

In the Matter of

Case No.: IPR2024-00380

JIANGSU FAVORED
NANOTECHNOLOGY CO., LTD.,
v.
P2I LTD.,

Deposition of Dr. Karen K. Gleason

Wednesday, January 15, 2025



The Little
Reporting
Company

469 Seventh Avenue
12th Floor
New York, NY 10018
tel: 646-650-5055
www.littlereporting.com

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

JIANGSU FAVORED NANOTECHNOLOGY
CO., LTD.,

Petitioner,

vs.

Case No.:
IPR2024-00380
Patent No.
11,041,087

P2I LTD.,

Patent Owner.

January 15, 2025
9:02 a.m.

Remote video-teleconference deposition of DR.
KAREN K. GLEASON, an Expert Witness, taken by Patent
Owner, held at Cambridge, Massachusetts, pursuant to
notice, before Elizabeth F. Tobin, a Registered
Professional Reporter and Notary Public of the State
of New York.

A P P E A R A N C E S:

(Present via video-teleconference)

On behalf of the Petitioner:

PERKINS COIE, LLP

11452 El Camino Real, Suite 300

San Diego, California 92130

858.720.5700

BY: PATRICK J. McKEEVER, ESQ.

pmckeever@perkinscoie.com

On behalf of the Patent Owner:

BOCHNER, PLLC

1040 Avenue of the Americas, 15th Floor

New York, New York 10018

646.971.0685

BY: ARIEL REINITZ, ESQ.

ariel@bochner.law

ALSO PRESENT:

KATE KALUGIN, LAW CLERK, BOCHNER

1 K. Gleason

2 COURT REPORTER: Good morning. My name
3 is Elizabeth Tobin. I am a New York State
4 stenographic reporter and a registered
5 professional reporter. Today's date is
6 January 15, 2025 and the time is approximately
7 9:02 a.m. This is the deposition of Dr. Karen
8 K. Gleason in the matter of Jiangsu versus P2i.
9 This case is venued in the United States Patent
10 and Trademark Office. The case number is
11 IPR2024-00380.

12 At this time I will ask counsel to
13 identify yourself, state whom you represent and
14 agree on the record that there is no objection
15 to this deposition officer administering a
16 binding oath to the witness remotely via
17 video-teleconference.

18 MR. REINITZ: Ariel Ryan for the patent
19 owner P2i. No objection to the oath being
20 administered remotely.

21 MR. McKEEVER: Patrick McKeever
22 representing petitioner and the witness and
23 also no objection to how the oath is being
24 administered.

25 K A R E N K. G L E A S O N,

1 K. Gleason

2 of lawful age, called by the Patent Owner for
3 examination pursuant to the Federal Rules of Civil
4 Procedure, stating an address of 4 Kenway Street,
5 Cambridge, Massachusetts 02138, having been first
6 duly sworn remotely upon agreement of all counsel,
7 as hereinafter certified, was examined and testified
8 as follows:

9 EXAMINATION OF DR. KAREN K. GLEASON

10 BY MR. REINITZ:

11 Q. Good morning, Dr. Gleason.

12 A. Good morning.

13 Q. Have you ever been deposed before?

14 A. Yes.

15 Q. Approximately how many times?

16 A. This is my fourth or fifth time.

17 Q. Were any of those prior depositions
18 conducted via Zoom or remotely?

19 A. All of them were remote.

20 Q. All of them. Okay.

21 So sometimes the Zoom depositions are a
22 little different but it sounds like this framework
23 is something you've got experience with.

24 As far as depositions go, all
25 depositions, you understand I would assume, that I'm

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

K. Gleason

going to ask you a whole bunch of questions today,
frankly, not too many. We may be wrapping up early.
And I hope you'll be able to at least give me some
answers.

If at any point I ask a question,
Dr. Gleason, and it's not entirely clear to you what
I'm asking, I would ask that you just ask me to
rephrase the question.

Does that work?

A. Yes, I understand.

Q. Okay. And likewise, Dr. Gleason, if I
ask a question and you answer it, it will be our
understanding that you understood the question I'm
asking.

Does that make sense?

A. Yes.

Q. Okay. Great.

Now, as far as the Zoom deposition
dynamics go, I take for granted you're coming
through signing on to the Zoom through a computer or
a device, a phone or iPad; is that right?

A. Yes. I'm on my laptop.

Q. Other than the Zoom application that
obviously is running as you're talking to us

1 K. Gleason

2 through, what, if any, other applications do you
3 have open on your desktop on the computer?

4 A. I have a file -- the file browser
5 application because I have a folder with all the
6 exhibits.

7 Q. Do you have email, like Outlook or
8 anything like that open --

9 A. No. I have opened the link for this and
10 then I closed that.

11 Q. Okay. Where I'm going with this, we just
12 want to ensure that there's no one trying to
13 communicate with you during the deposition. So we
14 would ask if you have a chat or anything, Outlook,
15 open that you can see, we ask that you either
16 minimize or close that so that during the deposition
17 you don't have messages coming in from anyone
18 outside.

19 A. I understand. It's closed now and I
20 won't open it.

21 Q. Likewise, if you have a phone or another
22 device within eye shot.

23 A. Yes, my phone is within eye shot.

24 Q. Could you turn it over? I'm not going to
25 necessarily ask you to turn it off, but just so no

1 K. Gleason

2 messages are popping up on the screen while you're
3 testifying.

4 A. Yes.

5 Q. Perfect.

6 Dr. Gleason, the previous four, five
7 depositions that you mentioned, were any of those in
8 patent cases?

9 A. They were all in patent cases.

10 Q. Were those four or five depositions, were
11 you testifying as an expert witness?

12 A. Yes.

13 Q. In all of those?

14 A. Yes.

15 Q. Were any of those four or five patent
16 cases, were you testifying as an expert witness for
17 the Jiangsu Favored Nanotechnology, the petitioner,
18 in this IPR proceeding?

19 A. Yes, I had a few previous depositions for
20 this client.

21 Q. How did you become engaged by the Jiangsu
22 Favored Company?

23 A. There was a message from one of these
24 firms that locates expert witnesses. I don't
25 remember which one it was. It was before the

1 K. Gleason

2 pandemic. I think it was around 2019. And they
3 were just identifying people with background in the
4 technical area and then I did an interview with the
5 attorney from Perkins Coie and I was selected.

6 Q. Have you -- other than your expert
7 witness work for Jiangsu Favored, the Jiangsu
8 Favored Company, the petitioner in this case, have
9 you done expert witness work for any other
10 companies?

11 A. Yes. The Carnegie Foundation, they had a
12 patent related to the chemical vapor deposition of
13 diamond and films and I was an expert witness for
14 several cases there.

15 Q. Other than your expert witness work for
16 the Jiangsu Favored Company, have you done any other
17 consulting type work for them, for the Jiangsu
18 Favored Company?

19 A. No. No, I have not.

20 Q. Dr. Gleason, what is your current title,
21 if any, at MIT?

22 A. I'm professor emerita. I'm actually a
23 named professor. So it's the Kasser Professor
24 Emerita of Department of Engineering.

25 Q. Just to be super clear for the record,

1 K. Gleason

2 not that I think there's any confusion, when we
3 refer to the MIT, we're referring to the
4 Massachusetts Institute of Technology; right?

5 A. That's correct.

6 Q. In your current capacity as professor
7 emerita, do you have day-to-day responsibilities at
8 MIT?

9 A. No, I do not.

10 Q. Do you still have a lab there?

11 A. No, I do not.

12 Q. Do you still have an office there?

13 A. No, I do not.

14 Q. Do you do any work with grad students
15 there nowadays?

16 A. Occasionally I will have a mentor
17 conversation with students there.

18 Q. And approximately how long or when,
19 approximately, would you say your role transitioned
20 to a professor emerita?

21 A. 2021.

22 Q. And prior to 2021 you did have an active
23 lab at MIT?

24 A. Yes. I was a full professor. I had an
25 active research group of supporting about 20

1 K. Gleason

2 researchers. I taught classes. I also had several
3 administrative roles. The last one being associate
4 provost which is the second tier down from the
5 university president.

6 Q. Dr. Gleason, just a handful of other
7 administrative items.

8 Do you -- are you taking any
9 medication -- and I'm not asking for any specifics.
10 But I just want to generally understand that --
11 whether it's a medication you're taking or a health
12 condition you may suffer from, is there anything
13 that you believe could impair your ability to
14 testify truthfully at today's deposition?

15 A. No.

16 Q. You got a good night's sleep last night?

17 A. Yes. It was fine. Thank you.

18 MR. REINITZ: Let's try to do it this
19 way. If it doesn't work, we'll try something
20 else. I'm going to introduce an exhibit. And
21 it's already been marked in this proceeding as
22 Exhibit -- I don't want to misspeak here --
23 1059. If everyone has access to the chat, what
24 I propose is try to drop it in and see if you
25 can pull it up. Let's see how this works.

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

K. Gleason

Let me know if it comes through for you,
Dr. Gleason. You may see it in the chat for
the Zoom.

THE WITNESS: Yes.

MR. REINITZ: You may have to download
it. It is Exhibit 1059. Let me see. I want
to get the title right. I believe that's
titled, "A Supplemental Declaration of
Dr. Karen K. Gleason dated December 26, 2024."

THE WITNESS: I have a copy of it up
already on my computer. I'll use that one
rather than fooling around.

MR. REINITZ: That's perfect.

Liz, do you have that exhibit?

COURT REPORTER: Yes.

(Discussion held off the record.)

(Jiangsu Favored Exhibit 1059, Dr.
Gleason's supplement declaration, previously
marked for identification.)

Q. Dr. Gleason, this Exhibit 1059, do you
recognize this as your declaration that was
submitted just a couple of weeks ago in this
proceeding?

A. Yes, I do.

1 K. Gleason

2 Q. Now, I just want to talk through a couple
3 of the points here that were raised that in this
4 exhibit, 1059. And most of them concern the section
5 here about the -- there was discussion between you
6 and, I guess, Dr. Senkevich regarding the level of
7 ordinary skill in the art as it's relevant, the
8 POSA, person of ordinary skill in the art?

9 A. Can you clarify what you mean by
10 discussion?

11 Q. Yes. I will do that. I'm just winding
12 up for my question here. Give me a second.

13 I'm looking here -- let's start at
14 paragraph 13 in Exhibit 1059, your supplemental
15 declaration. I'm looking at the -- looks like the
16 top of page 5. You reference one of your graduate
17 student, Scott J. Limb.

18 Do you see that?

19 A. Yes.

20 Q. When I began advising graduate student
21 Scott J. Limb -- I'm just reading here from
22 paragraph 13 -- he had a bachelor's degree in
23 chemical engineering and no prior experience with
24 plasmas.

25 You continue, In his first year as a

1 K. Gleason

2 graduate student, Scott designed and constructed a
3 reactor for pulsed plasma polymers assembled from
4 commercially available components.

5 So just to back up, Dr. Gleason, your
6 entire academic career has been at MIT; right?

7 A. That's correct. After I got a Ph.D. from
8 Berkeley, I went directly to MIT as a professor.

9 Q. And so, fair to say, at least firsthand,
10 much, if not most, of your firsthand academic
11 experience would have been with MIT grad students;
12 right?

13 A. That's correct.

14 Q. Would it be fair to say, Dr. Gleason,
15 that MIT is one of the best known and regarded
16 research universities in the world?

17 A. Yes. We always are ranked well with U.S.
18 News and World Reports. We do -- actually, in our
19 department all of the graduate students did their
20 undergraduate work elsewhere.

21 Q. And would it be fair to say, Dr. Gleason,
22 in your experience, that one of the reasons MIT has
23 that high regard in the academic world and beyond is
24 due to the caliber of its students; right?

25 A. Yes. Our students are very important.

1 K. Gleason

2 Q. So you reference here again, back in
3 paragraph 13 of Exhibit 1059, you reference the work
4 of Scott J. Limb. I assume he's probably Dr. Limb
5 now. And do you know -- then you reference, we can
6 continue, you will talk about the reactor he
7 constructed.

8 And now I'm a few lines down, the line
9 begins, Scott reported -- still in paragraph 13,
10 Scott reported the selection of a monomer from the
11 literature, optimization of deposition conditions
12 including pulse, cycle timing and the analysis of
13 the coatings in his first journal publication and
14 then you listed the publication. The citation, I
15 believe, ends with 1998. And that's Exhibit 1066 in
16 this patent office proceeding which is also, so you
17 know, which is listed as number 308 of the
18 publications in your CV.

19 A. Yes, I see that. And I also wanted to
20 note that I believe there may be a typo in the
21 exhibit number that I noticed when reading through
22 it. It may actually be 1065. The title is exactly
23 the same.

24 Q. Okay. Understood. And noted. We'll go
25 with the title then.

1 K. Gleason

2 So, as I understand it, as a nonacademic,
3 so that 1998 in the citation reflects that the
4 publication was published in 1998; right?

5 A. That's correct.

6 Q. Do you know, Dr. Gleason, what -- how
7 many years into his studies Dr. Limb was in 1998?

8 A. I do not.

9 Q. Do you know whether 1998 was during
10 Dr. Limb's first year as a graduate student at MIT?

11 A. No. Because the work always -- when you
12 do a write-up, takes some time. So the work is done
13 and then there's some period of analysis and writing
14 up. So it would be after the first year that the
15 write-up would appear.

16 Q. What would you expect, Dr. Gleason, if
17 the write-up -- the publication was published in
18 1998? How much lead time, how much of an interval,
19 would you expect between the publication itself and
20 the research?

21 A. The actual experiments were probably done
22 either in 1996 or 1997. This particular article had
23 a section in which a model was developed, an
24 analytical model. And I remember that that took
25 some time. We went back and forth on exactly how

1 K. Gleason

2 the model should be developed and compared to the
3 data.

4 Q. Zooming out for a second, Dr. Gleason,
5 what is the general trajectory or perhaps the
6 academic sequence in which a graduate student would
7 come, let's say, to MIT? I assume they complete a
8 bachelor's degree and they're accepted to a Ph.D.
9 program at MIT.

10 What happens, let's say, in the first
11 year for that grad student? Do they go straight
12 into a lab?

13 A. So every department is different. The
14 chemical engineering department has a very standard
15 trajectory. So most students arrive in September.
16 And they spend the first fall semester taking core
17 courses. And then they do a qualifying exam in
18 January. And then they join a laboratory
19 immediately thereafter.

20 Q. So at MIT, Dr. Gleason, it's your
21 testimony that students take, let's say, grad
22 student take about a semester of coursework and then
23 go into a lab after that?

24 A. The chemical engineering department, that
25 was the standard at the time Scott was there.

1 K. Gleason

2 Q. Has that changed since then?

3 A. I believe so. So it's been several
4 decades old. There are changes. But that's -- I'm
5 not fully aware of what the current situation is.

6 Q. Understood.

7 But you were -- let's say you were more
8 closely in the loop into close to 2020, 2021?

9 A. Correct, yeah.

10 (Simultaneous speakers.)

11 Q. So at that time, let's say in the 2000s,
12 2010s, was that still the general trajectory for a
13 grad student to come into about a semester of
14 coursework and then go into a lab?

15 A. Yes, that was the general trajectory.
16 Reason was primarily financial. For chemical
17 engineering graduate students, they received a
18 stipend and payment of their tuition. The
19 department has a central fund which supports the
20 graduate students for that first semester. And then
21 after that they need to be supported by a faculty
22 member. So I have -- I had a number of research
23 contracts and I would pay for the student out of
24 those research contracts. I would pay their stipend
25 and their tuition and all of their lab supplies and

1 K. Gleason

2 building equipment. So Scott was funded by a grant
3 from the National Institute of Health.

4 Q. Understood.

5 I recognize like you testified just a few
6 minutes ago, that your academic career has almost
7 entirely been at MIT. But do you know, Dr. Gleason,
8 whether that similar trajectory -- let's keep
9 calling it, I guess -- meaning a grad student, a
10 chemical engineering grad student, coming into a
11 Ph.D. program doing one semester of coursework and
12 then going straight into a lab, whether that
13 trajectory is common in other universities outside
14 MIT?

15 A. So chemical engineering, yes, that's the
16 common pathway. I did my doctoral degree at
17 University of California, Berkeley. And that was
18 the trajectory there. Chemical engineering is a
19 quite tight close-knit community especially for say
20 the top 10 graduate programs and the faculty members
21 are in good communication with each other across the
22 various campuses and we have to be competitive with
23 the other campuses. So if someone -- someone
24 somewhere else changes their program, we're
25 competing for those same graduate students. So we

1 K. Gleason

2 all want to offer the most favorable program from
3 the perspective of the graduate students. A lot of
4 it has to do with making sure that they're funded
5 for their doctoral degree.

6 Q. Understood.

7 And given that -- let's just stick with
8 MIT for now. It sounds like chemical engineering
9 grad students make it into a lab within a semester
10 or so, six months or so, of them starting their
11 Ph.D. program. On average would you say,
12 Dr. Gleason, that a first year, second year graduate
13 student at MIT, when would they generally be
14 publishing their first paper?

15 A. So the students arrive on campus, as I
16 mentioned, in September of their first year. And
17 then they're taking classes for the fall semester
18 and their exams are in January. So they would be in
19 the lab immediately after that. The reason being
20 that, you know, people are interested in making
21 progress towards their degree as far as that's from
22 the student perspective. And from the faculty
23 perspective, you know, I need to submit reports to
24 my sponsors, the agencies that have granted me money
25 to do research. So it's very important that the

1 K. Gleason

2 students get up and running in the laboratory.

3 So, you know, the students are starting
4 experiments in February of their first year and
5 every individual lab has different criteria. I told
6 my students that on average they would need to have
7 four publications to be able to graduate and that,
8 you know, it's ideal to have a publication in the
9 first year or early in the second year so that they
10 learn the process and it makes the subsequent
11 publications easier. There are other groups where
12 the publications, they wait until the end and that's
13 a very fraught time, very stressful time, because
14 the student don't have experience and then they are
15 trying to write four publications all at the same
16 time.

17 But my -- the way I ran the lab was to
18 have a publication early and then continue that --
19 that pace. So if they did one a year, they would be
20 done in four years. Many students do many more
21 publications than that. They were able to do
22 multiples in a year. I think I've had several
23 students -- I've had several students do more than
24 10 publications.

25 Q. And is it your sense or your

1 K. Gleason

2 understanding, Dr. Gleason, that in graduate
3 programs outside of MIT it's common for first and
4 second year graduate students to be publishing
5 original research?

6 A. It's not -- it's not uncommon. In my
7 role as a faculty member, we hire, you know, new
8 faculty. So we would be reviewing the CVs of
9 faculty applicants. So those would be usually
10 graduate students in the later part of their
11 program. And we would get on order a hundred
12 applications and most of those would have
13 significant numbers of publications, certainly the
14 ones that got picked. So it's not possible to write
15 all of these at the very end. You have to be able
16 to write some at the beginning.

17 Q. Understood.

18 Dr. Gleason, when did you publish your
19 first paper?

20 A. I was a graduate -- oh, I actually -- I
21 was an undergraduate at MIT graduating in 1982. And
22 I did have one publication from that time. It
23 probably appeared in 1983.

24 Q. Do you recall the topic of that paper or
25 that research?

1 K. Gleason

2 A. It was actually predicting the properties
3 of molecules. It was with Professor Reid.

4 Q. Do you know if that publication is on
5 your CV; Dr. Gleason?

6 A. It should be the first one on my CV. I
7 have them in reverse chronological order. So it
8 would be the last one listed, but the earliest one.

9 Q. Okay.

10 A. I will comment as well that in my
11 laboratory at MIT the people doing research included
12 these doctoral advisees that we've been talking
13 about. But it also included several other kinds of
14 people. I had quite a number of interns from other
15 universities and they would be sent there for a
16 period of four months to a year. Most of them were
17 from European universities. They had programs for
18 exchange. So there's a wide number of institutions
19 that sent graduate students, in some cases
20 undergraduate students.

21 Also, there's a robust graduate research
22 program Europe at MIT which allows undergraduate
23 student to do research in the laboratory. And I
24 have many excellent undergraduate researchers. I
25 recall there was an undergraduate Tom -- Todd Bailey

1 K. Gleason

2 who actually did his bachelor's thesis write-up on
3 pulsed plasma CVD.

4 Q. Dr. Gleason, I just want to return to,
5 again, it's a paragraph 14 that we were looking at
6 in your supplemental declaration Exhibit 1059. I
7 had read this and kind of ran through it and I just
8 want to come back to it.

9 You're talking again in paragraph 13
10 about Dr. Limb, Scott Limb's research. And you
11 describe there -- I'm about maybe a third of the way
12 down on page 5.

13 This was the first reactor ever
14 constructed in my laboratory. As my previous area
15 of expertise was nuclear magnetic resonance, NMR,
16 spectroscopy.

17 So just to stop there for a minute,
18 Dr. Gleason. Can you describe or clarify what you
19 mean when you say your previous area of expertise
20 was NMR spectroscopy?

21 A. Yes. So as a graduate student, I became
22 an expert in nuclear magnetic resonance. Primarily
23 I was looking at what the chemical bonding
24 structures were in thin films that we used for solar
25 cells and what their defects were. So the NMR

1 K. Gleason

2 spectroscopy gave a different insight into what the
3 structure of the film was and, therefore, how you
4 could optimize it, what its defects were and so
5 forth.

6 So when I arrived at MIT as a faculty
7 member in 1987, I continued this line of inquiry.
8 So I built my own NMR spectroscopies and they had
9 features that allowed me to look at thin films. And
10 that means there wasn't much sample. They had to be
11 very sensitive and very low background. And this is
12 an area that I pursued until I got tenure. Up until
13 the point you have tenure, your job security is not
14 assured.

15 So during that pre-tenure period, I had a
16 number of collaborations in which laboratories which
17 specialized in the synthesis of thin films would
18 provide me with samples and my laboratory would do
19 the advanced spectroscopy to try to understand those
20 thin films. And so when I got tenure, I decided
21 that I wanted to actually transition into being able
22 to make my own thin films, not only relying on what
23 other people would give me and that additional
24 control would allow me to, you know, understand
25 things better. I would know more about the samples

1 K. Gleason

2 and be able to synthesize exactly the samples that I
3 wanted and so forth.

4 Q. Understood.

5 And I just want to pick up again,
6 Dr. Gleason, and I appreciate that context.

7 Would it be fair to say that the -- your
8 area of expertise shifted over time away from NMR
9 spectroscopy? I'm picking up again on the language
10 that you used here in your declaration, your
11 previous area of expertise was NMR spectroscopy.

12 A. That's correct. So at the time that I
13 got tenure, I had in my laboratories two very
14 advanced NMR spectrometers. These are large
15 instruments with super conducting magnets. So there
16 was one room with two of them.

17 Over time, I shut the first one down and
18 the second one down and a number of reactors at the
19 same time grew from this first one that Scott Limb
20 constructed to -- we would make and deconstruct
21 reactors. But, on average, we probably had like six
22 or more reactors in the lab. It was much easier to
23 get funding for synthesizing in films than for doing
24 NMR spectroscopy. So I went with the flow.

25 Q. Now, I'm still here in paragraph 13. Now

1 K. Gleason

2 about, let's see, two-thirds of the way down on page
3 5, you reference that you advised -- I can just read
4 it here.

5 I also advised graduate student Catherine
6 B. Labelle, L-A-B-E-L-L-E, Hilton Pryce Lewis,
7 P-R-Y-C-E, Kenneth K.S. Lau, L-A-U, and Brett Cruden
8 C-R-U-D-E-N. Each selecting monomers, optimization
9 of pulsed plasma polymer deposition and coating
10 characterization in their first year as graduate
11 students.

12 Then you continue. These students also
13 published on pulsed plasma as reflected on the list
14 of publications in my CV.

15 Dr. Gleason, those publications that you
16 reference by -- again, I assume they're all doctors
17 now, Dr. Labelle, Lewis, Lau and Cruden, do you know
18 if any of those publications that you reference were
19 during the first or second years of their -- those
20 students' tenure at MIT?

21 A. I did not do a detailed analysis that
22 way. I know that all of these individuals were
23 standard chemical engineering graduate students and
24 would have started experimentation in my lab. You
25 know, after their -- directly after their first

1 K. Gleason

2 semester of courses.

3 And so the work -- the work that they
4 were doing would be part of a later publication, as
5 I mentioned. It usually takes, you know, six months
6 to a year or more to write a publication and then
7 the journal process itself takes several months.
8 They submit a manuscript and it goes out for review.
9 And typically that takes a couple of months. And
10 depending on the number and what the reviews say --
11 most reviews will have some suggestions for
12 revision. The manuscript comes back, is revised and
13 resubmitted. So even -- the journal process itself
14 takes at least six months and often a year or so.

15 Q. Understood.

16 At the same time, though, Dr. Gleason,
17 would you agree that there is generally a pressure,
18 maybe even a significant pressure, for a more junior
19 person -- person more junior in academia to publish
20 research at a relatively quick pace? By that I
21 mean, it would be unusual for a grad student to have
22 something worth publishing and sit on it for a few
23 years; right?

24 MR. McKEEVER: Objection.

25 A. I don't necessarily agree with that.

1 K. Gleason

2 There's different motivations. So you may do a body
3 of work and decide that you need to put it aside
4 because you've hit sort of an impasse in
5 understanding what the work is. And then later you
6 can come back to it because you would like to finish
7 your degree and you need one more chapter and it's
8 easier to come back to something you started earlier
9 than to start something brand new.

10 There isn't any particular rush in a
11 timeline for a graduate student. They're all going
12 to be applying for jobs at the end of their
13 programs. And so there may be some awards which
14 require publications, but that's not usually a
15 driving force. So there isn't a strong driver
16 within the graduate students to try to get
17 publications early. I would always, as a faculty
18 adviser, try to push for that just because I think
19 it's a significant hurdle to get the first
20 publication done and I think that helps with the
21 process, lowers the barrier for subsequent
22 publications.

23 At the time that I was advising Scott
24 Limb, as I mentioned I, I already had tenure so I
25 couldn't be fired. So there wasn't any particular

1 K. Gleason

2 pressure on me to publish from my university. The
3 only pressure would be from the sponsor which, in
4 this case, was NIH. And they had sort of a
5 yearly -- yearly reporting, as I recall. And, you
6 know, it's nice to have a publication, but as long
7 as you can write something up, you're usually fine
8 that you would demonstrate the work.

9 Q. Dr. Gleason, would it be fair to say that
10 your understanding of the person of ordinary skill
11 in the art, the POSA, that's referenced in your
12 declaration including in Exhibit 1059, is primarily
13 informed based on your experiences with MIT graduate
14 students?

15 MR. McKEEVER: Objection to the form.

16 Q. You can answer, Dr. Gleason.

17 A. I see.

18 So I, as an MIT faculty member, am
19 exposed to a large number of people during the
20 course of my career. So I had -- I taught a
21 thermodynamics course which typically had enrollment
22 around a hundred students. And so, I know the
23 capabilities of this -- this vast number of
24 undergraduate students that I've had. As I
25 mentioned, I also had a number of interns in my lab.

1 K. Gleason

2 Many of those came from European universities.

3 You know, I had MIT undergraduates in my
4 lab. I even had high school students in my
5 laboratory. So, you know, I've really been exposed
6 to people from a wide number of universities. And
7 this very broad way of including people I think is
8 one of the ways that MIT draws a great amount of
9 strength. It's not a very narrow university.

10 Q. Understood.

11 And just to further clarify, Dr. Gleason,
12 each of the graduate students that you referenced in
13 paragraph 13 of your supplemental declaration,
14 Exhibit 1059 -- so to run through them again, Scott
15 Limb, Catherine Labelle, Hilton Pryce Lewis, Ken Lau
16 and Brett Cruden -- each of those individuals were
17 MIT grad students; right?

18 A. Each of them were MIT chemical
19 engineering grad students. All of them had
20 bachelor's degrees in chemical engineering from
21 other institutions.

22 So Kathy Labelle had a bachelor's degree
23 from Cornell University. Hilton Pryce Lewis had a
24 bachelor's -- he was from South Africa. He had a
25 bachelor's degree from University of Natal. Kenneth

1 K. Gleason

2 K.S. Lau was from Hong Kong. I don't know that I --
3 he did his BS in Hong Kong. I'm not quite sure. I
4 think it was Hong Kong Institute of Science and
5 Technology, but I'm entirely positive of that. And
6 Brett Cruden had his bachelor's degree from Stanford
7 University.

8 Q. I appreciate that.

9 MR. REINITZ: Let's do this. Can we take
10 maybe five minutes and then pick back up. Does
11 that work for everyone?

12 THE WITNESS: That's great. Thank you.

13 (A recess was taken from 9:46 a.m. to
14 9:53 a.m.)

15 Q. Just a couple more questions and that
16 will be it for me, I think.

17 Dr. Gleason, again, in your declaration,
18 Exhibit 1059, paragraph 13, in a couple of places
19 I'll flag the first, you mentioned in page 5, one,
20 two -- well, we'll just start with that. Second
21 line down, When I began advising graduate student
22 Scott J. Limb, he had a bachelor's degree in
23 chemical engineering and no prior experience with
24 plasmas.

25 How do you know that, Dr. Gleason? How

1 K. Gleason

2 do you know Scott Limb didn't have prior experience
3 with plasmas?

4 A. So plasmas are not part of the standard
5 curriculum for chemical engineering. The curriculum
6 for bachelor's chemical engineering degree is
7 determined by the ABET board, the American Board of
8 Education Training, and the subjects are quite
9 standard. There's a core of thermodynamics and it's
10 called transport which is fluid mechanics and mass
11 transfer. And then there is reactor design. Those
12 are typically reactors that you would find in a --
13 the petrochemical refinery or other chemical plant.
14 So those are not courses that have plasma associated
15 with them.

16 The first semester of graduate school,
17 you also have three courses, one of each of those
18 areas, thermo, transport, reactor design. They're
19 more mathematically advanced but they do not include
20 plasma processing. During the first semester when
21 students are taking classes, they're also looking to
22 find research advisers. So both the students are
23 interviewing the faculty and the faculty are
24 interviewing the students. And you find out whether
25 they had any other experience and I can't recall any

1 K. Gleason

2 students, not only Scott, that had previous
3 experience with plasmas when they joined my group.
4 It was always a part of concern on the part of the
5 students, could they do this work for which they
6 were not trained. And I would always tell them that
7 your education is not to train you but to give you
8 education to do various types of experiments.

9 Q. Understood.

10 Just to come back to it and again to
11 clarify, when you say in your declaration that Scott
12 Limb had no prior experience with plasmas, what you
13 mean is that, to your knowledge, Scott Limb hadn't
14 taken any prior coursework concerning plasmas?

15 A. Yes. I don't -- I don't believe that
16 Scott took any coursework that involved plasmas.
17 And, in addition, he had not been in a laboratory or
18 a company that he, you know, worked with plasma
19 equipment.

20 Q. And that's something that would have come
21 up, Dr. Gleason -- I think mentioned, but I want to
22 clarify -- in an interview you would have conducted
23 with Scott Limb?

24 A. That is correct. It certainly would have
25 been an advantage. If someone walked into my office

1 K. Gleason

2 and wanted to become part of my group and they had
3 prior experience with plasmas, I would be extremely
4 excited. And I don't recall being extremely excited
5 in the case of Scott. He was a very good student.
6 I was excited for his personal qualities. But I
7 don't -- I don't -- I don't recall being excited
8 that he had plasma experience, especially at that
9 time because I was going into this new area for me.
10 So I would have been thrilled to find somebody who
11 had plasma experience. But I do not believe that
12 was the case.

13 Q. Understood. And likewise, I'm moving now
14 towards the end, it's actually the last sentence in
15 paragraph 13 towards the bottom of page 5 of
16 Exhibit 1059. You reference some of your other
17 students, Catherine Labelle, Hilton Pryce Lewis,
18 Kenneth Lau and Brett Cruden, and you say last
19 sentence in paragraph 13, Each of these students had
20 a bachelor's degree in chemical engineering and no
21 prior experience with plasmas.

22 Would it be fair to say, Dr. Gleason,
23 that that understanding of the experience of those
24 students prior -- the lack of prior experience with
25 plasma for each of those students was generally

1 K. Gleason

2 based on the same conclusion that you had drawn with
3 respect to Scott Limb?

4 A. Yes. Each of those situations, the
5 formal coursework in chemical engineering does not
6 involve plasmas and I do not recall that any of
7 those students had a prior research laboratory
8 experience or industrial internship that involved
9 plasmas.

10 Q. Okay. And to round it out then, it
11 was -- one of the factors that led to that
12 conclusion on your part was the fact that, to your
13 knowledge, none of those students had any prior
14 coursework concerning plasmas?

15 A. As I just answered, when I'm talking
16 about experience, it does include coursework. But
17 it also includes any other experiences which would
18 have been hands on had they done a research study as
19 an undergrad at their university or an internship in
20 a company.

21 Q. Understood. Okay.

22 Dr. Gleason, you've been a good sport. I
23 think that's it for me. Just to round it out, I
24 know I told you when we started I was going to ask a
25 bunch of questions and some of which may not have

1 K. Gleason

2 been a hundred percent clear. If at any point,
3 Dr. Gleason, I asked you a question and you didn't
4 fully understand what I was asking, did you ask me
5 to rephrase the question?

6 MR. McKEEVER: Objection to the form.

7 A. I believe that I understood the questions
8 that you asked and answered them to the best of my
9 ability.

10 Q. Understood. And by the same token, when
11 you did answer my questions, Dr. Gleason, did you
12 understand that what I was asking?

13 MR. McKEEVER: Objection to the form.

14 Q. You can answer.

15 A. I did not ask you to rephrase any
16 questions, so I believe I understood what you were
17 asking. But I'm not a mind reader, so I can't be
18 hundred percent sure.

19 Q. Is there anything else that we went over
20 today at your deposition that you want to clarify
21 that you haven't already been able to?

22 A. I don't think so, no.

23 MR. REINITZ: Like I said, Dr. Gleason,
24 appreciate your time. And no further questions
25 from me at this juncture.

1 K. Gleason

2 MR. McKEEVER: So I want to have a quick
3 chat with Dr. Gleason off the record before I
4 decide whether or not there's going to be any
5 redirect now that the cross-examination portion
6 of the deposition has been completed. I don't
7 think it will take me long, just two minutes to
8 chat with Dr. Gleason and we'll come back on
9 and I'll either have a couple of questions or I
10 won't.

11 (A recess was taken from 10:03 a.m. to
12 10:11 a.m.)

13 EXAMINATION BY

14 MR. McKEEVER:

15 Q. Dr. Gleason, do you recall that
16 Mr. Reinitz asked you about the Scott Limb paper
17 that's referenced in paragraph 13 of your reply
18 declaration?

19 A. Yes, I do.

20 Q. And again, as you talked about, that
21 paper was published in 1998, it looks like; correct?

22 A. That's correct.

23 Q. Do you have any recollection as to why
24 that particular paper was delayed or may have been
25 delayed in that case?

1 K. Gleason

2 A. So when Scott started his research, he
3 did the pulsed plasma method. And we were trying to
4 get films that had as high a content of CF₂ groups
5 as possible. And with the pulsed plasma method we
6 were able to get to a certain level but we wanted to
7 get higher. And he modified the reactor so that he
8 put in a film wire and didn't use the plasma. And
9 we, indeed, achieved films that were a hundred
10 percent CF₂.

11 It was kind of a eureka moment for my lab
12 and informed all of the rest of the papers that I
13 did in my lab and also the founding of the company
14 that I had. So, really, the pulsed plasma work was
15 in some sense put aside by Scott and he, you know,
16 did work on this pyrolytic CVD. And then for his
17 thesis which, as I mentioned, my recommendation was
18 there were four technical chapters, that was sort of
19 our standard minimum, he went back to the pulsed
20 plasma data that they had collected and developed a
21 model for. And the model was very important for him
22 to pass scrutiny with the thesis committee which
23 included chemical engineering faculty who were
24 experts in chemical engineering but not necessarily
25 in plasmas.

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

K. Gleason

Q. Thank you, Dr. Gleason.

And do you recall when the --
approximately when Scott worked on building out your
lab, as you discussed, in the same paragraph of your
declaration?

A. So I believe that he came in the class
starting in September 1992. As I mentioned, we did
an interview process. So I was looking for someone
to fill out this new NIH grant that I had gotten and
were interviewing people who would be interested in
building that equipment. So, you know, my
recollection is, is that he would have started in
February of 1993 to build the equipment.

MR. McKEEVER: Thank you, Dr. Gleason. I
have no further questions at this time.

MR. REINITZ: That's it for me.

(Whereupon, the proceedings were
adjourned at 10:15 a.m.)

J U R A T

I do hereby certify that I have read
the foregoing transcript of my deposition.

DR. KAREN K. GLEASON

Sworn and subscribed

before me

this _____ day of
_____, 2025.

A Notary Public

of the State of _____

I N D E X

WITNESS	EXAMINATION BY	PAGE
DR. KAREN K. GLEASON	MR. REINITZ	4
	MR. McKEEVER	37

P R E V I O U S L Y M A R K E D E X H I B I T S

EXHIBIT	DESCRIPTION	PAGE
1059	Dr. Gleason's supplement declaration	11

CERTIFICATE

STATE OF NEW YORK)

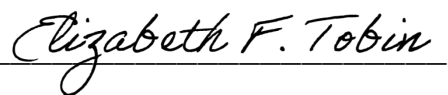
) ss.

COUNTY OF SUFFOLK)

I, Elizabeth F. Tobin, a Registered
Professional Reporter and Notary Public within and
for the State of New York, do hereby certify:

That Dr. Karen K. Gleason, the witness
whose deposition is hereinbefore set forth, was duly
sworn by me remotely and that such deposition is a
true record of the testimony given by such witness.

I further certify that I am not related
to any of the parties to this action by blood or
marriage and that I am in no way interested in the
outcome of this matter.


ELIZABETH F. TOBIN, RPR

January 15, 2025

ERRATA

PAGE/LINE CHANGE/REASON

[illegible]

A		B	C
a.m 1:13 3:7 31:13,14 37:11,12 39:19 ABET 32:7 ability 10:13 36:9 able 5:4 20:7,21 21:15 24:21 25:2 36:21 38:6 academia 27:19 academic 13:6,10,23 16:6 18:6 accepted 16:8 access 10:23 achieved 38:9 action 42:16 active 9:22,25 actual 15:21 addition 33:17 additional 24:23 address 4:4 adjourned 39:19 administered 3:20,24 administering 3:15 administrative 10:3 10:7 advanced 24:19 25:14 32:19 advantage 33:25 advised 26:3,5 advisees 22:12 adviser 28:18 advisers 32:22 advising 12:20 28:23 31:21 Africa 30:24 age 4:2 agencies 19:24 ago 11:23 18:6 agree 3:14 27:17,25 agreement 4:6 allow 24:24 allowed 24:9 allows 22:22 American 32:7 Americas 2:16	amount 30:8 analysis 14:12 15:13 26:21 analytical 15:24 answer 5:13 29:16 36:11,14 answered 35:15 36:8 answers 5:5 APPEAL 1:3 appear 15:15 appeared 21:23 applicants 21:9 application 5:24 6:5 applications 6:2 21:12 applying 28:12 appreciate 25:6 31:8 36:24 approximately 3:6 4:15 9:18,19 39:4 area 8:4 23:14,19 24:12 25:8,11 34:9 areas 32:18 Ariel 2:19 3:18 ariel@bochner.law 2:20 arrive 16:15 19:15 arrived 24:6 art 12:7,8 29:11 article 15:22 aside 28:3 38:15 asked 36:3,8 37:16 asking 5:8,15 10:9 36:4,12,17 assembled 13:3 associate 10:3 associated 32:14 assume 4:25 14:4 16:7 26:16 assured 24:14 attorney 8:5 available 13:4 Avenue 2:16 average 19:11 20:6 25:21	awards 28:13 aware 17:5 B 26:6 41:11 bachelor's 12:22 16:8 23:2 30:20,22,24,25 31:6,22 32:6 34:20 back 13:5 14:2 15:25 23:8 27:12 28:6,8 31:10 33:10 37:8 38:19 background 8:3 24:11 Bailey 22:25 barrier 28:21 based 29:13 35:2 began 12:20 31:21 beginning 21:16 begins 14:9 behalf 2:5,14 believe 10:13 11:8 14:15,20 17:3 33:15 34:11 36:7,16 39:7 Berkeley 13:8 18:17 best 13:15 36:8 better 24:25 beyond 13:23 binding 3:16 blood 42:16 board 1:3 32:7,7 BOCHNER 2:15,23 body 28:2 bonding 23:23 bottom 34:15 brand 28:9 Brett 26:7 30:16 31:6 34:18 broad 30:7 browser 6:4 BS 31:3 build 39:14 building 18:2 39:4,12 built 24:8 bunch 5:2 35:25	C 2:2 C-R-U-D-E-N 26:8 caliber 13:24 California 2:8 18:17 called 4:2 32:10 calling 18:9 Cambridge 1:17 4:5 Camino 2:7 campus 19:15 campuses 18:22,23 capabilities 29:23 capacity 9:6 career 13:6 18:6 29:20 Carnegie 8:11 case 1:7 3:9,10 8:8 29:4 34:5,12 37:25 cases 7:8,9,16 8:14 22:19 Catherine 26:5 30:15 34:17 cells 23:25 central 17:19 certain 38:6 certainly 21:13 33:24 CERTIFICATE 42:2 certified 4:7 certify 40:6 42:10,15 CF2 38:4,10 CHANGE/REASON 43:6 changed 17:2 changes 17:4 18:24 chapter 28:7 chapters 38:18 characterization 26:10 chat 6:14 10:23 11:3 37:3,8 chemical 8:12 12:23 16:14,24 17:16 18:10,15,18 19:8 23:23 26:23 30:18 30:20 31:23 32:5,6

32:13 34:20 35:5 38:23,24 chronological 22:7 citation 14:14 15:3 Civil 4:3 clarify 12:9 23:18 30:11 33:11,22 36:20 class 39:7 classes 10:2 19:17 32:21 clear 5:7 8:25 36:2 CLERK 2:23 client 7:20 close 6:16 17:8 close-knit 18:19 closed 6:10,19 closely 17:8 coating 26:9 coatings 14:13 Coie 2:6 8:5 collaborations 24:16 collected 38:20 come 16:7 17:13 23:8 28:6,8 33:10,20 37:8 comes 11:2 27:12 coming 5:20 6:17 18:10 comment 22:10 commercially 13:4 committee 38:22 common 18:13,16 21:3 communicate 6:13 communication 18:21 community 18:19 companies 8:10 company 7:22 8:8,16 8:18 33:18 35:20 38:13 compared 16:2 competing 18:25 competitive 18:22	complete 16:7 completed 37:6 components 13:4 computer 5:21 6:3 11:12 concern 12:4 33:4 concerning 33:14 35:14 conclusion 35:2,12 condition 10:12 conditions 14:11 conducted 4:18 33:22 conducting 25:15 confusion 9:2 constructed 13:2 14:7 23:14 25:20 consulting 8:17 content 38:4 context 25:6 continue 12:25 14:6 20:18 26:12 continued 24:7 contracts 17:23,24 control 24:24 conversation 9:17 copy 11:11 core 16:16 32:9 Cornell 30:23 correct 9:5 13:7,13 15:5 17:9 25:12 33:24 37:21,22 counsel 3:12 4:6 COUNTY 42:6 couple 11:23 12:2 27:9 31:15,18 37:9 course 29:20,21 courses 16:17 27:2 32:14,17 coursework 16:22 17:14 18:11 33:14 33:16 35:5,14,16 COURT 3:2 11:16 criteria 20:5 cross-examination 37:5	Cruden 26:7,17 30:16 31:6 34:18 current 8:20 9:6 17:5 curriculum 32:5,5 CV 14:18 22:5,6 26:14 CVD 23:3 38:16 CVs 21:8 cycle 14:12 D D 41:2,11 data 16:3 38:20 date 3:5 dated 11:10 day 40:15 day-to-day 9:7 decades 17:4 December 11:10 decide 28:3 37:4 decided 24:20 declaration 11:9,19 11:22 12:15 23:6 25:10 29:12 30:13 31:17 33:11 37:18 39:6 41:15 deconstruct 25:20 defects 23:25 24:4 degree 12:22 16:8 18:16 19:5,21 28:7 30:22,25 31:6,22 32:6 34:20 degrees 30:20 delayed 37:24,25 demonstrate 29:8 department 8:24 13:19 16:13,14,24 17:19 depending 27:10 deposed 4:13 deposition 1:15 3:7 3:15 5:19 6:13,16 8:12 10:14 14:11 26:9 36:20 37:6 40:7 42:12,13	depositions 4:17,21 4:24,25 7:7,10,19 describe 23:11,18 DESCRIPTION 41:13 design 32:11,18 designed 13:2 desktop 6:3 detailed 26:21 determined 32:7 developed 15:23 16:2 38:20 device 5:22 6:22 diamond 8:13 Diego 2:8 different 4:22 16:13 20:5 24:2 28:2 directly 13:8 26:25 discussed 39:5 discussion 11:17 12:5 12:10 doctoral 18:16 19:5 22:12 doctors 26:16 doing 18:11 22:11 25:23 27:4 download 11:6 Dr 1:15 3:7 4:9,11 5:7,12 7:6 8:20 10:6 11:3,10,18,21 12:6 13:5,14,21 14:4 15:6,7,10,16 16:4 16:20 18:7 19:12 21:2,18 22:5 23:4 23:10,18 25:6 26:15 26:17 27:16 29:9,16 30:11 31:17,25 33:21 34:22 35:22 36:3,11,23 37:3,8 37:15 39:2,15 40:10 41:5,14 42:11 drawn 35:2 draws 30:8 driver 28:15 driving 28:15
--	---	---	---

drop 10:24 due 13:24 duly 4:6 42:12 dynamics 5:20 E E 2:2,2 3:25,25 41:2 41:11,11,11 earlier 28:8 earliest 22:8 early 5:3 20:9,18 28:17 easier 20:11 25:22 28:8 education 32:8 33:7 33:8 either 6:15 15:22 37:9 EI 2:7 Elizabeth 1:18 3:3 42:8,22 email 6:7 emerita 8:22,24 9:7 9:20 ends 14:15 engaged 7:21 engineering 8:24 12:23 16:14,24 17:17 18:10,15,18 19:8 26:23 30:19,20 31:23 32:5,6 34:20 35:5 38:23,24 enrollment 29:21 ensure 6:12 entire 13:6 entirely 5:7 18:7 31:5 equipment 18:2 33:19 39:12,14 ERRATA 43:4 especially 18:19 34:8 ESQ 2:10,19 eureka 38:11 Europe 22:22 European 22:17 30:2 exactly 14:22 15:25	25:2 exam 16:17 examination 4:3,9 37:13 41:4 examined 4:7 exams 19:18 excellent 22:24 exchange 22:18 excited 34:4,4,6,7 exhibit 10:20,22 11:7 11:15,18,21 12:4,14 14:3,15,21 23:6 29:12 30:14 31:18 34:16 41:13 exhibits 6:6 expect 15:16,19 experience 4:23 12:23 13:11,22 20:14 31:23 32:2,25 33:3,12 34:3,8,11 34:21,23,24 35:8,16 experiences 29:13 35:17 experimentation 26:24 experiments 15:21 20:4 33:8 expert 1:16 7:11,16 7:24 8:6,9,13,15 23:22 expertise 23:15,19 25:8,11 experts 38:24 exposed 29:19 30:5 extremely 34:3,4 eye 6:22,23 F F 1:18 42:8,22 fact 35:12 factors 35:11 faculty 17:21 18:20 19:22 21:7,8,9 24:6 28:17 29:18 32:23 32:23 38:23	fair 13:9,14,21 25:7 29:9 34:22 fall 16:16 19:17 far 4:24 5:19 19:21 favorable 19:2 Favored 1:5 7:17,22 8:7,8,16,18 11:18 features 24:9 February 20:4 39:14 Federal 4:3 fifth 4:16 file 6:4,4 fill 39:10 film 24:3 38:8 films 8:13 23:24 24:9 24:17,20,22 25:23 38:4,9 financial 17:16 find 32:12,22,24 34:10 fine 10:17 29:7 finish 28:6 fired 28:25 firms 7:24 first 4:5 12:25 14:13 15:10,14 16:10,16 17:20 19:12,14,16 20:4,9 21:3,19 22:6 23:13 25:17,19 26:10,19,25 28:19 31:19 32:16,20 firsthand 13:9,10 five 7:6,10,15 31:10 flag 31:19 Floor 2:16 flow 25:24 fluid 32:10 folder 6:5 follows 4:8 fooling 11:13 force 28:15 foregoing 40:7 form 29:15 36:6,13 formal 35:5 forth 15:25 24:5 25:3	42:12 Foundation 8:11 founding 38:13 four 7:6,10,15 20:7 20:15,20 22:16 38:18 fourth 4:16 framework 4:22 frankly 5:3 fraught 20:13 full 9:24 fully 17:5 36:4 fund 17:19 funded 18:2 19:4 funding 25:23 further 30:11 36:24 39:16 42:15 G G 3:25 general 16:5 17:12 17:15 generally 10:10 19:13 27:17 34:25 give 5:4 12:12 24:23 33:7 given 19:7 42:14 Gleason 1:16 3:1,8 4:1,9,11 5:1,7,12 6:1 7:1,6 8:1,20 9:1 10:1,6 11:1,3,10,21 12:1 13:1,5,14,21 14:1 15:1,6,16 16:1 16:4,20 17:1 18:1,7 19:1,12 20:1 21:1,2 21:18 22:1,5 23:1,4 23:18 24:1 25:1,6 26:1,15 27:1,16 28:1 29:1,9,16 30:1 30:11 31:1,17,25 32:1 33:1,21 34:1 34:22 35:1,22 36:1 36:3,11,23 37:1,3,8 37:15 38:1 39:1,2 39:15 40:10 41:6
--	--	--	--

42:11 Gleason's 11:19 41:14 go 4:24 5:20 14:24 16:11,23 17:14 goes 27:8 going 5:2 6:11,24 10:20 18:12 28:11 34:9 35:24 37:4 good 3:2 4:11,12 10:16 18:21 34:5 35:22 gotten 39:10 grad 9:14 13:11 16:11,21 17:13 18:9 18:10 19:9 27:21 30:17,19 graduate 12:16,20 13:2,19 15:10 16:6 17:17,20 18:20,25 19:3,12 20:7 21:2,4 21:10,20 22:19,21 23:21 26:5,10,23 28:11,16 29:13 30:12 31:21 32:16 graduating 21:21 grant 18:2 39:10 granted 5:20 19:24 great 5:18 30:8 31:12 grew 25:19 group 9:25 33:3 34:2 groups 20:11 38:4 guess 12:6 18:9 H H 41:11 handful 10:6 hands 35:18 happens 16:10 health 10:11 18:3 held 1:17 11:17 helps 28:20 hereinafter 4:7 hereinbefore 42:12 high 13:23 30:4 38:4	higher 38:7 Hilton 26:6 30:15,23 34:17 hire 21:7 hit 28:4 Hong 31:2,3,4 hope 5:4 hundred 21:11 29:22 36:2,18 38:9 hurdle 28:19 I ideal 20:8 identification 11:20 identify 3:13 identifying 8:3 immediately 16:19 19:19 impair 10:13 impasse 28:4 important 13:25 19:25 38:21 include 32:19 35:16 included 22:11,13 38:23 includes 35:17 including 14:12 29:12 30:7 individual 20:5 individuals 26:22 30:16 industrial 35:8 informed 29:13 38:12 inquiry 24:7 insight 24:2 Institute 9:4 18:3 31:4 institutions 22:18 30:21 instruments 25:15 interested 19:20 39:11 42:17 interns 22:14 29:25 internship 35:8,19	interval 15:18 interview 8:4 33:22 39:9 interviewing 32:23 32:24 39:11 introduce 10:20 involve 35:6 involved 33:16 35:8 iPad 5:22 IPR 7:18 IPR2024-00380 1:8 3:11 items 10:7 J J 2:10 12:17,21 14:4 31:22 40:3 January 1:12 3:6 16:18 19:18 43:2 Jiangsu 1:5 3:8 7:17 7:21 8:7,7,16,17 11:18 job 24:13 jobs 28:12 join 16:18 joined 33:3 journal 14:13 27:7 27:13 juncture 36:25 junior 27:18,19 K K 1:16 3:1,8,25,25 4:1,9 5:1 6:1 7:1 8:1 9:1 10:1 11:1,10 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:10 41:5,11 42:11 K.S 26:7 31:2 KALUGIN 2:23	Karen 1:16 3:7 4:9 11:10 40:10 41:5 42:11 Kasser 8:23 KATE 2:23 Kathy 30:22 keep 18:8 Ken 30:15 Kenneth 26:7 30:25 34:18 Kenway 4:4 kind 23:7 38:11 kinds 22:13 know 11:2 14:5,17 15:6,9 18:7 19:20 19:23 20:3,8 21:7 22:4 24:24,25 26:17 26:22,25 27:5 29:6 29:22 30:3,5 31:2 31:25 32:2 33:18 35:24 38:15 39:12 knowledge 33:13 35:13 known 13:15 Kong 31:2,3,4 L L 3:25 41:11 L-A-B-E-L-L-E 26:6 L-A-U 26:7 lab 9:10,23 16:12,23 17:14,25 18:12 19:9 19:19 20:5,17 25:22 26:24 29:25 30:4 38:11,13 39:5 Labelle 26:6,17 30:15,22 34:17 laboratories 24:16 25:13 laboratory 16:18 20:2 22:11,23 23:14 24:18 30:5 33:17 35:7 lack 34:24 language 25:9
---	--	---	---

laptop 5:23 large 25:14 29:19 Lau 26:7,17 30:15 31:2 34:18 LAW 2:23 lawful 4:2 lead 15:18 learn 20:10 led 35:11 let's 10:18,25 12:13 16:7,10,21 17:7,11 18:8 19:7 26:2 31:9 level 12:6 38:6 Lewis 26:6,17 30:15 30:23 34:17 likewise 5:12 6:21 34:13 Limb 12:17,21 14:4,4 15:7 23:10 25:19 28:24 30:15 31:22 32:2 33:12,13,23 35:3 37:16 Limb's 15:10 23:10 line 14:8 24:7 31:21 lines 14:8 link 6:9 list 26:13 listed 14:14,17 22:8 literature 14:11 little 4:22 Liz 11:15 LLP 2:6 locates 7:24 long 9:18 29:6 37:7 look 24:9 looking 12:13,15 23:5,23 32:21 39:9 looks 12:15 37:21 loop 17:8 lot 19:3 low 24:11 lowers 28:21	magnetic 23:15,22 magnets 25:15 making 19:4,20 manuscript 27:8,12 marked 10:21 11:20 marriage 42:17 mass 32:10 Massachusetts 1:17 4:5 9:4 mathematically 32:19 matter 3:8 42:18 McKEEVER 2:10 3:21,21 27:24 29:15 36:6,13 37:2,14 39:15 41:7 mean 12:9 23:19 27:21 33:13 meaning 18:9 means 24:10 mechanics 32:10 medication 10:9,11 member 17:22 21:7 24:7 29:18 members 18:20 mentioned 7:7 19:16 27:5 28:24 29:25 31:19 33:21 38:17 39:8 mentor 9:16 message 7:23 messages 6:17 7:2 method 38:3,5 mind 36:17 minimize 6:16 minimum 38:19 minute 23:17 minutes 18:6 31:10 37:7 misspeak 10:22 MIT 8:21 9:3,8,23 13:6,8,11,15,22 15:10 16:7,9,20 18:7,14 19:8,13 21:3,21 22:11,22	24:6 26:20 29:13,18 30:3,8,17,18 model 15:23,24 16:2 38:21,21 modified 38:7 molecules 22:3 moment 38:11 money 19:24 monomer 14:10 monomers 26:8 months 19:10 22:16 27:5,7,9,14 morning 3:2 4:11,12 motivations 28:2 moving 34:13 multiples 20:22	notice 1:18 noticed 14:21 nowadays 9:15 nuclear 23:15,22 number 3:10 14:17 14:21 17:22 22:14 22:18 24:16 25:18 27:10 29:19,23,25 30:6 numbers 21:13
O			
O 3:25 41:11 oath 3:16,19,23 objection 3:14,19,23 27:24 29:15 36:6,13 obviously 5:25 Occasionally 9:16 offer 19:2 office 1:2 3:10 9:12 14:16 33:25 officer 3:15 oh 21:20 Okay 4:20 5:12,18 6:11 14:24 22:9 35:10,21 old 17:4 ones 21:14 open 6:3,8,15,20 opened 6:9 optimization 14:11 26:8 optimize 24:4 order 21:11 22:7 ordinary 12:7,8 29:10 original 21:5 outcome 42:18 Outlook 6:7,14 outside 6:18 18:13 21:3 owner 1:10,17 2:14 3:19 4:2			
P			

P 2:2,2 41:11 P-R-Y-C-E 26:7 P2i 1:9 3:8,19 pace 20:19 27:20 page 12:16 23:12 26:2 31:19 34:15 41:4,13 PAGE/LINE 43:6 pandemic 8:2 paper 19:14 21:19,24 37:16,21,24 papers 38:12 paragraph 12:14,22 14:3,9 23:5,9 25:25 30:13 31:18 34:15 34:19 37:17 39:5 part 21:10 27:4 32:4 33:4,4 34:2 35:12 particular 15:22 28:10,25 37:24 parties 42:16 pass 38:22 patent 1:2,3,8,10,16 2:14 3:9,18 4:2 7:8 7:9,15 8:12 14:16 pathway 18:16 Patrick 2:10 3:21 pay 17:23,24 payment 17:18 people 8:3 19:20 22:11,14 24:23 29:19 30:6,7 39:11 percent 36:2,18 38:10 perfect 7:5 11:14 period 15:13 22:16 24:15 Perkins 2:6 8:5 person 12:8 27:19,19 29:10 personal 34:6 perspective 19:3,22 19:23 petitioner 1:6 2:5 3:22 7:17 8:8	petrochemical 32:13 Ph.D 13:7 16:8 18:11 19:11 phone 5:22 6:21,23 pick 25:5 31:10 picked 21:14 picking 25:9 places 31:18 plant 32:13 plasma 13:3 23:3 26:9,13 32:14,20 33:18 34:8,11,25 38:3,5,8,14,20 plasmas 12:24 31:24 32:3,4 33:3,12,14 33:16 34:3,21 35:6 35:9,14 38:25 PLLC 2:15 pmckeever@perki... 2:11 point 5:6 24:13 36:2 points 12:3 polymer 26:9 polymers 13:3 popping 7:2 portion 37:5 POSA 12:8 29:11 positive 31:5 possible 21:14 38:5 pre-tenure 24:15 predicting 22:2 Present 2:3,22 president 10:5 pressure 27:17,18 29:2,3 previous 7:6,19 23:14,19 25:11 33:2 previously 11:19 primarily 17:16 23:22 29:12 prior 4:17 9:22 12:23 31:23 32:2 33:12,14 34:3,21,24,24 35:7 35:13 probably 14:4 15:21	21:23 25:21 Procedure 4:4 proceeding 7:18 10:21 11:24 14:16 proceedings 39:18 process 20:10 27:7 27:13 28:21 39:9 processing 32:20 professional 1:19 3:5 42:9 professor 8:22,23,23 9:6,20,24 13:8 22:3 program 16:9 18:11 18:24 19:2,11 21:11 22:22 programs 18:20 21:3 22:17 28:13 progress 19:21 properties 22:2 propose 10:24 provide 24:18 provost 10:4 Pryce 26:6 30:15,23 34:17 Public 1:19 40:17 42:9 publication 14:13,14 15:4,17,19 20:8,18 21:22 22:4 27:4,6 28:20 29:6 publications 14:18 20:7,11,12,15,21,24 21:13 26:14,15,18 28:14,17,22 publish 21:18 27:19 29:2 published 15:4,17 26:13 37:21 publishing 19:14 21:4 27:22 pull 10:25 pulse 14:12 pulsed 13:3 23:3 26:9 26:13 38:3,5,14,19 pursuant 1:17 4:3	pursued 24:12 push 28:18 put 28:3 38:8,15 pyrolytic 38:16
Q			
qualifying 16:17 qualities 34:6 question 5:6,9,13,14 12:12 36:3,5 questions 5:2 31:15 35:25 36:7,11,16,24 37:9 39:16 quick 27:20 37:2 quite 18:19 22:14 31:3 32:8			
R			
R 2:2 3:25 40:3 41:11 41:11 raised 12:3 ran 20:17 23:7 ranked 13:17 reactor 13:3 14:6 23:13 32:11,18 38:7 reactors 25:18,21,22 32:12 read 23:7 26:3 40:6 reader 36:17 reading 12:21 14:21 Real 2:7 really 30:5 38:14 reason 17:16 19:19 reasons 13:22 recall 21:24 22:25 29:5 32:25 34:4,7 35:6 37:15 39:3 received 17:17 recess 31:13 37:11 recognize 11:22 18:5 recollection 37:23 39:13 recommendation 38:17 record 3:14 8:25			

11:17 37:3 42:14 redirect 37:5 refer 9:3 reference 12:16 14:2 14:3,5 26:3,16,18 34:16 referenced 29:11 30:12 37:17 referring 9:3 refinery 32:13 reflected 26:13 reflects 15:3 regard 13:23 regarded 13:15 regarding 12:6 registered 1:18 3:4 42:8 Reid 22:3 Reinitz 2:19 3:18 4:10 10:18 11:6,14 31:9 36:23 37:16 39:17 41:5 related 8:12 42:15 relatively 27:20 relevant 12:7 relying 24:22 remember 7:25 15:24 remote 1:15 4:19 remotely 3:16,20 4:6 4:18 42:13 rephrase 5:9 36:5,15 reply 37:17 reported 14:9,10 reporter 1:19 3:2,4,5 11:16 42:9 reporting 29:5 reports 13:18 19:23 represent 3:13 representing 3:22 require 28:14 research 9:25 13:16 15:20 17:22,24 19:25 21:5,25 22:11 22:21,23 23:10	27:20 32:22 35:7,18 38:2 researchers 10:2 22:24 resonance 23:15,22 respect 35:3 responsibilities 9:7 rest 38:12 resubmitted 27:13 return 23:4 reverse 22:7 review 27:8 reviewing 21:8 reviews 27:10,11 revised 27:12 revision 27:12 right 5:22 9:4 11:8 13:6,12,24 15:4 27:23 30:17 robust 22:21 role 9:19 21:7 roles 10:3 room 25:16 round 35:10,23 RPR 42:22 Rules 4:3 run 30:14 running 5:25 20:2 rush 28:10 Ryan 3:18	37:16 38:2,15 39:4 screen 7:2 scrutiny 38:22 second 10:4 12:12 16:4 19:12 20:9 21:4 25:18 26:19 31:20 section 12:4 15:23 security 24:13 see 6:15 10:24,25 11:3,7 12:18 14:19 26:2 29:17 selected 8:5 selecting 26:8 selection 14:10 semester 16:16,22 17:13,20 18:11 19:9 19:17 27:2 32:16,20 Senkevich 12:6 sense 5:16 20:25 38:15 sensitive 24:11 sent 22:15,19 sentence 34:14,19 September 16:15 19:16 39:8 sequence 16:6 set 42:12 shifted 25:8 shot 6:22,23 shut 25:17 significant 21:13 27:18 28:19 signing 5:21 similar 18:8 Simultaneous 17:10 sit 27:22 situation 17:5 situations 35:4 six 19:10 25:21 27:5 27:14 skill 12:7,8 29:10 sleep 10:16 solar 23:24 somebody 34:10	sort 28:4 29:4 38:18 sounds 4:22 19:8 South 30:24 speakers 17:10 specialized 24:17 specifics 10:9 spectrometers 25:14 spectroscopies 24:8 spectroscopy 23:16 23:20 24:2,19 25:9 25:11,24 spend 16:16 sponsor 29:3 sponsors 19:24 sport 35:22 ss 42:5 standard 16:14,25 26:23 32:4,9 38:19 Stanford 31:6 start 12:13 28:9 31:20 started 26:24 28:8 35:24 38:2 39:13 starting 19:10 20:3 39:8 state 1:19 3:3,13 40:18 42:4,10 States 1:2 3:9 stating 4:4 stenographic 3:4 stick 19:7 stipend 17:18,24 stop 23:17 straight 16:11 18:12 Street 4:4 strength 30:9 stressful 20:13 strong 28:15 structure 24:3 structures 23:24 student 12:17,20 13:2 15:10 16:6,11 16:22 17:13,23 18:9 18:10 19:13,22 20:14 22:23 23:21
---	---	---	--

26:5 27:21 28:11 31:21 34:5 students 9:14,17 13:11,19,24,25 16:15,21 17:17,20 18:25 19:3,9,15 20:2,3,6,20,23,23 21:4,10 22:19,20 26:11,12,23 28:16 29:14,22,24 30:4,12 30:17,19 32:21,22 32:24 33:2,5 34:17 34:19,24,25 35:7,13 students' 26:20 studies 15:7 study 35:18 subjects 32:8 submit 19:23 27:8 submitted 11:23 subscribed 40:13 subsequent 20:10 28:21 suffer 10:12 SUFFOLK 42:6 suggestions 27:11 Suite 2:7 super 8:25 25:15 supplement 11:19 41:14 supplemental 11:9 12:14 23:6 30:13 supplies 17:25 supported 17:21 supporting 9:25 supports 17:19 sure 19:4 31:3 36:18 sworn 4:6 40:13 42:13 synthesis 24:17 synthesize 25:2 synthesizing 25:23	31:9 37:7 taken 1:16 31:13 33:14 37:11 takes 15:12 27:5,7,9 27:14 talk 12:2 14:6 talked 37:20 talking 5:25 22:12 23:9 35:15 taught 10:2 29:20 technical 8:4 38:18 Technology 9:4 31:5 tell 33:6 tenure 24:12,13,20 25:13 26:20 28:24 testified 4:7 18:5 testify 10:14 testifying 7:3,11,16 testimony 16:21 42:14 Thank 10:17 31:12 39:2,15 thermo 32:18 thermodynamics 29:21 32:9 thesis 23:2 38:17,22 thin 23:24 24:9,17,20 24:22 things 24:25 think 8:2 9:2 20:22 28:18,20 30:7 31:4 31:16 33:21 35:23 36:22 37:7 third 23:11 three 32:17 thrilled 34:10 tier 10:4 tight 18:19 time 3:6,12 4:16 15:12,18,25 16:25 17:11 20:13,13,16 21:22 25:8,12,17,19 27:16 28:23 34:9 36:24 39:16 timeline 28:11	times 4:15 timing 14:12 title 8:20 11:8 14:22 14:25 titled 11:9 Tobin 1:18 3:3 42:8 42:22 today 5:2 36:20 today's 3:5 10:14 Todd 22:25 token 36:10 told 20:5 35:24 Tom 22:25 top 12:16 18:20 topic 21:24 Trademark 1:2 3:10 train 33:7 trained 33:6 Training 32:8 trajectory 16:5,15 17:12,15 18:8,13,18 transcript 40:7 transfer 32:11 transition 24:21 transitioned 9:19 transport 32:10,18 TRIAL 1:3 true 42:14 truthfully 10:14 try 10:18,19,24 24:19 28:16,18 trying 6:12 20:15 38:3 tuition 17:18,25 turn 6:24,25 two 25:13,16 31:20 37:7 two-thirds 26:2 type 8:17 types 33:8 typically 27:9 29:21 32:12 typo 14:20	U 40:3 41:11 U.S 13:17 uncommon 21:6 undergrad 35:19 undergraduate 13:20 21:21 22:20,22,24 22:25 29:24 undergraduates 30:3 understand 4:25 5:11 6:19 10:10 15:2 24:19,24 36:4,12 understanding 5:14 21:2 28:5 29:10 34:23 understood 5:14 14:24 17:6 18:4 19:6 21:17 25:4 27:15 30:10 33:9 34:13 35:21 36:7,10 36:16 United 1:2 3:9 universities 13:16 18:13 22:15,17 30:2 30:6 university 10:5 18:17 29:2 30:9,23,25 31:7 35:19 unusual 27:21 use 11:12 38:8 usually 21:9 27:5 28:14 29:7
V			
V 41:11 vapor 8:12 various 18:22 33:8 vast 29:23 venued 3:9 versus 3:8 video-conference 1:15 2:3 3:17 vs 1:8			
W			
wait 20:12			
U			
T			
T 40:3 41:11 take 5:20 16:21,22			

walked 33:25	Y	1983 21:23
want 6:12 10:10,22	Y 41:11	1987 24:7
11:7 12:2 19:2 23:4	yeah 17:9	1992 39:8
23:8 25:5 33:21	year 12:25 15:10,14	1993 39:14
36:20 37:2	16:11 19:12,12,16	1996 15:22
wanted 14:19 24:21	20:4,9,9,19,22 21:4	1997 15:22
25:3 34:2 38:6	22:16 26:10 27:6,14	1998 14:15 15:3,4,7,9
wasn't 24:10 28:25	yearly 29:5,5	15:18 37:21
way 10:19 20:17	years 15:7 20:20	2
23:11 26:2,22 30:7	26:19 27:23	20 9:25
42:17	York 1:20 2:17,17	2000s 17:11
ways 30:8	3:3 42:4,10	2010s 17:12
we'll 10:19 14:24	Z	2019 8:2
31:20 37:8	Zoom 4:18,21 5:19	2020 17:8
we're 9:3 18:24	5:21,24 11:4	2021 9:21,22 17:8
we've 22:12	Zooming 16:4	2024 11:10
weeks 11:23	0	2025 1:12 3:6 40:16
went 13:8 15:25	02138 4:5	43:2
25:24 36:19 38:19	1	26 11:10
wide 22:18 30:6	10 18:20 20:24	3
winding 12:11	10:03 37:11	300 2:7
wire 38:8	10:11 37:12	308 14:17
witness 1:16 3:16,22	10:15 39:19	37 41:7
7:11,16 8:7,9,13,15	10018 2:17	4
11:5,11 31:12 41:4	1040 2:16	4 4:4 41:5
42:11,14	1059 10:23 11:7,18	5
witnesses 7:24	11:21 12:4,14 14:3	5 12:16 23:12 26:3
work 5:10 8:7,9,15	23:6 29:12 30:14	31:19 34:15
8:17 9:14 10:19	31:18 34:16 41:14	6
13:20 14:3 15:11,12	1065 14:22	646.971.0685 2:18
27:3,3 28:3,5 29:8	1066 14:15	7
31:11 33:5 38:14,16	11 41:14	8
worked 33:18 39:4	11,041,087 1:9	858.720.5700 2:9
works 10:25	11452 2:7	9
world 13:16,18,23	13 12:14,22 14:3,9	9:02 1:13 3:7
worth 27:22	23:9 25:25 30:13	9:46 31:13
wrapping 5:3	31:18 34:15,19	9:53 31:14
write 20:15 21:14,16	37:17	92130 2:8
27:6 29:7	14 23:5	
write-up 15:12,15,17	15 1:12 3:6 43:2	
23:2	15th 2:16	
writing 15:13	1982 21:21	
X		
X 41:2,11		