrew.

24 BY MR. BREGMAN:

25 Q. What do you think he met by "at least

1 that part"?

2 A. I don't know.

3 MR. ANDERSON: Objection. Form.

4 BY MR. BREGMAN:

5 Q. But it seems likely that he was saying
6 "at least that part" was referring to the part you
7 had just identified in your email. Right?

8 MR. ANDERSON: Objection. Form.

9 A. That is certainly a reasonable reading
10 into context.

11 BY MR. BREGMAN:

12 Q. Okay. So he was saying the part of your
13 dissertation that you had said was embargoed was
14 covered by the patent application. Is that fair?

15 MR. ANDERSON: Objection. Form.

16 A. And I don't know exactly.

17 BY MR. BREGMAN:

18 Q. And then he goes on to say, "We just need
19 to redouble our efforts on shoring up our IP."

20 Do you see that?

21 A. I do.

22 Q. What does that mean?

23 A. I don't know.

24 Q. What does "shoring up" mean?

25 A. Making stronger.

1 Q. So you are saying he has to increase his
2 efforts in making the IP stronger? Is that
3 correct?

4 MR. ANDERSON: Objection. Form.
5 Objection. Asked and answered.

6 A. Again, working harder to make our IP
7 stronger is how I understand that sentence.

8 BY MR. BREGMAN:

9 Q. And he says, "We do feel we are now in a
10 much better position to tackle that." And then he
11 says, "Let's talk" -- "Let's plan to talk tomorrow
12 at 9:45 a.m., re the plan for Albany."

13 Do you see that?

14 A. Yes.

15 Q. What is Albany?

16 A. In this context, Albany would have been
17 SEMATECH.

18 Q. So you previously said SEMATECH was in
19 Austin when you were dealing with them?

20 A. When we worked with them when I was in
21 graduate school, they were in the process of
22 moving to New York. New York basically paid them
23 a bunch of money, and they moved to New York. So
24 by this time in 2010, they were out of Austin, and
25 they were fully in New York.

1 Q. And what do you mean by his plan to --
2 the plan for Albany, which you are saying is
3 SEMATECH?

4 A. So there is a couple of other things of
5 context that we can look at in this email if you
6 want me to --

7 Q. Sure.

8 A. -- kind of jump in and explain them.

9 Q. Sure.

10 A. If you look at the time that he sent that
11 email --

12 Q. Uh-huh.

13 A. And we can come back to Albany, but if I
14 can instead go to Roel.

15 Q. R-o-e-l?

16 A. Yes.

17 Q. Okay.

18 A. I am assuming you were going to get
19 there, but it helps with this.

20 Q. Yeah.

21 A. So Roel is Roel Gronheid. Don't ask me
22 how to spell it.

23 Q. Okay.

24 A. So he at the time worked at IMEC in
25 Leuven, Belgium. And he -- so you see he is

1 talking about Roel, and he says, "I met with Roel
2 for an hour this morning." Roel was in Belgium,
3 and Roel would have been in Belgium, so this
4 implies that Andrew was also in Belgium.

5 And we can come back to what he was
6 talking to him about as you wish, but that kind of
7 helps place where Andrew is, and then -- that then
8 took -- he is in Belgium. Right? We -- so then
9 someone is going to go to Albany. That implies
10 that I am the one that's going to Albany. So I
11 would have presented a resist update probably at
12 SEMATECH in Albany.

13 Q. Okay. And what was being discussed with
14 Roel?

15 MR. ANDERSON: Objection. Form.
16 Objection. Outside the scope of Dr. Stowers'
17 declaration.

18 A. So his last sentence says he is --
19 referring to Roel, he says, "He is clearly pretty
20 motivated to get it on the ADT."

21 So he is motivated to get our resist onto
22 the ADT, the ADT -- I believe that stands for
23 advanced development tool. This was the first
24 iteration of an EUV tool that ASML produced. It
25 was before -- the first commercial product was

1 then called an NXE, but the ADT was sort of the
2 prototype tool. There was one in IMEC. There
3 were a couple others, and I am not entirely sure
4 where they're at. There might have been one at
5 Intel, I think.

6 But so then Roel is motivated. So Roel
7 is doing resist development work at IMEC, which is
8 another type of consortium. So he is motivated to
9 get our resist onto the advanced development tool,
10 so he is motivated to do exposures with our resist
11 on the prototype EUV tool.

12 Q. So it's -- IMEC is mainly funded by ASML?

13 A. That is not my understanding.

14 Q. Okay. What is your understanding?

15 A. There are members at IMEC. Certainly
16 ASML is a member, and they also support with
17 places to put tools, and they deliver tools to
18 IMEC. But Intel is a member. Samsung is a
19 member. You know, all of the big companies are
20 members at IMEC. So anyone -- pretty much anyone
21 in our industry is typically a member. LAM is
22 certainly a member at IMEC. And so everyone pays
23 money into IMEC to be a member and to get access
24 to a shared-use facility.

25 Q. Is everyone in the industry also a member

1 of SEMATECH?

2 A. At the time I don't believe so, but that
3 is probably a better question for someone else.

4 Q. And he says here, "I had good discussions
5 with Jacques tonight, and he answered some of your
6 questions re thickness, preparation, et cetera.
7 We can discuss."

8 Do you see that?

9 A. Yes.

10 Q. Who is Jacques?

11 A. I believe that is someone who is at
12 SEMATECH. And I think his last name was Georges.
13 It looked like George, and I didn't know how to
14 say it, but that is a person who worked at
15 SEMATECH.

16 Q. And you had some questions that Jacques
17 was answering about thickness. Is that right?

18 A. That is the context that I read from this
19 email.

20 Q. And what was your question about
21 thickness?

22 A. I do not know.

23 Q. And preparation?

24 A. Again, I do not know.

25 Q. And then he goes on to say, "Among other

1 things, we also now have good pull from Samsung
2 and from ASML/ZEISS senior management."

3 What does he mean by that?

4 MR. ANDERSON: Objection. Form.

5 BY MR. BREGMAN:

6 Q. What is your understanding of what he
7 means by that?

8 A. Let's go to the context that we talked
9 about earlier where Roel was interested in getting
10 our resist onto the prototype EUV tool -- do test
11 exposures, essentially, on the prototype EUV tool.
12 So you couldn't just put anything you wanted on
13 there. Right? It was, like, one of two EUV demo
14 tools. Right? So access to that was limited.

15 One of the things that limited access was
16 outgassing. And I can get into that if you are
17 curious, but essentially there were -- there were
18 hoops -- as we say in the email, there were -- you
19 had to get sign-offs in order to get a new
20 material onto this prototype tool.

21 So he had pull from Samsung and then ASML
22 and ZEISS senior management to help clear the
23 hoops to get the work done, to get the sign-offs
24 to make sure that we had access for Roel to do
25 exposures on this prototype EUV tool.

1 Q. So Samsung, ASML, and ZEISS were
2 responsible for clearing the hoops at Imatech?

3 MR. ANDERSON: Objection. Form.
4 Objection. Outside the scope of Dr. Stowers'
5 declaration.

6 BY MR. BREGMAN:

7 Q. Is that right?

8 A. Samsung -- this is -- I am reading into
9 this, and from what I know about the industry in
10 general, Samsung wouldn't have been responsible
11 for granting access, but ASML and ZEISS would have
12 been. Samsung could communicate their support,
13 which would then, you know, raise the priority,
14 but ultimately that came from ASML and ZEISS.

15 Q. And what were you speaking to SEMATECH
16 about?

17 MR. ANDERSON: Objection. Form.
18 Objection. Outside the scope of Dr. Stowers'
19 declaration.

20 A. I don't know. I vaguely remember -- so
21 SEMATECH was also a place where people were
22 pooling and doing early learning, and so we -- I
23 believe we were giving a resist update to a
24 committee on SEMATECH. I don't know who was on
25 that committee. I don't recall. I do remember at

1 one point I did take a trip to Albany to make a
2 presentation. I am assuming that that is what
3 this is, but I would have to do some
4 double-checking before I could confirm that.

5 Q. And it goes on to say, "I will look at
6 your material beforehand." Do you remember what
7 that material is -- or was? Sorry.

8 A. I do not. I can only read into the
9 context that I'm going to present in Albany. He
10 is going to look at my presentation materials
11 before we talk about what I am going to do at
12 Albany. And then the -- he is going to get that
13 through Dropbox, which was our file-sharing
14 service that we used at the time.

15 Q. So I think we have covered everything in
16 this except for this magic secret sauce stuff, so
17 we will see what the board says about that. I may
18 not have too much left, so can we take a break and
19 maybe just look through the rest of my questions,
20 and we will see what else I am going to do?

21 MR. ANDERSON: Yeah.

22 MR. BREGMAN: Okay.

23 (Recess: 11:46 a.m. to 12:06 p.m.)

24 MR. BREGMAN: So back on the record.

25 The counsel for the two parties have

1 discussed during the break that the board seems to
2 be unavailable today. They close at 3 p.m. East
3 Coast time, and they seem to have been unavailable
4 for a call to resolve this dispute about this line
5 of questioning being beyond the scope of
6 Dr. Stowers' declaration, so what we are going to
7 do is end our deposition now -- of course, if
8 there is a redirect, we might recross -- and --
9 and table this and have a call with the board with
10 their availability maybe next week sometime, and
11 if necessary, reconvene most probably in a virtual
12 format.

13 MR. ANDERSON: And just to be clear,
14 you have no further questions regarding the public
15 availability of Dr. Stowers' thesis beyond what
16 you just stated with respect to the call with the
17 board?

18 MR. BREGMAN: Right. No further
19 questions other than delving into some of the
20 issues where we -- where you instructed your
21 witness not to answer due to scope.

22 MR. ANDERSON: Sounds good.

23 THE CERTIFIED STENOGRAPHER: Will you
24 state on the record how you would like me to
25 handle the transcript? Would you like it

1 transcribed?

2 MR. BREGMAN: Yes. I think both
3 sides would like it transcribed. We will take
4 a -- we will take it expedited.

5 You want it expedited, I guess?

6 MS. PATITUCCI: Yes.

7 MR. WOLFE: Whatever they get is fine
8 with us.

9 THE CERTIFIED STENOGRAPHER: You will
10 take a copy then?

11 MR. BREGMAN: Yes.

12 MR. WOLFE: Yes.

13 (The deposition was concluded at
14 12:08 p.m.)

15

16

17

18

19

20

21

22

23

24

25

1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2
3 I, Christine Oljace, Certified Reporter and
4 Notary Public within and for the State of Oregon
5 do hereby certify:

6 That Jason K. Stowers, Ph.D., the witness
7 whose deposition is hereinbefore set forth, was
8 duly sworn by me before the commencement of such
9 deposition and that such deposition was taken
10 before me and is a true record of the testimony
11 given by such witness.

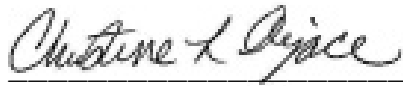
12 I further certify that the adverse party,
13 INPRIA CORP., was represented by counsel at the
14 deposition.

15 I further certify that the deposition of
16 Jason K. Stowers, Ph.D., occurred remotely on
17 Thursday, October 10, 2024, commencing at 9:55
18 a.m. to 12:08 p.m.

19 I further certify that I am not related to
20 any of the parties to this action by blood or
21 marriage, I am not employed by or an attorney to
22 any of the parties to this action, and that I am
23 in no way interested, financially or otherwise,
24 in the outcome of this matter.

1 IN WITNESS WHEREOF, I have set my hand this
2 15th day of October 2024, in the City of Eugene,
3 County of Lane, State of Oregon.

4 My commission expires: September 30, 2027

5
6
7 
8 _____

9 Christine Oljace, CSR-RPR-CRC

10 CSR No. 05-0397
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A			
ability	action	19:13, 19:14,	17:6
7:24	83:20, 83:22	21:10, 22:12,	allowed
able	actual	22:18, 28:3,	8:9, 43:17,
13:12	47:5, 62:13	35:16, 39:19,	43:20
about	actually	42:24, 44:7,	allowing
8:23, 9:18,	19:25, 20:17,	44:19, 45:4,	48:15
10:11, 14:15,	22:22, 45:22,	49:6, 52:20,	along
17:10, 17:13,	45:25, 57:4,	52:23, 55:1,	12:21, 38:9,
17:24, 19:6,	57:9, 63:11,	58:11, 58:23,	62:14
20:17, 21:2,	64:18	59:16, 60:21,	already
21:7, 22:11,	adapting	65:6, 73:6,	53:17
22:18, 24:25,	14:17	77:24	also
25:1, 35:17,	add	against	7:13, 14:22,
35:21, 37:21,	28:14	9:23, 10:5,	17:11, 27:6,
40:5, 43:25,	added	35:19	28:19, 29:9,
46:4, 48:10,	61:18	ago	34:17, 36:20,
48:20, 54:17,	additional	61:9	41:5, 42:15,
54:24, 55:6,	28:15, 30:12,	agreement	46:20, 49:17,
55:9, 55:11,	33:1, 33:4,	17:3, 19:7	53:14, 57:1,
57:17, 61:1,	46:14	ahead	59:4, 59:5,
62:11, 64:7,	address	45:15, 63:9,	70:21, 75:4,
66:15, 66:16,	6:15, 56:20,	64:5	76:16, 76:25,
66:24, 67:2,	57:1	alan	78:1, 79:21
67:14, 68:3,	administration	34:20, 36:19,	although
68:20, 68:25,	47:21, 47:23	39:13	64:24
69:2, 69:6,	adt	albany	alto
69:21, 70:10,	75:20, 75:22,	73:12, 73:15,	3:7
75:1, 75:6,	76:1	73:16, 74:2,	among
77:17, 77:20,	advanced	74:13, 75:9,	77:25
78:9, 79:9,	75:23, 76:9	75:10, 75:12,	amplified
79:16, 80:11,	advancing	80:1, 80:9,	23:24
80:17, 81:4	38:3, 38:5	80:12	anderson
above	adverse	alfa	3:18, 9:9,
30:19	83:12	39:7	9:12, 15:1,
absent	advisor	alison	15:2, 23:25,
67:8	49:1	3:11	24:3, 24:8,
absorber	aesar	all	24:10, 24:12,
71:4	39:7	11:18, 11:25,	29:22, 29:23,
access	after	15:22, 19:8,	37:3, 38:25,
15:16, 76:23,	13:4, 17:19,	23:6, 23:9,	39:15, 42:23,
78:14, 78:15,	17:23, 18:3,	25:16, 25:22,	45:13, 46:9,
78:24, 79:11	19:12, 21:25,	28:19, 29:2,	50:5, 62:16,
account	22:25, 24:15,	32:7, 32:25,	63:5, 64:1,
56:21, 56:22,	24:17, 28:9,	33:21, 39:9,	64:20, 65:1,
57:2, 58:3, 58:5	46:18, 49:11,	41:25, 52:7,	65:11, 65:17,
acquired	49:13	52:15, 52:16,	65:20, 65:24,
10:21	again	76:19	66:8, 66:11,
	17:25, 19:2,	allow	66:18, 66:25,
		7:11, 7:13,	

67:5, 67:15, 67:22, 68:7, 68:12, 68:15, 71:8, 71:16, 71:20, 72:3, 72:8, 72:15, 73:4, 75:15, 78:4, 79:3, 79:17, 80:21, 81:13, 81:22 andrew 19:21, 34:21, 36:20, 39:22, 56:19, 56:25, 57:15, 59:7, 60:2, 62:9, 68:23, 68:25, 69:15, 70:10, 71:12, 71:23, 75:4, 75:7 another 47:21, 57:25, 71:3, 76:8 answer 7:7, 7:12, 7:14, 7:23, 8:2, 8:3, 10:20, 19:6, 19:7, 24:6, 38:14, 66:21, 66:22, 67:1, 67:4, 67:6, 68:5, 68:8, 81:21 answered 35:10, 37:4, 73:5, 77:5 answering 77:17 answers 7:4 anuja 40:7 any 7:17, 8:5, 8:25, 12:24, 18:7, 18:11, 18:25, 19:23, 20:12, 22:2,	24:19, 24:22, 25:4, 25:9, 26:1, 30:12, 30:14, 30:22, 30:25, 31:2, 31:4, 32:19, 33:13, 33:17, 35:23, 36:1, 36:4, 38:6, 39:24, 43:21, 44:23, 45:11, 45:19, 51:8, 52:24, 53:24, 57:8, 57:20, 70:8, 83:20, 83:22 anybody 43:3, 43:19, 44:5, 44:15 anymore 18:14 anyone 15:9, 76:20 anything 26:21, 30:19, 46:6, 46:13, 46:16, 67:16, 78:12 anyway 70:19 appeal 1:3 appear 26:18 appearance 49:20, 50:8 appearances 3:1 application 35:23, 69:18, 69:23, 70:5, 70:7, 71:14, 71:19, 72:14 applications 20:11, 70:9, 70:12 apply 19:8, 20:10,	24:17, 60:19 appreciate 9:12 approximately 33:12, 55:23 area 14:15, 23:5 areas 13:25 arf 18:16, 70:18 argue 20:16 argument 66:24 around 14:3, 23:23, 28:15, 28:17, 60:1 asked 16:17, 37:4, 73:5 asking 7:11, 37:16, 49:2, 67:13 asml 75:24, 76:12, 76:16, 78:2, 78:21, 79:1, 79:11, 79:14 assert 10:5 asserting 35:19 assigned 21:18 association 36:15 assume 19:16, 56:25 assuming 74:18, 80:2 athens 45:2 attached 49:25, 62:21 attachment 51:18, 51:23,	54:7, 54:11, 54:12, 54:13, 54:18, 55:7, 68:21 attachments 9:2, 9:4, 9:16 attempting 70:17 attend 43:18, 43:20 attorney 83:21 august 40:17, 42:22, 44:8, 44:9, 46:7 austin 18:21, 18:24, 73:19, 73:24 availability 81:10, 81:15 available 49:12, 52:7, 52:16, 52:19, 60:10 avoided 27:25 aware 10:25, 11:6, 11:19, 11:23, 11:25, 17:7, 26:23, 33:18, 33:20, 70:8 awareness 11:21 away 29:12 B back 16:14, 19:4, 27:10, 36:4, 49:15, 55:18, 56:10, 57:8, 57:25, 74:13, 75:5, 80:24 background 12:8 bank 10:23
---	---	---	--

base 14:18 based 19:25, 32:20, 33:1, 34:16 basic 20:7 basically 29:10, 36:9, 56:12, 60:24, 64:15, 71:2, 73:22 became 21:23, 28:7, 28:8, 28:9 because 9:6, 47:8, 47:11, 53:14, 54:23, 56:20, 57:6, 57:7, 57:13, 66:21, 67:9, 67:13 become 11:6, 11:18 been 6:8, 6:19, 17:7, 18:4, 21:11, 31:9, 32:17, 33:25, 35:14, 36:9, 36:13, 41:19, 42:25, 43:22, 44:19, 47:20, 50:18, 54:21, 54:23, 70:10, 73:16, 75:3, 76:4, 79:10, 79:12, 81:3 before 1:3, 2:5, 6:19, 6:22, 7:12, 11:23, 17:17, 17:23, 19:20, 21:1, 23:7, 40:6, 44:2, 44:5, 54:22, 55:6, 55:22, 56:2, 60:21,	70:6, 75:25, 80:4, 80:11, 83:8, 83:10 beforehand 80:6 begin 7:12 beginning 2:3 behalf 2:2 being 30:18, 33:5, 35:22, 50:24, 51:1, 52:18, 62:22, 64:6, 75:13, 81:5 belgium 74:25, 75:2, 75:3, 75:4, 75:8 believe 18:1, 19:18, 20:22, 21:20, 26:10, 31:8, 33:11, 34:19, 34:22, 35:25, 36:3, 37:11, 38:14, 40:8, 42:4, 42:10, 42:12, 44:13, 48:4, 48:12, 50:19, 68:21, 69:22, 70:4, 75:22, 77:2, 77:11, 79:23 bells 25:4 below 49:24, 57:14 berkeley 17:10, 17:12, 17:19, 18:3, 18:7 best 7:23, 58:25 better 62:5, 63:20, 73:10, 77:3	between 7:14, 13:7, 13:16, 17:3, 46:6, 68:23 beyond 40:11, 43:9, 58:1, 81:5, 81:15 bias 32:19 big 10:13, 47:13, 76:19 bind 47:2, 47:14 bit 21:11, 53:23, 55:12 block 16:6, 18:2 blood 83:20 board 1:3, 66:23, 67:9, 67:12, 68:6, 68:14, 68:15, 80:17, 81:1, 81:9, 81:17 bockius 3:4, 3:10 book 47:2, 47:12, 49:9 born 45:5 both 8:20, 12:17, 38:19, 40:7, 63:1, 63:11, 82:2 bottom 50:13, 52:2, 52:12, 61:17, 62:24, 63:2, 63:18 bought 31:12	bound 49:9 box 47:15, 47:16, 47:23, 47:24, 48:8, 48:25 boxes 50:20, 50:22 break 7:13, 7:17, 7:21, 54:25, 55:7, 80:18, 81:1 bregman 3:5, 5:4, 6:13, 9:5, 9:10, 9:13, 14:6, 14:11, 24:2, 24:14, 37:9, 39:3, 39:17, 40:22, 40:24, 43:2, 45:14, 46:12, 50:6, 55:5, 62:19, 63:8, 64:4, 64:23, 65:4, 65:14, 65:18, 66:6, 66:9, 66:13, 66:20, 67:3, 67:11, 67:18, 67:25, 68:10, 68:13, 68:16, 68:19, 71:10, 71:17, 71:24, 72:4, 72:11, 72:17, 73:8, 78:5, 79:6, 80:22, 80:24, 81:18, 82:2, 82:11 brick 47:22 brief 13:7, 31:8 briefly 69:2, 69:6 bring 38:13
--	--	---	---

bringing 38:5 brings 9:19 brought 16:10, 16:15, 17:15, 22:22 building 47:21, 47:23, 53:13, 53:15 bunch 50:15, 67:2, 73:23 business 10:13 buy 38:17 buying 38:21, 38:23, 39:5	capacity 20:23 carrying 47:23 case 1:11, 11:17 cashed 31:13 cell 28:17, 70:16, 70:21, 71:3 ceo 27:18 certain 14:4, 31:23, 35:11, 46:15, 59:4 certainly 46:10, 72:9, 76:15, 76:22 certificate 83:1 certified 2:7, 6:4, 14:7, 81:23, 82:9, 83:3 certify 83:5, 83:12, 83:15, 83:19 cetera 77:6 chain 57:21 chalcogenide 14:5, 14:8, 70:25, 71:1 chalcogenides 70:24 challenged 33:25, 35:15 change 46:6, 46:13, 54:6 changed 46:10, 51:13, 52:25 check 27:19, 34:23,	50:20 checking 50:22 chemical 39:9, 39:10, 65:2 chemically 23:23 chemicals 38:17, 38:18, 38:21, 38:24, 39:5, 61:2 chemistry 12:23, 43:24, 45:12 chief 27:22 chips 23:7 choice 67:4 christensen 37:2 christine 1:22, 2:6, 83:3, 84:9 city 84:2 claim 9:25, 10:14 claims 9:22, 35:18, 36:2 clarify 26:22 class 30:5 clear 24:4, 64:6, 78:22, 81:13 clearing 79:2 clearly 75:19 close 81:2 coast 81:3	coating 29:11 coined 29:16, 29:25 collaborate 15:9, 15:18 collaboration 18:17 collected 50:25, 51:1 collecting 51:6 colloquial 61:5 com 56:24 combine 32:7 come 21:13, 21:16, 22:24, 40:13, 74:13, 75:5 coming 11:24 commencement 83:8 commencing 83:17 commercial 75:25 commission 84:4 committee 41:11, 41:21, 42:12, 42:21, 44:16, 46:7, 79:24, 79:25 common 70:25 communicate 27:7, 79:12 companies 15:20, 17:9, 18:7, 18:25, 21:6, 69:1, 76:19 company 10:7, 10:12,
C			
c-suites 27:25 california 3:7 call 61:2, 66:23, 67:11, 67:12, 68:14, 68:15, 81:4, 81:9, 81:16 called 15:24, 16:4, 23:5, 23:13, 29:8, 48:17, 76:1 camcor 15:24, 18:6 came 12:12, 17:18, 26:11, 38:12, 43:8, 79:14 can't 7:9, 10:14, 51:15, 56:18 cannot 8:5			

10:14, 10:18, 11:21, 18:22, 20:23, 24:22, 31:10, 32:22, 36:15 compared 57:7 compensated 32:18 compensation 30:12, 33:1, 33:4, 33:6 completed 45:22, 46:1, 46:8, 46:19 completely 8:6 complicated 10:17, 10:19 components 23:13, 23:14 comprehensive 18:9 concluded 82:13 concrete 56:7 conference 44:18, 44:21, 44:23, 45:1, 45:8 confirm 80:4 connection 45:19 consortium 18:15, 18:22, 76:8 constraints 43:22 consult 20:24 contain 64:18 contained 44:23 contents 42:20	context 21:4, 60:19, 61:12, 68:2, 72:10, 73:16, 74:5, 77:18, 78:8, 80:9 contingent 30:14 continuation 13:23 continue 13:18, 38:13 continued 16:24 continuously 53:7 contributed 34:15, 37:16, 37:19, 38:7 contributes 37:11 contribution 37:13, 39:14 conversation 60:5, 60:8, 60:21, 60:23 conversations 37:6 converting 14:5 copies 44:11 copy 9:6, 26:13, 41:15, 44:1, 44:4, 47:3, 47:4, 47:6, 48:7, 49:14, 49:18, 50:17, 82:10 corner 51:22, 52:12, 61:18, 61:25, 62:2, 62:12, 62:24, 63:2, 63:3, 63:17 corp 1:5, 1:8, 3:3,	3:16, 10:18, 10:19, 26:25, 83:13 corporate 27:24 corporation 34:1 correct 7:10, 10:10, 13:3, 26:22, 30:8, 30:21, 33:8, 33:15, 33:18, 39:23, 41:13, 41:20, 50:9, 52:13, 59:4, 73:3 correspondence 36:5 corresponds 62:11 corvallis 1:18, 2:3, 6:1, 6:17 cost 53:20 could 18:4, 25:14, 26:3, 49:8, 70:10, 79:12, 80:4 couldn't 42:18, 78:12 counsel 7:13, 8:1, 8:10, 8:17, 35:8, 35:10, 36:22, 80:25, 83:13 count 46:11 county 84:3 couple 8:15, 8:22, 23:10, 46:17, 62:14, 69:1, 74:4, 76:3 course 81:7	court 7:1, 7:5 covered 69:17, 71:13, 71:18, 72:14, 80:15 crc 2:6 criteria 57:11 cross-examining 67:23 csr 1:23, 2:6, 84:10 csr-rpr-crc 1:22, 84:9 cto 27:20, 28:2 curious 32:15, 78:17 customers 27:7, 27:10 cut 23:7 D dardi 37:2, 37:5 darpa 70:18 date 11:20, 40:17, 40:20, 40:23, 40:25, 41:1, 41:6, 41:7, 41:10, 45:2, 51:25, 52:1, 70:4 dates 15:8, 22:9 day 51:19, 84:2 de 40:7 deal 37:1, 69:7 dealing 36:23, 73:19
--	--	--	---

decision 10:4	83:15	display 20:11, 37:23	done 16:2, 16:3,
deck 44:20	described 71:5	dispute 81:4	20:1, 33:1,
declaration 9:1, 9:3, 9:15,	describing 63:20	dissertation 24:20, 24:23,	78:23
26:13, 26:16,	detailed 49:24, 50:11	25:17, 25:23,	double-checking 80:4
26:22, 30:11,	details 67:7	25:25, 26:2,	doug 17:6, 21:25,
40:16, 51:20,	develop 70:20, 71:2	41:15, 42:21,	34:20, 39:21,
52:2, 52:3,	developed 14:18, 14:21,	44:5, 44:25,	53:11, 53:12,
55:8, 62:18,	14:25	47:1, 52:19,	53:13, 69:8,
62:22, 63:7,	developing 38:13, 70:22	55:15, 55:19,	69:12
64:3, 64:22,	development 75:23, 76:7,	58:15, 58:18,	douglas 13:2
65:13, 66:1,	76:9	59:3, 59:5,	down 17:12, 68:9,
66:5, 66:19,	different 15:17, 22:14,	59:11, 59:18,	68:10
67:14, 67:16,	23:3, 23:4,	61:11, 61:14,	dr 6:14, 13:1,
67:23, 75:17,	23:23, 28:4,	62:25, 66:14,	13:8, 13:17,
79:5, 79:19,	44:19, 51:16,	66:19, 67:8,	13:22, 14:12,
81:6	61:16, 62:2	67:17, 67:19,	14:22, 15:10,
definition 20:25, 28:1	dion 3:5, 23:25	71:6, 72:13	19:23, 20:2,
definitive 17:16	directed 52:22	distinct 63:10	20:13, 20:21,
degree 12:10	directly 10:6, 16:10,	distributors 39:11, 39:12	24:25, 26:11,
delete 57:8, 57:9	26:6	doctoral 40:16	29:24, 36:14,
deliver 76:17	director 21:19, 28:8	document 39:20, 42:25,	42:2, 52:22,
delving 81:19	discuss 8:9, 11:15,	44:7, 45:21,	53:2, 62:17,
demo 78:13	77:7	46:3, 46:18,	63:6, 64:2,
department 43:25, 45:12	discussed 18:6, 19:9,	46:24, 53:6,	64:21, 65:12,
depending 38:20	75:13, 81:1	54:18, 54:22,	65:25, 68:20,
depends 14:14	discussing 68:24	61:22, 66:7,	75:16, 79:4,
deposed 6:19	discussion 35:7	66:12, 66:14	79:18, 81:6,
deposition 1:17, 2:1,	discussions 11:1, 11:4,	documents 8:25, 63:15	81:15
8:10, 8:13,	12:1, 12:5,	doing 16:20, 16:23,	drafting 35:23, 36:1
14:3, 35:6,	35:10, 77:4	21:7, 23:2,	drive 6:17, 15:23
71:3, 81:7,		28:15, 28:19,	drop-down 50:21
82:13, 83:7,		37:24, 46:14,	dropbox 80:13
83:9, 83:14,		52:21, 53:2,	dropped 48:5
		70:16, 76:7,	dropping 47:24
		79:22	due 81:21
		dollars 31:20, 32:9,	
		32:12	
		donated 16:6	

duly 6:8, 83:8 during 15:10, 17:1, 81:1 E e-beam 15:25 earlier 19:6, 37:10, 37:21, 61:1, 69:21, 78:9 earliest 70:4 early 15:8, 28:15, 35:8, 70:22, 79:22 east 81:2 educational 12:7 effectively 12:22, 27:22, 31:13 effort 27:4 efforts 72:19, 73:2 either 13:19, 18:4, 51:8, 71:5, 71:6 elapsed 49:11 else 14:17, 20:24, 43:3, 44:5, 44:15, 77:3, 80:20 else's 57:7 elsewhere 36:16 email 54:20, 54:21, 55:25, 56:2, 56:11, 56:13,	56:14, 56:16, 56:20, 56:21, 56:22, 57:1, 57:4, 57:6, 57:14, 58:3, 58:5, 58:12, 58:14, 58:21, 59:2, 59:7, 62:21, 63:4, 66:15, 66:17, 68:1, 68:2, 68:3, 68:4, 68:22, 68:24, 72:7, 74:5, 74:11, 77:19, 78:18 emails 56:10, 57:8, 57:9, 57:11, 57:12, 57:20 embargo 48:10, 48:17, 49:4, 49:5, 49:11, 49:15, 49:22, 53:21, 53:22, 54:16, 55:14, 55:19, 55:23, 56:2, 56:4, 56:8, 56:12, 56:15, 56:17, 58:9, 58:16, 58:18, 58:24, 59:1, 59:12, 59:17, 59:20 embargoed 72:13 embargoes 49:21 employed 21:8, 83:21 employee 15:2, 15:5, 21:11 employees 39:24 employment 12:8, 30:13	end 53:8, 81:7 ended 20:19 ending 2:4, 59:18 energy 23:8 engineer 28:7, 28:8 engineering 12:11 enough 26:3 entirely 35:2, 76:3 entirety 35:12, 37:15, 44:8 entities 19:8, 33:17 entity 19:17 entrepreneur 53:16, 53:18 esq 3:5, 3:11, 3:18, 4:3 essentially 13:17, 37:25, 49:1, 49:12, 50:20, 50:25, 66:4, 78:11, 78:17 et 77:6 eugene 15:23, 21:22, 84:2 euv 16:2, 23:11, 23:14, 23:16, 24:5, 24:10, 24:11, 26:4, 75:24, 76:11, 78:10, 78:11, 78:13, 78:25 even 11:22, 53:11,	53:17, 59:4 ever 6:19, 6:21, 15:5, 26:5, 31:4, 36:22, 40:6 every 29:5 everyone 57:7, 76:22, 76:25 everything 25:24, 80:15 exact 11:20, 22:9, 37:17 exactly 14:14, 17:22, 20:25, 28:2, 36:14, 42:14, 59:15, 72:16 examination 5:4, 6:12 examined 6:10 example 16:1, 21:3, 28:16, 54:9 except 49:25, 80:16 exchange 68:22 excuse 66:8 exercised 31:12, 31:17, 32:25 exercising 31:7 exhibit 26:14, 49:25, 51:3, 55:8, 62:25, 68:21, 68:22 exhibits 5:8, 9:15 exist 18:14, 44:7,
---	--	--	--

59:18, 59:22, 65:3 existed 16:25, 44:9 existing 19:17 exists 59:20 expanding 38:4 expedited 82:4, 82:5 expires 84:4 explain 74:8 exploring 70:16 exposure 15:16, 15:18, 16:6, 16:13, 16:18 exposures 16:2, 76:10, 78:11, 78:25 extension 28:21 extent 37:12 extra 23:8	familiar 11:9, 42:8 far 57:8 february 17:17, 18:4, 55:17, 59:9, 59:25, 70:1, 70:6 feedback 53:7 feel 73:9 feeling 34:13, 37:18 few 15:21, 20:19, 39:25, 40:12, 43:5, 43:7, 58:16 figure 32:19, 62:10, 66:2 file 53:24 file-sharing 80:13 filed 11:23, 70:3, 70:5, 70:7, 70:9 filing 9:23, 36:11 filings 37:7 fill 48:5, 48:9 filled 48:24, 49:2, 49:15 financial 32:21 financially 83:23 financials 32:16 find 40:23, 57:12, 59:2	fine 66:22, 68:5, 82:7 finish 7:11, 7:19, 13:9 firm 37:1 first 6:8, 7:20, 11:6, 11:18, 14:25, 16:1, 16:2, 20:15, 20:17, 21:11, 22:23, 23:4, 29:17, 37:20, 51:23, 59:9, 75:23, 75:25 floor 3:19 focus 19:25 focused 37:22, 38:4 follow-on 60:5 followed 23:12, 51:14 follows 6:10 fonder 37:2 forestry 42:13 form 37:3, 38:25, 39:15, 42:23, 45:13, 46:9, 48:5, 48:6, 48:7, 48:9, 48:11, 48:12, 48:13, 48:23, 48:24, 49:2, 49:15, 49:18, 49:21, 50:1, 50:19, 50:23, 50:25, 51:6, 51:7, 51:9,	51:12, 51:14, 51:15, 52:20, 62:16, 63:5, 64:1, 64:20, 65:11, 65:24, 71:8, 71:16, 71:21, 72:3, 72:8, 72:15, 73:4, 75:15, 78:4, 79:3, 79:17 format 81:12 formatted 47:13 forth 16:14, 36:5, 66:4, 83:7 forwarded 60:2 found 54:20, 56:11, 56:13, 56:15, 56:16, 58:21, 59:2, 60:2 founded 37:20 foundry 17:24, 18:3 four 52:5 frame 17:22, 46:17, 53:24 frames 17:14 friday 1:19, 2:5, 6:2 front 26:14 full 6:15 fully 10:24, 46:2, 51:12, 66:10, 73:25 functional 20:10, 37:23
F			
face-to-face 8:16 facility 15:23, 53:14, 76:24 fact 25:23 facts 66:4 fair 56:9, 72:14 fairly 15:8 fall 18:2			

functionality 48:15 fund 25:9, 25:12 funded 25:3, 25:6, 25:12, 76:12 further 62:14, 81:14, 81:18, 83:12, 83:15, 83:19 fyi 59:10	47:9, 48:14, 48:25, 50:12, 63:9, 64:5, 64:14, 67:2, 67:7, 68:9, 68:10, 74:14, 75:9, 78:8 goes 39:21, 72:18, 77:25, 80:5 going 25:1, 27:9, 47:2, 50:16, 54:24, 62:1, 66:23, 66:25, 67:1, 67:5, 67:7, 68:8, 68:9, 68:10, 68:13, 68:17, 69:3, 69:7, 74:18, 75:9, 75:10, 80:9, 80:10, 80:11, 80:12, 80:20, 81:6 gone 40:13 good 27:17, 77:4, 78:1, 81:22 google 25:15, 57:5, 57:16 government 10:24 grad 38:16 graduate 13:13, 16:3, 22:3, 22:25, 25:21, 25:23, 73:21 graduated 17:23, 24:16, 24:18 grant 70:18, 70:20 granting 79:11	grenville 19:21, 21:13, 34:21, 36:20, 39:22, 56:19, 56:25, 57:15, 59:8, 60:3, 62:9, 68:23, 68:25, 69:15, 70:10, 71:12 gronheid 74:21 ground 21:12 group 20:19, 23:12, 23:15, 24:9, 26:11, 26:12, 37:21, 43:9, 43:11, 43:13, 43:14, 44:2 groups 23:4 guess 82:5 guessed 56:6 guys 9:5	handling 36:2 happen 53:9, 67:9 hard 47:3, 47:4, 47:6, 51:13 harder 73:6 hardmask 29:10 hardmasks 28:16 hastings 3:17, 4:2 head 7:9, 18:12 heads-up 69:16 hearing 6:22 held 31:4 help 16:11, 78:22 helped 16:12 helps 74:19, 75:7 herbert 37:2 here 6:17, 8:17, 9:4, 9:19, 11:15, 30:20, 33:5, 35:17, 41:2, 41:23, 47:14, 53:20, 56:23, 67:18, 67:20, 67:23, 77:4 hereby 83:5 hereinbefore 83:7 hey 16:11 high 29:4, 29:5
G		H	

history 21:17, 70:23 hold 30:25, 31:2, 33:13 hoops 78:18, 78:23, 79:2 hope 9:6, 21:8 hour 54:24, 75:2 hours 8:16, 8:22 houses 39:7 houston 3:20 huge 57:6 hundred 31:19 hydroxide 30:2 I ibm 40:7 idea 34:16 identified 72:7 illinois 12:12 imatech 79:2 imec 74:24, 76:2, 76:7, 76:12, 76:15, 76:18, 76:20, 76:22, 76:23 immediately 19:12 implies 75:4, 75:9 important 64:16	include 34:20 includes 40:17, 40:20, 40:25, 41:1, 41:6 increase 73:1 independently 14:20 index 5:1 industry 18:15, 76:21, 76:25, 79:9 infant 17:18 information 50:24, 51:1, 51:8, 51:17 informing 53:8 initially 28:16 inorganic 12:22 inpria 1:8, 3:16, 10:2, 10:16, 11:1, 12:1, 13:7, 13:10, 13:19, 15:2, 15:5, 19:11, 19:16, 19:22, 20:13, 20:20, 20:21, 21:1, 21:9, 21:25, 25:7, 25:13, 26:25, 27:4, 27:12, 27:23, 30:25, 31:4, 31:12, 33:7, 33:10, 33:17, 36:12, 37:20, 38:9, 38:12, 38:14, 40:10, 56:22, 57:1, 83:13	inpria's 10:5, 11:1, 70:23 input 35:23, 36:1, 36:4 inside 47:22, 66:15 instances 22:14, 27:7, 57:13 instead 50:21, 51:6, 74:14 institute 16:5 instructed 8:2, 81:20 instructions 53:4 integration 28:8, 28:10 intel 16:7, 16:8, 17:3, 17:5, 21:18, 21:22, 22:6, 22:15, 22:24, 23:2, 23:13, 23:17, 23:20, 24:7, 24:15, 24:19, 26:2, 76:5, 76:18 intended 24:5 inter 11:12 interested 78:9, 83:23 interject 23:25 intern 26:10 interned 23:14 internships 22:2 interview 21:6	interviews 45:19 introduction 52:13 invalidate 9:22, 35:20 invent 34:24 invention 37:12, 61:6 inventor 33:25, 34:10, 34:13, 35:22, 37:10, 70:13 inventors 34:17 invitation 43:15 involved 10:4, 11:4, 12:4 ip 11:21, 36:10, 36:11, 37:7, 53:24, 72:19, 73:2, 73:6 ipr 1:11, 11:10, 11:19, 11:23, 35:17 issues 81:20 iteration 75:24 itself 14:19, 45:22 J jacques 77:5, 77:10, 77:16 japanese 10:23 jason 1:17, 2:1, 5:3, 6:7, 6:16, 54:15, 56:19, 56:23, 83:6,
---	---	---	---

Transcript of Jason K. Stowers, Ph.D.
Conducted on October 11, 2024

95

83:16 jeremy 15:1, 15:2, 29:17, 29:20, 29:22 jicc 10:21 jkstowers@inpria 56:24 job 1:25, 21:1, 24:15, 24:17, 27:3, 45:19 jobs 23:3 joe 42:6 john 42:4 join 20:13 joined 19:11, 19:20, 20:21, 21:2, 23:1, 28:4 joining 20:20 joke 61:8 jsr 10:17, 10:18, 11:2, 12:2, 31:2, 31:5, 31:12, 31:14, 33:14 july 13:20, 19:14, 26:17, 51:20 jump 69:3, 74:8 june 13:20, 19:14, 22:10, 70:4	keep 62:1 kenane 26:5 kept 57:9 kerr 47:20, 47:22 kezler 13:1, 13:2, 13:17, 20:19, 20:21, 24:25, 34:21, 39:22, 42:2, 43:13, 43:14, 52:22, 53:2 kezler's 13:8, 13:22, 14:12, 14:22, 15:10, 19:23, 20:2, 20:13, 25:10, 26:11, 29:24, 36:14 kind 47:8, 53:18, 56:5, 61:22, 74:8, 75:6 knew 19:20 know 7:14, 7:18, 9:18, 10:11, 10:12, 10:14, 11:20, 15:8, 15:14, 15:21, 16:24, 16:25, 17:2, 17:5, 17:18, 18:13, 20:24, 21:24, 22:9, 22:13, 23:6, 25:8, 25:11, 25:13, 26:7, 28:1, 28:6, 29:2, 32:1, 32:6, 32:20, 34:11, 36:7, 36:14, 37:5, 39:13,	39:24, 40:3, 40:4, 40:5, 40:12, 40:13, 40:14, 41:1, 41:24, 43:16, 43:21, 43:23, 48:8, 48:25, 49:8, 51:5, 51:14, 51:21, 52:15, 52:23, 53:5, 53:8, 53:11, 53:12, 53:19, 55:24, 56:6, 56:7, 57:3, 60:17, 62:15, 66:16, 69:4, 69:14, 69:25, 72:2, 72:16, 72:23, 76:19, 77:13, 77:22, 77:24, 79:9, 79:13, 79:20, 79:24 know-how 38:8, 38:11 knowledge 17:8, 38:11 koby 6:16	11:1, 11:23, 11:25, 33:25, 34:1, 35:15, 39:24, 40:8, 40:9, 40:13, 76:21 lane 84:3 large 10:12 larger 9:21, 10:1, 19:25 largest 15:15 last 11:22, 29:21, 35:7, 36:9, 40:3, 42:19, 52:25, 75:18, 77:12 late 13:11 later 13:13, 25:2, 48:10, 69:7 law 37:1 lawrence 17:10 lawsuit 9:21, 10:1 laying 64:15 learning 79:22 least 9:6, 18:21, 25:6, 42:5, 60:8, 69:17, 71:13, 71:25, 72:6 leave 69:8, 69:12 led 35:24, 69:24 left 21:21, 21:22,
K k-a-r-c-h-e-s-y 42:9 karchesy 42:6		L lab 12:24, 13:1, 13:8, 13:22, 14:12, 14:22, 15:10, 19:23, 20:2, 20:13, 25:10, 29:24 labeled 41:2 labs 17:10 lack 62:5, 63:20 lam 1:5, 3:3, 9:21, 10:2, 10:5, 10:8, 10:11,	

80:18 left-hand 51:22, 52:12 lengthy 42:24, 42:25 lerner 42:4 let's 12:17, 33:21, 40:15, 49:9, 53:21, 59:8, 64:6, 67:11, 67:12, 68:5, 73:11, 78:8 letters 25:14, 45:9 leuven 74:25 level 29:4, 29:5 leveraged 70:23 lewis 3:4, 3:10 library 46:20, 47:1, 47:12, 47:19, 48:15, 49:20 likely 72:5 limited 78:14, 78:15 line 7:19, 7:20, 68:9, 68:11, 81:4 link 59:21, 62:8 list 18:10, 41:24, 41:25 listed 33:24, 70:13 lithography 14:16, 14:19, 15:25, 18:17, 21:20, 23:11, 28:20, 28:21,	29:3, 37:25, 38:2, 44:24 little 22:19, 36:10, 53:22, 54:24, 55:12, 61:25 live 6:16 llp 3:4, 3:10, 3:17, 4:2 located 18:19 long 8:21, 8:22, 35:4, 35:12, 61:9 longer 53:23 look 8:25, 19:4, 26:14, 35:5, 37:17, 39:19, 40:21, 59:7, 59:23, 60:1, 61:14, 62:23, 63:1, 67:10, 74:5, 74:10, 80:5, 80:10, 80:19 looked 9:1, 9:14, 29:3, 38:20, 51:12, 60:9, 77:13 looking 58:19, 62:3 looks 57:10 lot 23:3, 55:13 lots 25:20 lucky 25:24 M made 25:25, 50:1	magic 60:12, 60:16, 60:24, 61:5, 63:25, 67:20, 69:5, 80:16 mailing 47:10 main 11:17, 13:25 mainly 76:12 majority 10:14, 15:24 make 24:3, 24:12, 26:15, 61:2, 73:6, 78:24, 80:1 makes 25:22 making 38:17, 72:25, 73:2 manage 27:5 management 10:7, 78:2, 78:22 manufacturers 39:9 many 22:17 margin 47:14 market 3:12 marriage 83:21 master's 12:13, 12:18 material 14:17, 14:19, 14:21, 14:25, 65:7, 70:17, 71:2, 78:20, 80:6, 80:7 materials 12:11, 14:5,	14:8, 14:10, 20:7, 20:9, 28:17, 28:24, 29:1, 29:2, 29:9, 29:11, 29:13, 29:14, 30:6, 37:22, 38:1, 64:16, 70:21, 70:25, 71:5, 80:10 matter 34:24, 83:24 maybe 28:1, 35:8, 42:6, 80:19, 81:10 mean 10:1, 16:15, 19:2, 29:4, 31:25, 32:15, 32:17, 35:14, 37:15, 40:20, 41:1, 41:8, 45:25, 46:24, 49:5, 50:10, 50:12, 50:13, 59:15, 60:16, 60:18, 67:25, 69:12, 72:22, 72:24, 74:1, 78:3 means 14:5, 78:7 meant 68:3 meeting 8:15 member 76:16, 76:18, 76:19, 76:21, 76:22, 76:23, 76:25 members 76:15, 76:20 mentioned 10:8, 17:9, 18:6, 40:8 menu 54:9
---	---	---	---

menus 50:15, 50:16, 50:21	molybdenum 14:4	42:19, 45:7, 56:21, 77:12	nsf 25:3, 25:6, 25:9, 25:12, 70:19
met 8:17, 8:19, 8:20, 19:21, 21:25, 39:25, 40:2, 40:6, 40:9, 71:25, 75:1	money 32:8, 73:23, 76:23	named 33:24, 34:17, 35:22	number 14:3, 15:17, 33:22, 61:16, 62:1, 62:2, 62:8, 62:12, 62:25, 63:16, 68:22
metal 14:2, 20:7, 20:8, 23:19, 27:5, 29:11	months 46:17	names 40:1, 69:1	numbered 65:9
method 71:3	more 10:19, 11:8, 22:16, 31:19, 31:22, 33:16, 35:1, 38:5, 43:15	nanometer 18:16	numbers 61:16, 61:21, 62:1
meyers 20:16, 27:15, 36:21	morgan 3:4, 3:10	national 17:10, 70:19	nw 4:4
michael 4:3, 42:4	morning 75:2	necessary 81:11	nx 76:1
microsoft 57:5, 57:17, 57:18, 58:24	most 10:13, 41:22, 81:11	need 9:5, 29:5, 66:9, 66:16, 71:23, 72:18	
middle 7:18	mostly 14:16	needed 15:16	oath 6:25
might 41:23, 51:16, 53:19, 59:5, 76:4, 81:8	motivated 75:20, 75:21, 76:6, 76:8, 76:10	needs 67:9	object 7:13, 8:1
migrated 57:4	moved 21:22, 23:11, 57:16, 73:23	never 20:21	objection 37:3, 37:4, 38:25, 39:1, 39:15, 39:16, 42:23, 45:13, 46:9, 62:16, 62:17, 63:5, 63:6, 64:1, 64:2, 64:20, 64:21, 65:11, 65:12, 65:24, 65:25, 71:8, 71:16, 71:21, 72:3, 72:8, 72:15, 73:4, 73:5, 75:15, 75:16, 78:4, 79:3, 79:4, 79:17, 79:18
milestone 17:14, 47:9	moving 18:23, 73:22	new 18:23, 73:22, 73:23, 73:25, 78:19	objections 65:1, 65:17, 65:20
mill 3:6	much 32:20, 33:9, 73:10, 76:20, 80:18	nice 33:19	
million 32:9, 32:11, 32:14	murky 10:22	nizan 26:5, 40:8	
mind 69:3	must 8:3	nod 7:8	
minutes 54:25	myself 14:16	nondisclosure 17:3, 19:7	
mix 38:22		none 5:8	
mne 45:9, 45:10	N	normal 30:19, 43:25	
molecular 17:24, 18:3	nader 40:2, 40:4	normally 53:9	
	name 6:15, 6:16, 29:21, 40:3,	northwest 6:17	
		notary 83:1, 83:4	
		nothing 6:9	

obligation 32:21 obviously 42:2, 50:16, 70:6 occurred 83:16 october 1:19, 2:5, 6:2, 45:22, 46:8, 46:20, 83:17, 84:2 offer 24:15 offered 5:8 office 1:1, 34:3, 36:6 officer 27:23 official 34:11 officially 13:12 offshoot 11:16 often 21:5 oh 9:7, 52:8, 54:10 okay 8:21, 9:10, 10:25, 12:20, 14:12, 15:9, 16:8, 17:20, 17:24, 20:4, 30:3, 32:23, 34:7, 39:21, 41:4, 42:1, 42:20, 54:22, 55:3, 63:13, 63:19, 63:22, 63:23, 64:8, 64:10, 64:13, 65:5, 65:8, 67:11, 68:16, 72:12, 74:17,	74:23, 75:13, 76:14, 80:22 old 57:3 oljace 1:22, 2:6, 83:3, 84:9 one 9:7, 9:8, 9:22, 14:1, 15:14, 20:15, 21:19, 23:10, 25:1, 25:11, 28:6, 29:5, 29:12, 31:6, 32:11, 35:18, 38:12, 54:1, 54:3, 55:9, 57:13, 57:24, 57:25, 58:17, 59:19, 63:13, 65:21, 70:15, 75:10, 76:2, 76:4, 78:13, 78:15, 80:1 one-ish 8:23 one-year 54:16, 55:14, 55:18, 55:22, 56:2, 56:6, 56:7, 59:11, 59:17, 59:23, 67:19 ones 20:16, 64:24 online 51:6 only 10:15, 33:6, 37:25, 56:14, 56:16, 57:14, 57:24, 58:12, 58:21, 59:1, 64:17, 64:24, 80:8 opinions 66:3	option 31:23 options 31:7, 31:11, 31:12, 31:13, 31:16, 31:25, 32:1, 33:13, 33:16, 52:18, 52:24, 70:17 order 78:19 oregon 1:18, 1:23, 2:3, 6:1, 6:18, 12:13, 12:25, 17:3, 22:23, 38:9, 42:15, 43:12, 45:12, 46:19, 48:14, 49:20, 83:4, 84:3 organization 27:6, 27:10 originated 29:19 origination 29:19 osu 21:14 other 14:3, 18:7, 18:25, 19:8, 19:23, 19:25, 20:4, 20:12, 24:22, 25:2, 25:9, 27:11, 34:17, 36:18, 43:17, 43:19, 44:15, 51:10, 55:13, 57:20, 58:10, 70:8, 70:15, 74:4, 77:25, 81:19 others 18:11, 42:5, 76:3 otherwise 83:23	out 19:22, 31:13, 32:19, 43:15, 44:11, 47:10, 48:5, 48:9, 57:5, 62:10, 64:15, 66:2, 73:24 outcome 83:24 outgassing 78:16 outside 15:10, 39:16, 62:17, 63:6, 64:2, 64:21, 65:12, 65:25, 75:16, 79:4, 79:18 outside-of-the-d- epartment 42:11 over 8:10, 10:2, 23:11, 30:19, 32:7, 32:9, 32:11, 32:14, 37:14, 37:17, 39:19, 47:14, 57:4 own 27:4, 33:17 owned 31:6, 31:8, 31:11 owner 1:9, 3:16 owns 10:16, 10:18 oxide 14:2, 20:7, 20:8, 23:19, 27:5, 29:11 oxides 14:4 oxo 30:2 oxygen 30:4
---	--	--	--

P			
package	parent	36:2, 36:5,	36:18, 37:25,
23:8	10:18, 33:17	36:6, 36:22,	77:14
page	parentheses	36:23, 36:24,	personal
3:6, 5:2,	33:23, 34:1	37:13, 37:15,	17:8, 30:22,
26:19, 41:3,	parents	38:7, 39:14,	58:12
41:5, 51:23,	43:7	69:17, 69:22,	peter
52:3, 52:11,	part	69:24, 70:3,	37:5
52:14, 60:13,	9:21, 9:24,	70:6, 70:8,	petitioner
61:10, 61:11,	10:6, 10:7,	70:12, 71:13,	1:6, 2:2, 3:3
61:16, 61:18,	10:23, 19:24,	71:18, 72:14	ph
61:21, 61:23,	20:22, 44:23,	patents	1:17, 2:1, 5:3,
61:24, 62:3,	50:14, 69:17,	10:3, 10:5,	6:7, 12:14,
62:5, 62:7,	71:13, 72:1,	25:2	12:15, 13:5,
62:10, 62:12,	72:6, 72:12	patitucci	13:10, 13:11,
62:13, 62:22,	partes	3:11, 9:8, 82:6	13:23, 15:10,
62:23, 62:24,	11:12	patterning	16:21, 17:1,
63:1, 63:2,	partially	29:11	20:12, 21:2,
63:16, 63:18,	25:3	paul	21:5, 21:7,
64:17, 64:25,	participated	3:17, 3:18,	25:17, 28:22,
65:3, 65:8,	37:7	4:2, 8:19, 16:4,	83:6, 83:16
65:15, 67:21,	participating	66:21	philadelphia
69:5, 71:12,	42:12	paying	3:13
71:15	particular	13:17	philip
pages	12:24, 71:1	pays	42:17, 42:18
62:14, 62:23,	parties	76:22	phonetic
63:1, 63:3,	80:25, 83:20,	pdf	40:3
63:12, 64:7,	83:22	61:17, 61:24,	photoresist
65:9, 71:6	partly	62:4, 62:8,	14:2
paid	57:7	64:12, 64:14,	photoresists
30:19, 30:23,	party	64:17, 64:25,	27:5, 28:12
33:9, 73:22	83:12	65:8, 65:15	physically
palo	passed	pennsylvania	18:19, 47:16
3:7	49:13	3:13	pick
paper	past	people	54:25
47:5, 47:11,	53:12, 59:11,	18:17, 18:21,	picture
47:13, 50:1,	59:19, 67:19	20:1, 20:19,	53:15
50:17, 51:7,	patent	23:10, 37:22,	pieces
51:9	1:1, 1:3, 1:9,	40:12, 43:5,	10:15
paperboard	1:13, 3:16,	43:7, 43:9,	place
47:15, 47:16	9:22, 9:24,	43:17, 43:19,	16:4, 22:23,
paragraph	11:16, 25:2,	57:10, 79:21	38:6, 75:7,
26:24, 30:10,	33:22, 33:24,	perfect	79:21
30:11, 33:21,	34:2, 34:6,	9:9	places
40:15, 50:5,	34:7, 34:10,	period	69:1, 76:17
50:7, 50:14,	34:16, 34:18,	31:8, 31:9,	plan
51:2, 51:9	34:23, 34:25,	48:17, 54:1,	73:11, 73:12,
	35:3, 35:20,	59:23	74:1, 74:2
	35:22, 35:24,	person	played
		14:21, 29:18,	36:20

please 6:4, 6:14, 7:7, 7:11 point 19:17, 21:19, 21:21, 25:11, 28:7, 29:12, 31:6, 33:6, 45:5, 60:8, 67:15, 80:1 pooling 79:22 popped 58:16, 58:17 portal 51:2 position 21:21, 73:10 possibly 28:1 postdoc 13:8, 13:17, 13:21, 15:11, 16:23, 16:25, 19:12 poster 53:13 powerpoint 41:17, 41:19, 44:10, 44:11, 44:14, 44:20 pregnant 17:15 prep 8:14 preparation 35:5, 77:6, 77:23 prepare 8:12, 38:21 prepared 19:5 present 26:1, 41:17, 41:18, 43:3, 44:14, 45:11, 45:18, 80:9 presentation 41:18, 41:20,	43:1, 43:4, 44:2, 44:6, 44:10, 44:12, 44:15, 45:17, 80:2, 80:10 presented 16:17, 16:19, 41:11, 41:14, 42:20, 43:1, 44:20, 45:1, 46:7, 75:11 presenting 44:22 president 26:25, 27:2, 27:3, 27:18, 28:5, 28:9, 28:11, 36:8 presidents 27:11 presumably 17:5 pretty 10:13, 17:6, 25:24, 57:3, 75:19, 76:20 previous 24:5 previously 58:8, 73:18 price 31:23, 32:6 principal 28:7 print 47:10 printed 41:7, 51:17, 51:19 printing 47:9 printout 52:9 prior 11:1, 12:1, 19:21, 28:5, 36:9, 59:17 priorities 27:6	priority 79:13 private 58:3 probably 11:24, 17:5, 20:24, 24:24, 29:17, 29:25, 31:8, 40:4, 43:24, 56:6, 60:5, 60:7, 70:11, 71:22, 75:11, 77:3, 81:11 problem 57:6 procedure 49:22 proceed 39:2, 39:18 proceeding 9:18, 11:7, 30:13, 30:15, 34:2 process 18:23, 31:10, 43:25, 47:8, 48:20, 48:22, 51:5, 53:6, 53:19, 70:9, 73:21 produced 75:24 product 28:8, 28:10, 28:17, 75:25 professor 21:23 program 17:1 progress 27:8 project 15:1 prompted 60:6 properties 20:10, 37:23	protect 53:22 prototype 76:2, 76:11, 78:10, 78:11, 78:20, 78:25 provide 7:8, 16:13, 59:20 providing 32:18 provisional 70:5 psi 16:5, 17:15, 18:7 public 48:16, 53:23, 81:14, 83:1, 83:4 publication 55:19, 59:11, 59:19, 67:19 publicly 49:12 published 25:16, 25:19, 43:17 pull 78:1, 78:21 pull-down 50:15, 50:16, 54:9 purchase 11:2, 12:2, 31:14 put 43:22, 49:10, 53:21, 66:4, 76:17, 78:12 putting 53:20 Q qualification 34:12 qualifies 34:10
--	--	---	--

question 7:7, 7:12, 7:14, 7:15, 10:17, 10:19, 10:20, 27:17, 32:2, 77:3, 77:20 questioning 68:9, 68:11, 81:5 questions 7:4, 7:19, 7:20, 7:23, 8:1, 8:3, 35:9, 67:2, 77:6, 77:16, 80:19, 81:14, 81:19 quite 15:21, 20:18, 35:3, 61:9	61:5, 61:15 reason 8:5, 59:6 reasonable 71:22, 72:9 reasons 38:12 recall 31:18, 38:23, 40:1, 43:10, 44:22, 45:2, 45:4, 45:7, 45:16, 48:8, 49:19, 49:21, 50:7, 51:11, 53:5, 58:11, 59:24, 79:25 receipt 48:2, 49:17 receive 26:3 received 12:10 receiving 30:12 recently 10:21, 40:13, 57:4 recess 55:4, 68:18, 80:23 recipe 60:12, 60:16, 63:21, 63:24, 63:25, 64:11, 64:18, 64:24, 65:2, 65:9, 65:16, 65:22, 65:23, 69:5 recollection 26:9, 55:16, 55:18, 56:3 reconvene 81:11 record 6:15, 22:12, 24:4, 47:25, 70:2, 80:24,	81:24, 83:10 recorded 7:4, 7:9 recross 81:8 redirect 81:8 redouble 72:19 refer 34:6 referring 54:10, 62:21, 63:4, 69:23, 71:15, 72:6, 75:19 refers 11:16 refresh 56:3 regarding 81:14 related 36:6, 44:24, 83:19 relative 60:25 relevant 32:22, 60:12, 60:22, 66:3, 69:5, 71:11 relied 66:6, 66:11, 66:13 relies 68:1 rely 67:24, 67:25 relying 66:19, 67:16 remember 13:15, 15:22, 17:14, 22:7, 41:22, 42:13, 42:18, 43:6, 43:7, 45:6, 45:10, 47:8, 47:22, 49:7,	50:19, 51:12, 52:18, 52:20, 52:21, 53:1, 56:1, 56:4, 61:8, 79:20, 79:25, 80:6 remind 28:3, 29:20 remotely 83:16 replace 30:8 replied 57:25 report 27:14, 27:15 reported 1:22 reporter 2:7, 7:5, 83:1, 83:3 representative 42:11 represented 83:13 request 49:25 requesting 49:22 required 7:22 research 1:5, 3:3, 10:9, 10:11, 23:13, 23:14, 24:20, 24:23, 25:16, 26:1, 33:25, 35:15, 38:8, 41:11, 41:14, 44:24, 45:11, 45:18, 46:15 resist 23:15, 75:11, 75:21, 76:7, 76:9, 76:10, 78:10, 79:23 resists 20:8, 23:20,
R			
r-o-e-l 74:15 radiation 23:16 raise 6:5, 79:13 raised 11:21 ran 36:12 rationale 64:15, 65:6 rd 59:9, 59:25 read 35:3, 35:12, 37:14, 55:25, 56:2, 60:4, 60:11, 77:18, 80:8 reading 55:17, 55:21, 72:9, 79:8 really 13:15, 40:12, 45:6, 55:13,			

23:24 resolve 81:4 respect 81:16 responded 59:8, 68:25, 69:16 response 7:8 responsible 36:17, 36:18, 38:3, 79:2, 79:10 rest 80:19 restate 7:16 restricted 48:16, 54:8 results 15:19, 16:14 review 11:12, 35:18 reviewing 35:11 rich 40:2 right 6:5, 9:6, 11:18, 11:25, 12:2, 20:21, 21:13, 22:11, 30:20, 31:14, 31:24, 33:21, 34:18, 34:21, 36:19, 42:22, 46:24, 47:2, 47:9, 47:12, 47:13, 50:4, 50:17, 51:20, 52:1, 52:11, 55:11, 55:20, 60:3, 61:19, 62:7, 64:19, 65:10, 65:19, 67:18, 72:7, 75:8, 77:17,	78:13, 78:14, 79:7, 81:18 right-hand 61:17, 61:25, 62:2, 62:12, 62:24, 63:2, 63:17 ring 25:4 road 3:6 roel 74:14, 74:21, 75:1, 75:2, 75:3, 75:14, 75:19, 76:6, 78:9, 78:24 role 20:25, 27:1, 36:8, 36:20 rolled 59:25 roughly 21:17 roundabout 13:9 routinely 15:23 rpr 2:6 rule 37:8 S said 9:14, 12:4, 13:16, 16:11, 19:11, 32:17, 33:13, 37:10, 40:25, 41:6, 51:11, 58:9, 59:22, 67:14, 69:4, 69:8, 69:16, 71:11, 71:13, 72:13, 73:18 salary 13:18, 30:19,	33:7, 33:11 sale 32:3, 32:5 same 12:19, 12:22, 19:7, 20:6, 20:13, 28:24, 30:7, 38:1, 39:21, 48:11, 48:12, 48:13, 49:23, 50:11, 50:25, 51:19, 52:1, 65:1, 65:17, 65:20, 70:22 samsung 76:18, 78:1, 78:21, 79:1, 79:8, 79:10, 79:12 sauce 60:12, 60:16, 60:24, 61:3, 61:5, 62:20, 63:25, 66:16, 67:20, 69:5, 71:12, 71:15, 80:16 save 57:11 saved 54:21 saw 60:9 say 16:19, 20:15, 24:5, 26:24, 30:11, 32:2, 33:22, 33:23, 36:19, 40:16, 41:10, 41:14, 43:11, 43:19, 45:21, 46:18, 46:23, 48:14, 48:25, 49:9, 49:19, 51:13, 52:5, 52:8, 53:1, 54:5,	56:9, 57:16, 58:8, 58:24, 61:10, 72:18, 77:14, 77:25, 78:18, 80:5 saying 61:6, 64:9, 72:5, 72:12, 73:1, 74:2 says 25:3, 52:10, 53:16, 54:8, 56:18, 60:12, 67:18, 73:9, 73:11, 75:1, 75:18, 75:19, 77:4, 80:17 sbir 25:13 scherrer 16:4 scholararchives 52:6 school 16:3, 22:3, 22:25, 25:21, 25:24, 73:21 science 12:11, 42:13 scope 39:1, 39:16, 62:17, 63:6, 64:2, 64:21, 65:12, 65:25, 75:16, 79:4, 79:18, 81:5, 81:21 screenshot 49:24, 50:14 screenshots 51:9 search 56:21, 58:2, 58:5, 58:23, 58:24 searched 56:10, 56:12, 58:6, 58:9,
---	---	--	---

58:10, 58:12, 58:14, 59:1, 59:3 searching 58:11 second 24:1, 65:21 secret 62:20, 66:15, 67:20, 69:5, 71:11, 71:15, 80:16 section 48:24, 50:3 sections 35:11 see 16:19, 22:21, 30:16, 31:11, 34:4, 40:18, 41:12, 45:23, 46:21, 48:18, 50:2, 51:23, 51:25, 52:11, 52:13, 54:1, 54:14, 56:20, 59:13, 60:14, 61:25, 62:11, 69:10, 69:19, 72:20, 73:13, 74:25, 77:8, 80:17, 80:20 seem 81:3 seems 71:22, 72:5, 81:1 seen 27:18, 40:5 select 50:21 selenium 14:10 selling 31:10 sematech 18:13, 18:14, 18:18, 21:19,	21:21, 73:17, 73:18, 74:3, 75:12, 77:1, 77:12, 77:15, 79:15, 79:21, 79:24 seminar 45:12 send 60:7 senior 78:2, 78:22 sent 43:15, 57:12, 57:14, 59:9, 62:9, 68:24, 74:10 sentence 73:7, 75:18 separate 32:2 september 84:4 serial 53:16, 53:17 series 50:19 service 80:14 sessions 8:14 set 27:6, 38:1, 48:16, 55:18, 83:7, 84:1 settings 52:6, 52:15 settled 20:18 several 22:8 shake 7:8 share 15:19 shared-use 76:24 shelf 49:10	shift 16:5, 26:4 shoring 72:19, 72:24 short 31:9 shortened 30:6 shortening 30:2 shorthand 2:7, 83:1 shortly 13:6 show 51:2 showed 16:13, 18:8, 18:25 showing 51:4 shown 51:18 sic 52:12 side 9:21, 18:5 sides 82:3 sideshoot 9:24 sigma-aldrich 39:8 sign-offs 78:19, 78:23 signature 26:19 signature-mig2k 84:7 signed 26:16, 51:19, 52:2 silva 40:7 similar 28:24 since 22:12, 36:9	single 29:5 sites 15:17 situations 52:7, 52:16 slash 27:18, 64:11, 64:14, 65:3, 65:6, 65:21 small 21:12 smaller 19:24 solar 28:17, 70:16, 70:20, 71:3 some 8:15, 13:12, 17:2, 17:12, 17:25, 18:1, 18:15, 18:16, 18:17, 18:21, 20:6, 20:23, 21:21, 25:6, 25:21, 27:7, 28:14, 29:8, 29:9, 33:19, 35:9, 36:16, 38:8, 41:24, 45:1, 53:3, 57:9, 57:11, 60:22, 70:16, 70:20, 70:23, 77:5, 77:16, 80:3, 81:19 somebody 67:8 someone 14:17, 16:7, 20:24, 29:24, 34:15, 37:11, 43:24, 47:18, 75:9, 77:3, 77:11 something 13:13, 21:8, 42:6, 44:20,
--	---	---	---

44:22, 48:1, 53:19, 60:6, 60:24, 60:25, 61:7, 63:11, 67:14 sometime 21:24, 35:7, 81:10 somewhere 10:22, 19:14, 25:2 son 17:18, 45:5 sorry 12:17, 18:2, 20:8, 54:11, 63:16, 71:9, 71:20, 80:7 sort 9:20, 23:5, 42:10, 45:16, 61:23, 76:1 sorts 28:3 sound 22:11 sounds 42:8, 81:22 source 23:16 speaking 79:15 special 61:6 specific 11:8, 17:13, 35:2, 51:15, 57:10 specifically 37:16 specifics 52:23 spell 74:22 spelling 59:5 spend 17:12, 23:8,	31:25 spin 29:10 spin-on 20:7, 20:8 spinout 19:22 sponsor 24:19, 24:22 stance 36:10 stand 25:14 stands 75:22 start 12:17, 13:10, 17:13, 59:8, 61:22, 61:23, 62:3, 63:13, 63:15 start-up 23:1 started 13:6, 13:11, 13:19, 22:1, 22:19, 23:5, 28:6, 55:7, 56:5 starting 12:8, 17:21, 61:18, 62:23 starts 10:22 state 6:14, 12:13, 12:25, 17:4, 38:9, 42:15, 43:12, 45:12, 46:19, 48:14, 49:20, 70:2, 81:24, 83:4, 84:3 stated 81:16 statement 33:2, 67:24 statements 38:19	states 1:1, 34:2, 36:5 stenographer 6:4, 14:7, 81:23, 82:9 stephen 20:16, 27:15, 36:21 steps 49:23, 50:11 still 18:21, 18:24, 20:16, 33:2, 40:9, 40:14, 58:4 stock 30:25, 31:2, 31:4, 31:6, 31:8, 32:3, 32:4, 32:6, 33:16 stood 45:10 stowers 1:17, 2:1, 5:3, 6:7, 6:14, 6:16, 54:15, 56:19, 56:23, 62:17, 63:6, 64:2, 64:21, 65:12, 65:25, 68:20, 75:16, 79:4, 79:18, 81:6, 81:15, 83:6, 83:16 street 3:12, 3:19, 4:4 stronger 72:25, 73:2, 73:7 structure 27:24 student 38:16 students 20:12, 21:6 stuff 28:15, 80:16	subject 34:24 submission 48:1 submit 47:4, 50:21 submitted 26:16, 46:19, 46:23, 47:17 submitting 47:7 substance 46:13 substantially 34:15, 49:23, 50:10 suing 10:2 sulfate 30:5 sulfates 30:2 sulfur 14:9 supply 39:7 support 26:4, 76:16, 79:12 supposed 47:11 sure 17:6, 17:22, 21:4, 22:13, 24:2, 24:3, 24:4, 24:13, 26:15, 29:18, 35:3, 40:4, 55:2, 56:9, 74:7, 74:9, 76:3, 78:24 surprisingly 58:25 switzerland 16:4 sworn 6:8, 83:8 T table 81:9
---	---	--	---

tackle 73:10	48:20, 53:3, 54:18, 55:11,	thereto 9:15, 9:16	25:13, 26:15, 39:25, 48:21,
take 7:17, 7:20, 23:6, 49:9, 49:10, 49:15, 54:23, 54:24, 80:1, 80:18, 82:3, 82:4, 82:10	56:18, 62:20, 63:3, 66:20, 66:21, 66:25, 67:6, 68:5, 68:7	theses 48:16	51:1, 51:6, 51:7, 80:13, 80:19
taken 2:2, 83:9	telling 67:3, 67:6, 67:9	thesis 40:16, 40:21, 40:22, 41:7, 41:11, 42:21, 44:1, 44:4, 45:21, 49:23, 81:15	thursday 83:17
taking 20:6	tellurium-type 14:10	thickness 77:6, 77:17, 77:21	tim 40:5
talk 21:1, 25:1, 48:10, 64:6, 73:11, 80:11	ten 8:23	thing 30:7, 47:21, 56:5, 61:6, 67:20	time 7:11, 7:17, 13:7, 16:6, 16:13, 16:18, 16:25, 17:12, 17:13, 17:22, 17:25, 18:20, 19:17, 20:13, 23:13, 23:18, 26:12, 28:13, 28:19, 30:22, 30:23, 31:14, 32:3, 32:5, 35:4, 35:13, 36:16, 37:24, 43:1, 46:17, 48:17, 49:7, 49:13, 53:11, 53:17, 53:22, 53:24, 54:1, 55:25, 58:3, 58:7, 59:25, 60:9, 61:9, 70:16, 70:22, 73:24, 74:10, 74:24, 77:2, 80:14, 81:3
talked 37:21, 40:6, 69:6, 69:21, 78:8	terms 29:15, 29:16, 58:6, 58:8, 58:10, 58:13, 58:22, 60:18	things 14:3, 15:14, 17:7, 19:4, 23:23, 25:20, 38:21, 54:5, 63:10, 70:15, 74:4, 78:1, 78:15	timeline 17:16, 21:24
talking 14:15, 35:17, 35:21, 40:4, 46:4, 54:17, 55:6, 55:9, 57:17, 61:1, 62:10, 66:16, 68:20, 70:10, 75:1, 75:6	terribly 8:22	think 8:23, 9:3, 11:22, 19:3, 20:17, 21:10, 22:18, 23:18, 25:12, 27:17, 27:24, 29:17, 35:1, 38:11, 38:19, 40:11, 41:22, 42:5, 43:16, 44:17, 45:5, 46:14, 51:4, 57:24, 58:6, 63:3, 70:14, 71:25, 76:5, 77:12, 80:15, 82:2	tin-based 29:14
talks 66:15	test 23:8, 78:10	thousand 31:19	title 21:20, 27:16, 28:10, 36:14
technical 27:23, 35:9, 67:7, 67:17	testified 6:10, 6:21	three 22:14, 22:16	titles 27:25, 28:4
technicality 13:14	testify 6:8, 8:5, 30:20, 30:23	through 12:7, 14:4,	today 6:25, 8:6, 8:18, 9:19,
technology 26:25, 27:2, 27:4, 27:12, 28:5, 28:11, 36:8, 38:4, 38:5	testifying 6:24, 6:25		
telecky 34:20, 36:19	testimony 8:9, 30:13, 30:15, 32:18, 32:20, 83:10		
telecky's 39:13	texas 3:20		
tell 21:6, 41:23,	th 3:19, 70:1, 84:2		
	thank 9:9, 9:11		
	thanks 69:16		
	thereafter 13:6		

11:15, 19:5, 28:11, 30:20, 30:23, 33:5, 35:17, 60:18, 67:24, 81:2 told 49:1, 53:2 tomorrow 73:11 tonight 77:5 took 55:7, 75:8 tool 75:23, 75:24, 76:2, 76:9, 76:11, 78:10, 78:11, 78:20, 78:25 tools 15:16, 15:18, 76:17, 78:14 top 18:11, 35:2, 51:22, 51:25, 61:24, 62:1, 62:12, 63:2, 63:17 towards 20:11, 53:8 town 43:8 trademark 1:1, 34:3 transcribed 82:1, 82:3 transcript 81:25 transferred 38:9 transitioned 29:12, 29:14 travis 3:19 trial 1:3, 6:21 trip 17:16, 80:1	true 33:2, 38:20, 83:10 truth 6:8, 6:9 truthfully 8:6 try 16:11 trying 9:22, 9:24, 20:10, 32:19, 35:18, 35:19, 45:4, 62:9, 66:2, 70:20, 71:2 turn 33:21, 40:15, 46:25, 47:5 turned 29:9, 48:9, 57:5 turning 48:22 two 8:14, 13:25, 17:9, 42:5, 54:9, 55:10, 57:12, 61:15, 62:23, 63:1, 63:10, 63:11, 64:7, 64:18, 78:13, 80:25 tying 46:15, 46:16 type 47:13, 71:1, 76:8 types 52:5 typically 76:21	ultimately 79:14 unavailable 81:2, 81:3 uncertain 17:13, 18:1, 20:22, 24:24 under 6:25, 18:2, 51:2, 52:13, 53:21 undergrad 12:9 undergraduate 12:10, 22:20 underneath 60:11 understand 6:24, 7:3, 7:15, 7:22, 8:3, 8:8, 10:24, 11:14, 21:4, 33:22, 61:13, 66:9, 68:2, 73:7 understanding 9:20, 21:5, 34:9, 35:16, 49:6, 49:7, 54:15, 55:14, 55:24, 59:16, 71:14, 76:13, 76:14, 78:6 understood 53:18, 54:3 united 1:1, 34:2, 36:5 university 12:11, 12:13, 13:14, 15:15, 46:20, 48:15, 49:20, 52:9, 52:24, 53:14 unless 8:2 until 8:10, 8:23, 13:13, 45:22, 49:11, 49:12	update 75:11, 79:23 urbana-champaign 12:12 url 59:18, 59:20, 59:21, 59:22, 59:23, 60:11 use 30:22, 38:22, 58:13 useful 38:6 using 20:9, 37:22, 38:1 uv 24:5
	U		V
	uh-huh 28:18, 33:3, 42:3, 53:10, 74:12		vague 69:9, 69:13 vaguely 79:20 validate 9:24 valuable 53:20 value 31:16, 32:1, 32:2, 32:4 various 28:4, 43:8 verbal 7:8, 60:5, 60:7 verbally 53:3 version 46:8 versions 29:7 versus 51:16, 55:10 vice 26:25, 27:1, 27:3, 27:11, 28:5, 28:9, 28:11, 36:8

view 48:16	wednesday 8:15, 8:19	46:11, 46:24, 56:12, 56:17, 58:15, 58:16, 59:3	wouldn't 17:6, 79:10
violation 10:2	week 81:10	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	written 46:2, 53:4
virtual 81:11	went 18:23, 22:8, 48:21, 51:18, 56:10, 60:1, 60:9	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	wrote 55:22, 59:10
visibility 52:6	weren't 12:4, 56:9	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	Y
voice 27:9	whatever 82:7	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	yeah 9:17, 11:16, 17:11, 20:3, 24:8, 30:1, 32:17, 39:6, 39:12, 39:18, 40:25, 42:10, 42:16, 42:18, 46:5, 47:4, 48:3, 48:19, 50:18, 55:2, 56:16, 57:3, 57:19, 60:4, 60:20, 61:8, 61:20, 69:11, 74:20, 80:21
W	whereof 84:1	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	year 11:22, 13:13, 33:9, 35:7, 35:8, 36:9, 54:2, 54:4, 55:9, 55:21, 55:23, 59:19
wafer 23:6, 23:7, 23:9	whether 17:22, 32:19	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	years 23:10, 39:25, 52:25, 54:9, 55:10
wager 42:4	white 47:16	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	yesterday 8:16, 8:20, 8:24
walk 12:7, 53:12	whole 6:9, 28:13, 50:15	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	york 18:23, 73:22, 73:23, 73:25
want 7:17, 23:6, 24:3, 26:14, 29:2, 40:23, 41:1, 47:1, 54:24, 63:13, 66:20, 67:13, 68:4, 74:6, 82:5	widely 43:15	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	yourself 38:17, 68:23
wanted 24:12, 50:22, 69:2, 78:12	wife 17:15, 17:19, 21:23	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	Z
washington 4:5	wise 40:2, 40:5	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	zeiss 78:2, 78:22, 79:1, 79:11,
watson 42:17, 42:18	wish 75:6	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	
wavelength 18:16	witham 6:17	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	
way 12:21, 16:12, 30:14, 59:1, 60:4, 61:5, 83:23	within 67:17, 83:4	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	
we're 25:1, 35:17, 54:17, 64:15	witness 5:2, 9:11, 14:9, 24:7, 24:9, 24:11, 39:2, 81:21, 83:6, 83:11, 84:1	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	
web 51:1	wolfe 4:3, 82:7, 82:12	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	
website 49:24	wood 42:13	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	
	word 42:25, 46:3,	work 12:24, 13:6, 13:23, 14:14, 14:18, 14:19, 15:11, 15:23, 16:10, 16:15, 16:17, 16:20, 16:24, 18:8, 18:16, 19:1, 19:22, 19:23, 19:24, 19:25, 20:4, 21:2, 21:7, 22:24, 23:7, 25:7, 25:9, 25:11, 25:12, 26:5, 26:6, 28:21, 28:22, 29:10, 31:25, 36:22, 38:4, 38:6, 40:14, 45:1, 58:12, 58:14, 70:21, 70:24, 76:7, 78:23	

79:14 zirconium 29:13, 30:9 zircsox 29:8, 29:16, 30:7 zoom 8:15 \$ \$2 32:14 \$500,000 31:22, 32:7 0 00033 1:11 0397 1:23, 2:7, 84:10 05 1:23, 2:7, 55:4, 84:10 06 80:23 08 2:4, 82:14, 83:18 1 10 54:25, 55:4, 83:17 1008 62:25 11 1:19, 2:5, 6:2, 55:4, 68:18, 80:23 12 2:4, 80:23, 82:14, 83:18 13 52:12 14 40:17, 42:22, 44:9, 59:10	1400 3:6 15 84:2 16 52:25 17 61:24 1700 4:6 1701 3:12 18 52:11, 61:24 19103 3:13 193 18:16 2 20 68:18 2002 22:10 2003 22:10 20036 4:5 2004 22:10 2008 13:11, 17:18, 18:4, 26:14, 40:17, 42:22, 44:9, 45:3, 45:23, 46:7, 46:8, 46:20, 49:21, 50:1, 51:3, 55:8, 55:18, 68:22 2009 13:20, 19:15 2010 54:3, 54:5, 54:15, 55:13, 55:17, 59:9, 59:25, 70:2, 70:4, 73:24	202 4:6 2024 1:11, 1:19, 2:5, 6:2, 26:17, 51:20, 83:17, 84:2 2027 84:4 2050 4:4 215 3:14 23 59:9, 59:25 24 70:1 250,000 33:11 29 26:17, 51:20, 51:25 2nd 17:17 3 30 84:4 31 68:18 4 4400 3:8 45 73:12 46 80:23 5 5000 3:14 52 62:13, 62:24, 63:16, 64:11, 65:8, 65:21 53 55:4	55 2:4, 6:2, 83:17 551 4:6 553533 1:25 564 33:24, 34:7, 34:18, 34:25, 35:21, 35:24, 36:2, 36:6, 36:23, 37:13, 39:14, 69:22, 69:24, 70:3 58 3:19 6 600 3:19 650 3:8 68 60:13, 61:10, 61:11, 62:3, 62:5, 62:10, 62:13, 62:22, 62:23, 63:1, 63:2, 63:18, 64:12, 64:14, 64:17, 64:25, 65:3, 65:6, 65:8, 65:15, 65:21, 67:21, 69:6, 71:6, 71:12, 71:15 7 713 3:21 7300 3:21 77002 3:20 7th 17:17 8 805 6:17
---	---	--	--

84 64:14, 65:3, 65:6 849 3:8 860 3:21 9 9 2:4, 6:2, 59:10, 73:12, 83:17 9,823,564 1:13, 33:23 94304 3:7 963 3:14	
---	--