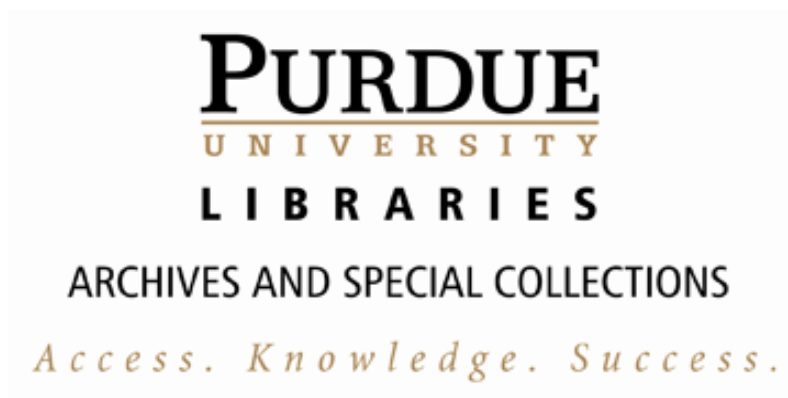


Fred E. Lytle Interview

Conducted by Katherine Markee on January 20, 2010



The following interview was conducted with Fred E. Lytle (FL), Professor Emeritus of Chemistry, for the Purdue University Oral History Program. It took place on Wednesday, January 20, 2010 at his office in Indianapolis. The interviewer is Katherine Markee (KM), the Oral History Librarian.

KM: Welcome and good afternoon Professor Lytle and thank you very much for your time.

FL: Welcome.

KM: Tell us a little bit about where and when you were born, your parents and siblings and early years.

FL: OK. I was born in Lewisburg, Pennsylvania in 1943 and I grew up in Sunbury, Pennsylvania which was about seven miles down the road. I had two brothers, Chuck is four years younger than I am and my brother Rob died about a year ago and he was twenty years younger than I was.

KM: Wow. How about your early school days and then a little bit about high school. What went on there?

FL: Well you know Sunbury is sort of, it's in the Susquehanna Valley but it's buried in the mountains.

KM: Uh-huh.

FL: In the mountainous region of Pennsylvania.

KM: Sure.

FL: And you know I really enjoyed school, I mean school was terrific. And I came from a family where neither of my parents were really educated. My father dropped out of school in eighth grade and...

KM: Uh-huh.

FL: My mother made it through high school and she was always really proud of that, that she was educated.

KM: Uh-hmm.

FL: And it was really interesting because you know out of the three boys, they had three boys, and out of the three of us, you know two of us got a Ph.D. and the other one was an electrical engineer from Berkeley.

KM: Wow.

FL: And my poor parents never ever understood what it was we were doing.

KM: [laughter] They worked with you though, huh?

FL: That's right. That's right.

KM: Worked alongside you. When you were in high school were there any student organizations or a special teacher that you happened to recall that you had?

FL: I had a terrific background in physics. As a matter of fact I originally went off to college in physics and not chemistry.

KM: Uh-huh.

FL: But I had...the greatest thing I had in high school was they had a stunning preparation in mathematics. And I was never really quite sure why, it was one of those classic things that was a person. I had one teacher in particular who was just terrific.

KM: Sure.

FL: And so you know by the time my family decided that I should go to college I had this really terrific preparation in all kinds of math and as a matter of fact that's really what I do right now.

KM: OK.

FL: Even though I was trained as a chemist, down here at Indigo Biosystems I do a lot of mathematics for them.

KM: Super. It just stayed with you all this time. You got a good foundation in high school.

FL: Yeah, yeah.

KM: You lucked out.

FL: And then because I was in physics originally in college I took all the math that a physics major takes.

KM: Sure.

FL: Which is a lot more than chemists do.

KM: I see. Okey-dokey. Then you went on to college. How did you happen to select this particular one in Pennsylvania?

FL: Well it was really interesting. Nobody in the family ever thought I was going to go to college.

KM: OK.

FL: And I was apprenticing in an auto body shop...

KM: OK.

FL: And the man that owned it had always wished that he had gone to college and so he talked my father into looking into it. When we visited, a great story...when we sat down with the guidance counselor in the high school, my father and I.

KM: Uh-huh.

FL: The guidance counselor said Mr. Lytle I see that you're a registered Democrat therefore I cannot help your son get into college. [laughter]

KM: Excuse me. [laughter]

FL: It turned out that our dentist was the only Democrat on the school board and so my dad talked to him and he said well you know it's hard to believe but the superintendent of the school district is a Democrat and that's a real long story but I'll make an appointment with you to go see him and so we went to see him and he got me into Juniata College.

KM: [laughter] That's an interesting scenario.

FL: So that's how I got to Juniata College.

KM: OK. Did you live on campus while you were there?

FL: Oh yeah.

KM: OK.

FL: There was one year that we lived in...they didn't have enough housing on campus one year and a bunch of us lived in an apartment.

KM: Sure.

FL: But other than that yeah I lived on campus.

KM: Yeah, OK. Tell us a little bit about what campus life was like. Any student clubs or what your major was?

FL: Juniata College is the Church of the Brethren School, it started with the Church of the Brethren and my family is not members of that particular church but the Church of the Brethren was, let's say, an austere organization. And so there were no things like fraternities, sororities and stuff like that. You know there was no smoking on campus, there was no drinking, and we were really lucky there were dances by the time I got there.

KM: [laughter] Was it co-ed? Boys and girls?

FL: Yes it was co-ed.

KM: OK.

5:00 **FL:** It was almost split 50-50 even in those days of men and women.

KM: OK, OK. Sure.

FL: But they had two programs that they were really well known and they continue to be really well-known and one of them was chemistry and the other was pre-med. And I went there in physics and the program really wasn't all that good in physics at that time. Since then, we've had a Nobel Laureate who came out of the college in physics.

KM: Oh wonderful.

FL: But at the time I was there physics wasn't terribly good and I knew a lot of the chemistry majors and so I moved into chemistry and finally became a sole chemistry major my senior year.

KM: OK.

FL: It took me a couple years to catch up though.

KM: OK, sure, OK. Sounds good. But you had a good experience while you were there?

FL: Oh it was terrific, yeah.

KM: Super.

FL: It was absolutely stunning.

KM: That's good, OK. Then after that is that when you went on to grad school after you finished?

FL: I went to grad school right away, I went to MIT.

KM: OK.

FL: Of course to me that was like a dream come true because my family, like I said, was not educated or anything.

KM: Sure.

FL: And so you knew about very few schools and MIT was certainly one of the schools that even my relatives knew about and I just, you know, I went to MIT right after undergraduate work and I graduated out of there in four years and it was just an absolutely incredible preparation. MIT was such an exciting place to be, it was just unbelievable.

KM: Yeah, you got a good experience there. How did you happen...was there some professors there and you liked the program? Is that why you selected MIT?

FL: [laughter] Yeah. Well yeah first off yeah going to MIT itself was a real plus but it turned out that there was a professor at Juniata College, David Hercules, who I worked for as an undergraduate and before my senior year started he was hired by MIT in the chemistry faculty. And when he went up there he wanted to continue with a lot of the research we were doing so he had actually had four of us out of my class went to MIT graduate school.

KM: Oh wow. Followed him, well that was a nice arrangement, worked good.

FL: Yeah. So I ended up working for Dave for eight years and that was a really good experience also.

KM: Good, sounds good. Then was it after that...was there any military service? Did you serve in the military at any time?

FL: No, I was called up for Vietnam and failed my physical because I'm hard of hearing and in particular I'm tone deaf.

KM: Oh, OK.

FL: So I can't hear. I'm absolutely deaf to high frequencies.

KM: OK.

FL: And over the years Purdue's Department of Audiology has worked with me on various things.

KM: Sure. Right, okey-dokey. Then your career path then takes you to Purdue after you finished MIT?

FL: Yeah, yeah.

KM: OK.

FL: I was here at Purdue two weeks I think after I got my Ph.D.

KM: Wow.

FL: And those were in the days when a lot of people, particularly in analytical chemistry, did not post-doc. People just went on to take a job right out of graduate school.

KM: OK. Did they recruit you or how did you happen to...? Was there an opening at Purdue when you came?

FL: [laughter] Yeah it turns out...

KM: You know you and I came the same year. I came in '68 as well. [laughter]

FL: Yeah. OK.

KM: Yeah.

FL: Yeah well what happened was that there was a person on the faculty here who is the head of the analytical chemistry group and that was my major at MIT was analytical chemistry.

KM: OK.

FL: And his name was Lockhard B. Rogers and he went by the name of Buck.

KM: OK.

FL: And so Buck Rogers was here and he was my academic grandfather. And so if you look at that academic family you are going to find his name.

KM: OK. I enjoy that. The handout, I enjoyed reading that.

FL: Yeah it was my thesis advisor's thesis advisor. And so of course Dave Hercules, my thesis advisor, told Buck that he had somebody coming out who was really good and was going to look for an academic job and Purdue happened to be looking at that time for a spectroscopist, which is what I was.

KM: Uh-huh.

FL: And so I came and interviewed and it's really funny because modern students just have a hard time believing this but I interviewed here two and a half years into graduate school I interviewed at Purdue and they offered me a job.

KM: Wow.

FL: And so you know I then, it took me another year and a half to get a Ph.D.

KM: Uh-huh.

FL: So I was in really good shape in graduate school because there I was, unlike most of the people, and I already had a job at one of the Big Ten universities.

KM: Right.

FL: So it was very terrific.

KM: Your comfort level was very high.

FL: That's exactly right. That's exactly right.

KM: OK. Tell us a little bit about when you came. I noticed that one of the grants that you got, shortly after you came, in '72 was that NSF grant for laser research and

10:00

then, something else I read, a lab was built about 1974. So this is when you continued on in the laser area, is that correct?

FL: Right, yeah.

KM: OK.

FL: What had happened was that I had never done any laser research myself.

KM: Uh-huh.

FL: But when I was at MIT, MIT the building that we were in was a mix of physics people and chemistry people. And because I had so much physics I used to hang around the physics students and I got to know Charles Towne's graduate students pretty well and he had got the Nobel Prize for lasers my second year in graduate school. So this made an impression on me...

KM: Oh yeah.

FL: And when I came to Purdue I decided, I saw lots of ways that lasers could be used in chemistry, so I decided to start a laser program.

KM: OK.

FL: And so that particular grant was probably one of the first grants that NSF made to an analytical chemist in lasers.

KM: Uh-hmm.

FL: So I'm considered you know one of the pioneers in analytical laser spectroscopy.

KM: Right.

FL: I go back to almost day one.

KM: Well it says, something I read here, the first analytical chemist to build a laser in '68 and that's about eight years after it was developed so that's pretty good.

FL: Yeah that's right. Yeah.

KM: Three feathers in your cap there for that. [laughter]

FL: Yeah.

KM: Tell us a little bit about some of your other research. And also how was the support in those days as they went into the '70s and the '80s?

FL: Well the support was a lot, the percentage of success was a lot higher than it is...

KM: OK. Today.

FL: I feel sorry for young faculty today trying to get research support. And the success rate ran about 40% at the National Science Foundation.

KM: That's pretty good.

FL: And since I was so early into the area...

KM: Right.

FL: And you know everybody just considered me a pioneer of the area that NSF actually supported my research for twenty six years.

KM: Oh wonderful. Once you got in and they knew what you were doing your home free. That's great.

FL: And then finally what happened was, this would have been in the late '80s, the world starting shifting over to biology and biochemistry. And I hate to say it when someone is recording my voice but I hate biology, gosh. Biology and biochemistry they're just the pits.

KM: [laughter]

FL: So I would not move my research program that direction and so ultimately it cost me my research and my funding.

KM: Oh.

FL: So when that happened then I started to you know wind down my research program and started doing a lot more administrative work.

KM: Oh, OK. Yeah. You were also the co-developer of the Synchronously Pumped Dye Laser. You want to make a comment?

FL: Yeah I had invented...Joel Harris, Ray Chrisman and I, Ray Chrisman worked for Stewart Tobias and Joel was my first Ph.D. student.

KM: Uh-huh.

FL: And Joel, Ray, and I had invented this laser called the Cavity Dumped Synchronously Pumped Dye Laser. And what it allowed was the generation of wavelength tunable that is the laser could change its color and picoseconds

pulses so they would be like a trillionths of a second. And we could vary how often the pulses could come out of the laser; I mean you could get one pulse an hour if you wanted. But we could get them from whatever you wanted to basically four MHz.

KM: Wow.

FL: So it turned out that until the invention of a laser called the Titanium Sapphire Laser in the late '80s, early '90s, the Synchronously Pumped Dye Laser was the workhorse of picoseconds spectroscopist. So this certainly helped me gain a lot of fame in the area and I'm sure it's what got me promoted.

KM: Oh yeah.

FL: You know from tenure to promoted.

KM: Sure.

FL: And because we had all sorts of visitors from all over the world that came to see this laser because everyone knew how good it was.

KM: Oh, that's great.

FL: We never patented it. We were just in a real hurry to get it published because I needed it for tenure.

KM: Sure.

FL: And if we would've patented it I don't think I would have ever got tenure if we would've spent the time trying to patent it.

KM: Oh, OK. You got to make that decision at that time, right.

FL: Yeah.

KM: Alright, okey-dokey. You want to talk a little bit about teaching? Particularly that course that 621 you taught that for a great number of years.

FL: Yeah, yeah. And you know it's really interesting, you know I said I had this terrific background in math in high school.

KM: Sure.

FL: And that got me doing a lot of data processing and thinking about things and I had actually built a four bit computer when I was in high school. When you realize that was in the '50s it's a little more difficult than it is today to build a four bit computer.

KM: [laughter] Yeah, right. I hear you.

15:00 **FL:** When I was at Juniata College I continued in all this math because of my physics major but we also had a computer show up on campus and there was nobody there, it was in the summer, and no one wanted to run it or anything. So I started to work with it and teach myself numeric methods and computer programming. And then eventually when I went to MIT I supported myself for one year as the Chemistry Department computer programmer. And in all of this I built up mathematical techniques.

KM: Sure,

FL: You know from my background and everything else and so I was one of the very early people also that really understood programming and algorithms. Computers were dumb in those days.

KM: Oh, a lot of work to be a programmer.

FL: Right, I'd say you really had to know how to program stuff to get accurate and reliable results out and so this got me into things where calculations impacted analytical chemistry. Because people would come to me and ask me how you did this stuff. And so very early on I was associated with 621 but I taught the statistics part of it.

KM: OK.

FL: And a faculty member, Nick Winograd who's now at Penn State, well he's been at Penn State since like '79 or '80, but Nick Winograd was in charge of the course. And finally when Nick went to Penn State I was just asked if I would teach the whole course which was just fine with me. And so the course was a mix of mathematical methods of processing data and electronic methods of processing signals. And so the course was actually, for many, many years, was simply required of all the analytical graduate students. And it was so important to people's lives that here a number of years ago the department had a celebration on the course and all sorts of people came back telling stories how 621 helped them in their career and so forth. And my job at Indigo, I have the job because the CEO of Indigo took 621, and also the woman I report to, the chief scientific officer, she also took 621.

KM: Oh my gosh, oh my lord. Super.

FL: So they knew exactly what it is that I knew because of this course and so that's what I do. I sit in my officer here and apply the material in that course to problems in the pharmaceutical industry.

KM: Oh, that's just great. You got well-prepared.

FL: Yep.

KM: And you're working with colleagues. That's good.

FL: Yeah.

KM: You mentioned earlier a little bit about administrative so I want to talk about some of your administrative posts that you had including the Acting Director instrumentation, but also when you were Associate Department Head for the Centers and Facilities. I'll leave you to that.

FL: Graham Cooks once referred to me as the Kelly girl of departmental administration. And every time they had a problem...

KM: [laughter] When you say Kelly girl I understand what you're saying.

FL: Yeah, OK.

KM: Other people may not.

FL: Yeah that's right. Yeah. And so yeah I was a division head, you know Chemistry is divisionalized because it is so big. It's a really big department.

KM: Sure.

FL: And you need some administrative substructure otherwise you'll never be able to run the thing. And I was a division head from actually slightly before I became a full professor, which was sort of awkward, for about a seven year period of time then I got back into it a little later for another five years. And I always said the reason I was a good administrator was because I hated it. And so I would find all the ways that there were in the world to smooth it over so it worked really well and never gave me any problems.

KM: [laughter] That's a good method. I'll keep that in the back of my head.

FL: Right. And so what happened was that whenever they would have a place where there was a problem with the administrative structure, you know if there was just an issue on the structure.

KM: Sure.

FL: Then they would get me involved and say sort of you know why don't you fix this. And so I was the Director of General Chemistry and I was actually an associate head twice. The first time I had, you know, like pretty close to the whole support staff reported to me. And that was pretty onerous; I had a lot of stuff. And then the second time then Ian Rothwell got me involved with having the professional staff, instead of the whole support staff, just the professional staff and that was primarily facilities, the department was trying to get a grip on its facilities. So I had these people report to me and you know it was just really nothing more than

20:00 a position of trying to keep the faculty happy, keep the staff happy, get them some kind of rewards and you know money to buy things and so forth.

KM: Keep things moving.

FL: That's right, that's exactly right.

KM: Right, right. Yeah. Were you ever on the Senate or any other university committees or school/ college committees?

FL: No.

KM: OK.

FL: I was on the School of Science Committee, I'm trying to even remember...like the faculty committee for the School of Science.

KM: OK.

FL: There's some name for it and I can't remember what it is.

KM: Sure.

FL: And I was on that for a number of years and I was on the...part of that School of Science Committee was the Educational Policy Committee and I was on that for a while.

KM: Sure. OK.

FL: At the university I never did anything more than just committee work but I was on the original committee for the Education of Teaching Assistants which was called

CETA. And that was a really, really important committee that President Ringle had started. And it dealt with, you know, trying to get the teaching assistants so they were doing good jobs in classrooms and that they knew how to teach and so forth and eventually that resulted in the Purdue Teaching Academy.

KM: Oh, OK.

FL: So I was a founding member of the Teaching Academy because I was on the original committee...

KM: Right.

FL: We used to joke that those who ran the Teaching Academy did so because it was the only way we could get off of CETA because no one would let us off of CETA.

KM: [laughter] Yeah we had to get a follow-up and get it up and running, right?

FL: Right, that's right.

KM: Yeah.

FL: And then you know of course I served on lots of teaching...

KM: Oh, sure.

FL: Award committees and dean search committees and stuff like that.

KM: Right.

FL: Just the standard kind. I guess the craziest thing I ever had to do, was luck of the draw, I was the chair of the faculty grievance committee one year. That was interesting.

KM: Oooh, yeah I'm sure.

FL: That was a really interesting job. [laughter]

KM: I'm sure it was.

FL: Yeah, right. [laughter]

KM: Oh dear. What about diversity? You want to make a comment. That's changed over time hasn't it within the confines or you broadened it a little bit? Diversity within the school and the department. Diversity sort of you know opened up...

FL: Well the biggest thing I ever did in the area of diversity...

KM: Right.

FL: Of course was the work with the blind students.

KM: OK. Yes I was going to ask you about that.

FL: Yeah.

KM: How did that come about?

FL: Well it's really a thing. My wife Joyce was the head of....she ran the General Chemistry office.

KM: OK.

FL: And all of the sudden one fall, without anybody warning us, we found we had a blind student in General Chemistry. [laughter]

KM: Oh wow.

FL: And so we're trying to figure out what to do with this and it turned out at that time there was a graduate student in chemistry whose name was David Schleppenbach* and David's wife was blind. And so he was well aware of the technology that existed to help blind students and so forth. And so he was working in the department, the Chemistry Department actually paid for his salary and a couple other people and it was called the Visions Lab in those days. And it eventually became TAVIS, which was part of the Dean of Students and then was directly folded into the Dean of Students' Office.

KM: OK.

FL: But in those days it was in Chemistry, it was a chemistry operation and they were reading students, we had a couple of blind students eventually, and they were reading them equations and tests, like these people who would be taking math courses, and they would read them verbally these equations you know. And they had to remember them in their head because we didn't have the capability of having them in Braille.

KM: Right.

FL: And there is a special Braille called Nemeth Code and I was lucky enough to meet Abraham Nemeth during that period of time, it was in the middle 1990's.

And so what happened was one time there was a meeting in the School of Science about this issue with the blind students and my wife was at the meeting and somebody who was in a position of power said this is stupid, it's impossible; you can't convert equations into Braille. And she told me this on like a Friday and I got incensed about it and so I went home over the weekend and wrote a small program that converted fairly simple stuff into Braille. [laughter]

KM: Oh my god.

FL: And took it back. And she showed it to people and said well here it is, my husband converted this stuff into Braille. And so they said well it won't work with advanced equations and so then I got really mad because then they were telling me I didn't know what I was doing. And so I sat down and it took me, oh, maybe a semester but by the end of the semester I had the world's first computer program that converted equation graphics directly into Nemeth Code Braille. And became really well-known in the blind community for it.

25:00

KM: Wonderful. That's great.

FL: And eventually what happened was Schleppenbach and I published the original program and not the one the university...the university eventually licensed it but the original one I published on the Internet and companies who did professional Brailing saw it, that it was out there in the open, and they just you know a couple years later...being in chemistry I didn't have time to maintain this crazy program.

KM: No.

FL: So eventually commercial operations picked it up and they just basically lifted my code off the Internet. My stuff was all written in a macro anyway, it was a Word Perfect macro, wasn't even a regular computer language. And so eventually commercial companies picked it up you know and they supported it and so Purdue hasn't used my computer program since, wow, I bet they haven't used it since 2000.

KM: Huh.

FL: And yeah Sue Wilder was the person that we eventually hired to head the Visions Lab and David graduated and it moved into Dean of Students office and there it was called TAVIS. And there's still around because Sue Wilder now reports to Tony Hawkins directly and she's in charge of a whole bunch of stuff. But you know I was talking to her not to long ago and they're still there and they're still providing people except they, you know, provide for a whole lot of other people.

KM: Sure.

FL: Because the thing we have at Purdue is absolutely unique. There's nobody else has anything like it.

KM: Yeah, right. Are they still using your program though?

FL: No.

KM: Oh.

FL: They haven't used my program for years.

KM: Are they using one of the ones that became available? Is that what they're doing?

FL: Yeah.

KM: OK.

FL: That's right. Like I said I just didn't have....my job was to do chemistry not to write Braille programs.

KM: Oh sure. Right. But at least you're the one that got on the ground floor which is great.

FL: Yeah that's right. It was commonly believed that it was an impossible task until I simply showed people and said well here it is. I mean you know its working. So the second they saw that I actually had a working program well then they knew it was worth their time commercially to work on it because...

KM: Right.

FL: Because they could then sell it.

KM: It can be done.

FL: Yeah, that's right.

KM: Right.

FL: It can be done.

KM: OK. Now let's...awards and honors. You got that Faculty Development from Merck but you got an Outstanding Teacher Award from Science and also the Amoco which is now the Murphy and one of the founding fellows of the Teaching Academy or the Book of Great Teachers.

FL: Right.

KM: And a couple of others is certainly the Class of 1922, the Outstanding Innovation Helping Students Learn Award and that is the article that I read for the scientific work that you did with the Braille.

FL: Right, yeah. Yeah a lot of those from '96 on, probably the majority of those teaching awards was because of the Braille work.

KM: Uh-huh.

FL: The earlier ones of course were not because I hadn't done the Braille work.

KM: Sure.

FL: But that award and...

KM: You were the Indiana Professor of the Year, congratulations. That's very nice.

FL: Yeah, right. No, that was really nice. As a matter of fact the most exciting thing about that my name was on the scoreboard at the Ross-Ade Stadium between the 3rd and 4th quarter of the IU game.

KM: Oh.

FL: And Dr. Beering gave me the award out on the field. I mean that was a really incredible thing.

KM: Hey that's super. I probably saw that because I'm usually at all the games.

FL: Yeah, right, right.

KM: Those awards from the American Chemical Society that you've gotten, the Chemical Instrumentation Award, those are very nice.

FL: Are you there?

KM: Yeah I'm here. They just said line conditions have changed, they're reverting to a...yeah we're fine. OK. Can you hear me OK?

FL: Yeah I can hear you.

KM: The American Chemical...

FL: So you were asking me about the awards from the American Chemical Society?

KM: Yes, right. Uh-huh.

FL: Right.

KM: You got two of those.

FL: You know that's one of the things I'm really pleased about because you know lots of times people will win research awards and lots of times people, you know, will win teaching awards but I've won both sets of awards. And the Fisher Award, it was called the American Chemical Society Award in Analytical Chemistry.

KM: Right.

FL: To analytical chemists it's always called the Fisher award because that was the company for years and years supported it.

KM: OK.

FL: And that's the highest honor in the United States that any analytical chemist can get. So basically that year I was declared the top analytical chemist in, well in 1986 it was.

30:00 **KM:** Uh-huh.

FL: Then the other award is an ACS Division in Analytical Chemistry Award and that was in chemical instrumentation.

KM: OK.

FL: And both of those were really for my work in lasers. You know the Fisher award for just being an all-around analytical chemist who developed the area of laser spectroscopy for analysis and then the divisional award was for all the instrumentation I built over the years, particularly for the pico-seconds spectrometers and stuff like that.

KM: Uh-huh, OK. Good, very nice and well-deserved. One other one was the Department of Chemistry Engagement Award. Do you recall receiving that? An Engagement Award at one time?

FL: An Engagement Award. [laughter]

KM: Yeah there was a list of some of awards and things, I happened to see that. And some of the sources I also use, we do have some newspapers piled up in the Archives and I happened to come across that.

FL: Yeah.

KM: Yeah.

FL: Yeah I haven't a clue. I do remember winning the, what the devil is...I was looking at my wall and I don't have it here, I only have my two research awards here in the office.

KM: Uh-huh.

FL: I'm trying to remember the name of what it is, it's a diversity award.

KM: OK.

FL: Ken Burns and I got it one year and then there was a student who I didn't know. So I was the first faculty member to get that award and I'm trying to remember what the name of the award was. It has a name but it was for diversity.

KM: Right.

FL: And both Ken and I got it because he at the time during the time of doing the Braille work he was the associate treasurer or something like that.

KM: Uh-huh.

FL: And he was the one who was in charge of funding for handicapped issues and he is the one that made that whole program financially possible.

KM: Uh-hmm, OK. Well that's nice, that's good to know and I made a note on that. And then you're professional associations and the American Chemical Society and also you were on the National Bureau of Standards Panel for Analytical Chemistry in the mid '80s.

FL: Yeah.

KM: You recall that?

FL: Yeah.

KM: OK.

FL: As a matter of fact, it was pretty close to the end of that. Eventually Congress in their great wisdom, which they always seem to have, decided that there were too many consultants in the federal government.

KM: [laughter]

FL: And even though this was an advisory committee and had absolutely nothing to do with consulting, the only way they could give us enough money to actually pay for the hotel room and meals in Washington was to declare us consultants.

KM: Oh.

FL: And then the federal rules allowed them to actually pay our hotel bill. [laughter]

KM: Interesting.

FL: So the committee disappeared shortly, easily within five years of when I was on the committee. But that was a great committee. I mean that was a committee of people who set the tone for what the National Science Foundation was going to support in chemistry for the next couple years. So it was a lot of real heavy hitters, a lot of people in the National Academy were on it and it was an onerous but still one of the most enjoyable committee assignments at the national level I've ever had.

KM: Yeah.

FL: It was just all really absolutely first-rate people who were on it, it was just really enjoyable.

KM: It was a very good experience for you.

FL: Yes, that's right.

KM: Right. Then you were also a member of the Optical Society of America and the Society for Applied Spectroscopy as well.

FL: Yeah, yeah.

KM: OK.

FL: The Society for Applied Spectroscopy I was just elected a fellow of that in October.

KM: OK.

FL: And the interesting thing is that, this is really incredible in away, that at the same meeting my thesis advisor, David Hercules, was inducted as a fellow, my first Ph.D., Joel Harris, was inducted as a fellow, and my second Ph.D., Mary Wirth who is now the Brooks Fortune Chair of Chemistry at Purdue, she was inducted. And so there were four of us from the same academic family who were inducted at the same session.

KM: Oh.

FL: And I checked that the people who ran the program didn't even know that any of us worked for anybody else. They were completely clueless about that that had nothing to do with it at all.

KM: Oh, very good. Congratulations, that's nice.

FL: Thanks.

KM: How about family? Do you have children and did any of them come to Purdue?

FL: No, no.

KM: OK.

FL: I have two children from a former marriage.

KM: Uh-huh.

FL: And my wife Joyce has one from a former marriage and the two oldest, Brad and Jennifer, Jennifer is my stepdaughter and Brad's my son. They both went to IU.

KM: OK.

35:00

FL: And at the time they went to college I was teaching general chemistry and they said that they were never, ever come to Purdue while I was teaching general chemistry. [laughter]

KM: They didn't want to take a chance.

FL: I had a reputation as a real cast master. [laughter] So anyway they went to IU and my son majored in history and my stepdaughter majored in English and social relations as she called it. And then the youngest daughter was eight years behind those two and she got a degree in landscape architecture at Ball State.

KM: OK.

FL: And you know that's why she went to Ball State.

KM: Sure.

FL: And again she was happy to get out of town. When you're on the faculty it's amazing how, particularly like I said you have a high profile position where you're teaching thousands of students, your children really want to be at some other school.

KM: [laughter] OK. Now the retirement. I know you're a fellow at a company in which you're at the office now. Did you start to take that on after you retired?

FL: I actually started consulting company from pretty close to their day one.

KM: OK.

FL: And, well I was trying to figure out exactly when it was, I almost have to go back to financial records to see when I started cashing checks from the company.

KM: Sure.

FL: But it was quite some time, it was at least two years before I retired.

KM: Uh-huh.

FL: And they just paid me, it was basically piece work. You know, we need an algorithm to do this, we need you to write some code to do that and my wife Joyce had backed off 80% as part of, you know, the partial early retirement thing. And she didn't work on Fridays and I had rearranged my teaching schedule so I always taught on Tuesdays and Thursdays and I was always grateful to the Chemistry Department to allow me to do that. And then I spent Fridays down here in Indianapolis with the company, consulting.

KM: Uh-huh.

FL: And then we have an awful lot of friends down here, most of them former graduate students that we knew at Purdue. And they have children and at that time we didn't have any grandchildren and they have children and we like being around young people. And so we had a house built in Zionsville and we would actually live down here Friday, Saturday, and Sunday and live in our house in Lafayette, you know, for the rest of the week.

KM: Sure.

FL: And so we owned two homes for two years, which was a real pain in the behind, but it eventually worked out. And so then when we were retired we were really lucky because we retired, you know, in the beginning of the May of 2008 and we sold our house two weeks later.

KM: Wow. You lucked out.

FL: Yeah, that's' right.

KM: Sure.

FL: With the way the housing market is we certainly felt blessed.

KM: Right. Whereabouts were you living Dr. Lytle?

FL: We live in Zionsville.

KM: No I mean when you lived in Lafayette.

FL: Oh, when we lived in Lafayette.

KM: Uh-huh.

FL: OK. We lived out past the airport, sort of off on Newman Road, on the way to Fort Ouiatenon.

KM: OK. Sure, OK. Alright I understand. Right. I live Northwestern, right across from the Mollenkopf Athletic Center, between Bexley and Northridge.

FL: Oh, OK, OK. Yeah.

KM: So it's very close to Ross-Ade. [laughter]

FL: Yeah, right. You were close to the action. We always felt lucky with both of us interacting with so many students we felt really lucky that the little subdivision nobody knew about and we could hide. [laughter]

KM: You had your own little place right?

FL: Right.

KM: OK. Do you have a Purdue tradition that you'd like to share with us?

FL: No.

KM: OK.

FL: I don't think so.

KM: OK.

FL: You know it's really funny because people will say to me how come you don't have Boilermaker plates or something and I said well I didn't go to Purdue, you know I worked at Purdue.

KM: Right. Gotcha.

FL: But I enjoyed my job, my job was fantastic.

KM: Right.

FL: I just can't think of a job that I would have liked more and over the years it's just hard to tell you how many different schools, companies, and different people tried to hire me away from Purdue and you know eventually...a couple times I was

really serious because they wanted me to go to Lawrence Livermore and work in the laser program and one time Duke University tried to hire me out and Duke is so pretty, it's such a beautiful school. And every time what kept me at Purdue was the people that...

KM: Right.

FL: You know, particularly the analytical chemistry group that's so strong. I mean we were ranked number one in the nation all the way to somewhere in the '90s when we dropped down to number two.

KM: Right.

40:00

FL: And the other thing was that I always felt like I had terrific support at Purdue. And that was from professional support staff to people who worked in shops and so forth.

KM: Sure.

FL: All the way up to the president, you know. I always felt that I had a dean and a provost and a president and you know department head who really cared about what was going on and really understood, you know, what first rate was. And tried to really make the operations first rate.

KM: Right.

FL: So anyway I always felt I always had this tremendous support from people and people who I really liked and admired and got along with and people who laughed and worked hard but they played hard too and had a good time.

KM: Right, sounds very good. Do you have any outstanding event that you would like to share with us? I think that some of those comments certainly fall within that parameter.

FL: What kind of an event?

KM: An outstanding event. You've had a lot probably but I think what you just said a lot of the things all worked together. You just really enjoyed every day.

FL: That's right, yeah.

KM: And that's how it's standing.

FL: Yeah I came from the East Coast and I really came here with great trepidation because I knew nothing about the Midwest and you know my comment after a number of years was that you know the day to day quality of life in West Lafayette was as good as any place I had ever seen. And since I traveled so much I had no desire actually to live in any other place because you know some other place like San Diego might be maybe a little more exciting for warm salt water and stuff like that but I could go there anytime I wanted to go because I travel all the time.

KM: There you go.

FL: And I thought West Lafayette was a terrific place to raise a family and just to come home to.

KM: Right.

FL: You know when you're tired of traveling you come back home and West Lafayette was a terrific place.

KM: Right and you're glad to be back. We're getting close to closing so I'm going to leave it to you if you have any comments or something that I didn't ask or if you want to make any further comments on something that we talked about.

FL: No, I don't think so.

KM: OK. I'm going log off and then I'm going to make a comment.

End of Interview

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*Proper names may be spelled incorrectly