

Celebration of inorganic lives
Interview with Stanley Kirschner

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1. Brief biographical sketch

1.1. Date and place of birth

December 17, 1927; Brooklyn, New York, USA.

1.2. Current position

Professor of Chemistry Emeritus, Wayne State University, Detroit, Michigan 48202, USA. Tel.: +1-313-5772571; Fax: +1-313-5771377.

1.3. Education

Stuyvesant High School, New York, NY
B.S., Brooklyn College, Brooklyn, NY, 1950
A.M., Harvard University, Cambridge, MA, 1952
Ph.D., University of Illinois, Urbana, IL, 1954.

1.4. Positions

Research Chemist, Monsanto Chemical Co., Everett, MA, 1951
Assistant Professor, Wayne State University, Detroit, MI, 1954–57
Associate Professor, Wayne State University, Detroit, MI, 1957–60
Professor, Wayne State University, Detroit, MI, 1960–92
Professor Emeritus, Wayne State University, Detroit, MI, 1992.

1.5. Visiting Professorships

University College, London, England, 1963–64
University of São Paulo, Brazil, 1969
Centrul de Chimie, Timisoara, Romania, 1973
University of Florence, Italy, 1976
Tohoku University, Sendai, Japan, 1978
Institutul de Chimie, Cluj-Napoca, Romania, 1978
Technical University of Lisbon, Portugal, 1984
University of Porto, Porto, Portugal, 1984.

1.6. Honors and awards

Fulbright Scholar Award, 1963–64
NSF Senior Postdoctoral Fellowship, 1963–64
Distinguished Alumnus Awards, Brooklyn College, 1964
Visiting Scholar Award, Ford Foundation, 1969
Faculty Research Award, WSU Sigma Xi, 1974
Visiting Professorship Award, Japan Society for the Promotion of Science, 1978

Heyrovsky Medal, Czechoslovak Academy of Science, 1978
President's Award for Excellence in Teaching, WSU, 1979
Catalyst Award for Teaching Excellence, Chemical Manufacturers Association, 1984
Fulbright Fellow, Luso-American Cultural Commission, Lisbon
Gulbenkian Fellowship Award, Gulbenkian Foundation, Lisbon
Alumni Association Faculty Service Award, WSU, 1986
Henry Hill Award, American Chemical Society, 1995
Engineering Society of Detroit Gold Award, 1995
Brazilian Academy of Sciences
Fellow, American Association for the Advancement of Science
Honorary Fellow, Indian Chemical Society
Honorary Member, Chilean Chemical Society

1.7. Publications

ca. 100 publications on chemistry and chemical education in scientific journals and editor of three books on inorganic and coordination chemistry.

2. Interview of Professor Stanley Kirschner—Interviewer, The Editor

Detroit, November 14, 1996

We find ourselves in Stan's office looking at the guest book which he initiated in 1965 and Anton Vlcek is the first signature. It contains the names of some of the most well-known chemists, inorganic chemists primarily, I guess, throughout the world who have come through Stanley's office, including the interviewer, who, I see, was here on October 27, 1969 initially, again on September 1, 1971, and also today, November 14, 1996!

ABPL: Stan, go back in time to when you first realized that chemistry existed; how did it become part of your life?

SK: I became hooked on chemistry through my father who was a pharmacist. He brought home a small chemistry set when I was 11 years old and did a demonstration for me where he poured together two clear liquids which turned bright red, and I was hooked at that moment on chemistry! I knew that was the field I wanted to go into. That facilitated my life a great deal because I then went to a science high school, Stuyvesant High School in Manhattan, New York City. I studied science there and then went on to Brooklyn College in Brooklyn, New York (part of New York City) and studied chemistry there. I had wonderful teachers both in high school and in college. I met my future wife, Esther, in college and we were married when we graduated. We went to the Boston area where I studied for a M.Sc. degree at Harvard University, and my wife studied for a M.S.W. degree at Simmons College School of Social Work. There I met Professors Eugene Rochow and Leonard Nash. They were really the only people there at that time who were

teaching in the field of inorganic chemistry; physical and organic were the main fortes of that institution at that time. Since, I liked inorganic (especially coordination chemistry) very much, I talked with both Rochow and Nash about this at some length. They recommended that, if I wanted to go into coordination chemistry, I should go the University of Illinois and work with Professor John C. Bailar, Jr., which I did. It was a wonderful piece of advice.

ABPL: Can you tell us something about those Bailar years and things you remember about interacting and being a student of Bailar?

SK: John Bailar was a most unusual person. He was very empathetic, and students could talk to him frankly about anything, not just chemistry. He would give them help and advice in any area. I remember some anecdotes involving Bailar, who was also a philosopher. He once told us this story about the effect of personality on chemical reactions. It turns out that Bailar had a student who wanted to make a certain compound that a previous student (who received the Ph.D. degree) had made, because he wanted to continue studies on that compound. He gave the student in question a copy of the dissertation of the previous student and told him to set about making some of that compound. The student came back a few days later and said he was unable to make the compound. So they telephoned the previous student, who had made the compound, and who was now working in industry. They talked over the telephone with him and he said the compound was made according to the directions in the dissertation. 'I did not leave anything out; I added A to B, and so forth and then put the whole mixture on the steam bath and I let it rip. That was it, the compound came right out.' Bailar realized that the student who originally made the compound was a very extroverted person, quite outgoing, whereas the new student was the opposite, quite introverted. So he said to the new student, 'I would like to see you make this compound or try to make it.' The student followed the instructions exactly and then put the mixture on the steam bath, but he cracked open the steam valve only a little bit, so that only a very small amount of steam came up. Bailar, keeping in mind the outgoing nature of the previous student, went over to the steam bath and opened all the valves wide, so the whole lab was like a Turkish bath, and the compound dropped right out. 'The difference between an extroverted and introverted personality in chemistry is 5°C.', he said.

ABPL: What else can you remember from that time period?

SK: Well these Bailar stories are legendary among his students. There was another story of a student who had made a complex compound when he first began working with Bailar, and he made a large quantity, probably several hundred grams, which he studied for the following four years. Near the end of his dissertation work, he had only one more experiment to do and he had run out of the compound, so he set about to make some more of it, which was not supposed to be a difficult compound to make. It was a chromium compound and he would have had enough if he just made a few grams. He was unable to make the few grams. He tried everything he could think of. He must have left out something from his own instructions, which he was preparing to put into his Ph.D. dissertation. He tried to solve this problem for six more months, but was unable to prepare the

compound, the compound that he himself had made so long ago. He was quite desperate now, when he remembered what he had used as the starting material, ‘Mallinkrodt’ chromium chloride hexahydrate. The bottle he was now using was ‘Baker’ chromium chloride hexahydrate, but it had the same formula, $\text{CrCl}_3 \cdot 6\text{H}_2\text{O}$. He said, ‘Well maybe it makes a difference which company’s chromium chloride I used.’ You could see how he was scraping the bottom of the barrel to find the cause of his problem, because the formula was the same on both labels. He had the old, empty bottle (Mallinkrodt) and the new bottle from Baker, so he went to the storeroom. The storeroom clerk was not a friendly person. In fact, he was the opposite to a friendly person. The student asked if he could have a pound of Mallinkrodt chromium chloride. Well, they were now distributing Baker chromium chloride so the clerk brought him a bottle of the Baker product. The student said, ‘No, I need Mallinkrodt, not Baker.’ The man looked at him as though he were crazy. He said ‘this is what we have now. I don’t know if we have (somewhere in the back) an old bottle of Mallinkrodt.’ I wouldn’t be surprised, I thought to myself, if a bottle exchanged hands there, a bottle of Scotch I mean. In any case he was able (by being very kind to this clerk) to get him to look in the back. They would not let students in the back of the storeroom in those days. The clerk found a bottle of Mallinkrodt chromium chloride. The student went back to the lab happy with his bottle and tried to prepare the compound according to his own instructions, and it worked perfectly, no problem. It turns out that these two bottles had chromium chloride $\cdot 6\text{H}_2\text{O}$ as hydrate isomers. One had no water inside the coordination sphere and one had 1 water inside the coordination sphere, and therein was the difference. This was probably due to different temperatures of crystallization used by the two companies during the preparation of chromium chloride $\cdot 6\text{H}_2\text{O}$.

It was John Bailar who introduced his students to conferences. He once packed his car full of his graduate students and drove them from Urbana, Illinois to Indiana University at Bloomington, Indiana. We all went to a conference on coordination chemistry, where I met Professor Harry Irving for the first time. It was not one of the series of ICCS meetings but it was a very interesting conference in any case, and we were all taken with this. Many of Bailar’s students who went to such conferences, including me, continued to go to national and international chemistry conferences after that.

ABPL: Can you remember something about the conditions in the labs in Bailar’s day? Obviously he did not have the sophisticated equipment that students take for granted now. What kind of life did you lead in the laboratory doing research in those days? Who were your colleagues?

SK: I spent 1952–1954 in the Bailar labs. Daryle Busch was a classmate as was Bill Cooley, who did research at the Proctor and Gamble Corporation. Among other things, he worked on the stannous fluoride additive to toothpaste for preventing cavities in teeth. Bob Rebertus went to industry also. He worked for the 3M Corporation in St. Paul, Minnesota. The academic research laboratories then were very different from the labs now. We were wet chemists then. Almost everything we did was by wet chemical methods. We did have infrared instruments, and NMR was just arriving on the scene. It was being developed by the people at

Harvard in 1951. Its use had just started at that time so we were doing very little NMR. There were no EPR instruments or computers that I can remember now.

ABPL: Who influenced you during those formative years in Illinois?

SK: The two most important people, besides Bailar, were Lou Audrieth and Therald Moeller. They exerted very strong influences and were wonderful inorganic chemists. Moeller wrote the textbook that we used as students in inorganic chemistry at that time. It was one of the first of the modern inorganic chemistry textbooks. He wrote it in the early 1950s and it was a fine book. We all appreciated being able to use it, and I used it later myself in my teaching. I received the Ph.D. degree in 1954, as did Daryle Busch, Bill Cooley and Bob Rebertus, and some of my other friends in the lab. These were people who worked for Bailar also. I went right from there to my first position, which was Assistant Professor of Chemistry at Wayne University. It was called Wayne University in those days, and it did not become a state university until 2 years after I arrived.

ABPL: What kind of research program did you initiate at Wayne State and why?

SK: I started off in several areas. One was the stereochemistry of coordination compounds. I was always interested in the phenomenon of optical activity. That led ultimately to our studies on optical rotatory dispersion, circular dichroism, and the Pfeiffer effect. We worked for a long time on this and did a lot on the Pfeiffer effect, finally coming up with what we think is a definitive mechanism for the effect, a hydrogen bonding mechanism, but I won't go into that here. We also worked on separation procedures for some time, that is separation of racemic mixtures of optically active isomers, especially by preferential adsorption on finely divided solid surfaces. For example, finely ground *dextro*-quartz was one of the chromatographic adsorbants we used quite a lot, although we were not the discoverers of that. We used other substances as well in columns for separation. A third area was in the anticancer activity of metal complexes. We also started that in the early years. The idea was that one ought to use as ligands, compounds that have antitumour activity in their own right. Many of them have sulfur donor atoms, and so we chose platinum as the metal to make a complex of an antitumour agent, because sulfur is a very good coordinating atom to platinum. We made several platinum complexes of antitumour agents, which were active against tumors of various kinds. But not so active as cisplatin, which was discovered by Barnett Rosenberg to have very strong antitumour activity against certain tumors, particularly genito-urinary system tumors.

ABPL: What can you think of, in particular research areas, that you are particularly proud of?

SK: There is one I recall very clearly, which was the proof that the tris(acetylacetonato) complex of silicon (IV) is a 6-coordinate ion, not 4-coordinate. We were able to do that by resolving the optically active complex into its two enantiomers. That work was carried out by one of my research students, Sanat Dhar, who now teaches at De Paul University in Chicago. By proving that this complex is optically active, we also proved its octahedral structure, because the tetrahedral complex of silicon (IV) with acetylacetonate would not be optically active.

ABPL: One of your well known activities, of course, is your involvement with the International Conferences on Coordination Chemistry (ICCC), and you were the Permanent Secretary for a very long time. Could you tell us how you became involved with that?

SK: Yes. I mentioned that John Bailar was instrumental in getting me and many other of his students interested in conferences. He told me one day in a conversation (this would be about 1957 or 1958) that he had attended the IV ICCC meeting in Rome in 1957, and felt that it was time for the ICCC to come to the USA. So he said he was going to ask various people (probably on the eastern seaboard because this is nearest to Europe and travel fares at that time were a big problem), whether they would be willing to host it. Well, I thought to myself, I would be willing to host it at Wayne State University in 1961. I went to the Chairman of the Chemistry Department and asked if it would be a thing that the Department would support. He was very enthusiastic, so then I went to the Dean of the College and the President of the University and asked if they would support it, with the knowledge of the Chairman of course. They were all very enthusiastic about my tendering an invitation to the ICCC to come to Detroit in 1961. Then I called the Mayor of the City of Detroit and the Governor of the State of Michigan, and they sent letters of invitation. They thought it was a wonderful idea. I made up a small book of all these letters of invitation to hold the ICCC in Detroit in 1961, which I sent to Bailar. He was very impressed, and I also think he was not getting a great deal of interest in holding an ICCC at an institution along the eastern seaboard. So he said, 'Well, let us both go to the ICCC meeting in London in 1959, that was the fifth ICCC, and make a pitch.' At that time, they did not have ICCCs planned many years in advance.

We went to London together. Harry Emeleus was the organizer of that meeting and he just called a few people together to decide where the next ICCC should be held. There was no executive committee or planning committee or anything like that at that time. There were a few people from three or four countries, plus Professor Emeleus. Bailar and I were there because we said that we had an invitation to present. We presented the invitation with the book of letters to Emeleus. The others there had no invitations to present from their countries, so they agreed to come to the USA (Detroit) in 1961. I then applied for grant money to the U.S. Air Force Office of Scientific Research, because I wanted money to bring over many people from several foreign countries. I do not remember the exact number now, maybe 60 people or so. They said they would give me money for putting on the conference, but not money for buying air tickets. Instead, they agreed to fly these people to the USA by MATS. MATS was the U.S. Military Air Transport Service. In order to fly these foreigners by MATS, they had to commission them in the U.S. Air Force. I remember that Professor Frank Dwyer (Australia) was commissioned a colonel in the U.S. Air Force, in order to be flown from Australia to Detroit, which delighted him no end. All the others had some kind of commission and were flown to the USA by MATS. The seats on MATS airplanes faced backwards, not toward the front of the plane—I just happened to remember that point. The conference had to be limited to 400 persons, because our

new conference centre had meeting rooms that seated a maximum total of 400 at that time-and I was told that the VI ICCC was a big success. Many people told me that they enjoyed it very much.

I became interested in this series of conferences, but I was not the secretary of the ICCC or anything like that. I organized the ICCC in Detroit with the help of many Americans. I remember Bailar, Cotton, Basolo, and lots of other renowned American scientists were on that organizing committee at that time. Also, I received a sizable grant from the Ford Motor Co. They agreed to do all the printing for the conference of the programs and things of that kind. In addition, I arranged for the full text of all of the papers to be published in a book, published by the Macmillan Co. The books arrived at the conference by car the day before the conference began.

There are many other stories to tell about the VI ICCC (*vide infra*). Instead of calling together just a few of the senior people in coordination chemistry to discuss the location of the next ICCC, Professor Bailar and I attempted to assemble what amounted to the beginnings of an Informal Organizing Committee, namely, a committee consisting of at least one senior representative from every nation in attendance at this Detroit ICCC. The International Union of Pure and Applied Chemistry (IUPAC), by now a usual co-sponsor of the ICCC meetings, requested that the ICCC switch its meetings to even-numbered years, so as to avoid possible conflicts with the IUPAC Congresses, which are held in odd-numbered years. The informal organizing committee agreed, and, at this point, Professor Lars Gunnar Sillen (Sweden) proposed Stockholm as the venue for the VII ICCC (1962), which was also accepted by the committee. Professor Sillen called together a similar group of people to decide where the next meeting should be held and it was decided to accept the invitation of Professor V. Gutmann for Vienna for the 1964 ICCC. Then Gutmann did the same, and his committee decided that the next meeting would be held in 1966 in Zurich and St. Moritz (Professor G. Schwarzenbach). Gerold Schwarzenbach also put together a similar committee to decide where the meeting should be held in 1968. At that meeting, the Japanese representative made a very strong motion to hold an ICCC meeting in Japan. Schwarzenbach began asking some questions about past meetings. Where was No. III held; where was No. II held? Who were the speakers in Nos. III, IV and V? Nobody knew all the answers to those questions. So Schwarzenbach said, 'There needs to be a Permanent Secretary for the ICCC, so we can keep track of what has happened in the past, and we can have all of these questions answered, in order to help us to decide where to go for future meetings'. Then he turned to me, and out of the clear blue he said 'Stanley Kirschner, you be the Permanent Secretary, okay?' And I said, 'Okay!' and that was how I became Permanent Secretary of the ICCC, a position I held for 23 years. Ultimately, it was decided to hold the next ICCC (Number X) in Tokyo and Nikko, Japan, in 1967, under the principle that it would be acceptable to hold ICCC meetings in 'distant' locations in odd-numbered years, because relatively few chemists would be able to attend. It was felt that this would not represent a serious conflict, even if these meetings overlapped with IUPAC Congresses.

Another anecdote of interest in connection with the ICCC meeting held in Detroit (No. VI) was with regard to the matter of inviting scientists from the Soviet Union to attend an ICCC meeting in the USA. It was the time of the Cold War. Even so, two Soviet scientists (V.I. Spitsyn from Moscow and A.A. Grinberg from Leningrad) attended the V ICCC in London in 1959. I knew it would be difficult to invite Soviet scientists to an ICCC meeting in Detroit, so, as soon as I returned from England (in 1959), where it was approved to hold the VI ICCC in Detroit in 1961, I called the U.S. State Department and told them we would like to invite certain Russians, such as K.B. Yatsimirskii. He was one that we wanted to invite because he was an outstanding, well-known, and well-respected scientist in the field of coordination chemistry. The representative from the State Department enlightened me as to how one invites Soviet scientists to a conference in the USA. You cannot just invite Yatsimirskii to come, the way you can today. You must send a letter to the Academy of Sciences of the USSR and you must list the Soviet scientists that you would like to invite. We had a list of about 12 Soviet scientists whom we wanted to invite, so I sent that letter. That would bring us into early 1960. I received a response from the Soviet Academy of Sciences 6 months later.

They said that they would send four Soviet scientists to this meeting. One of them was Yatsimirskii, but the other three were people we had never heard of. There was some speculation as to whether they were chemists or not, because none of us knew them, but we all knew Yatsimirskii and we were glad that he would be able to come. Then, more time passed and I became friendly with the man at the U.S. State Department who was looking after me in this matter. About 10 days before the VIth ICCC was to begin (in 1961), he advised me that there is no way, in his opinion, that Yatsimirskii is going to be able to get permission to attend. Yatsimirskii has not yet applied for a U.S. visa, and the Soviets know it takes us 20 days to prepare a U.S. visa; and it is only about 10 days until your conference begins. No way can we get a visa for him in time. 'Oh,' I said 'Thank you very much, but now I have to make some telephone calls.' So I called John Bailar and I told him this whole story. I said, 'I don't see any way to get Yatsimirskii his visa unless you call the President of the United States'. Well, John Bailar, was a wonderful person. He was a Republican and the President was John F. Kennedy (a Democrat) and Bailar said, 'You know my politics Stanley; you call President Kennedy'. So I decided that the first person I would call would be the Science Advisor to the Secretary of State. That man's name was Walt Whitman (the same name as the poet). I called Mr. Whitman and his secretary answered, a very pleasant lady. She said that Mr. Whitman was out of the country now. Would I be willing to talk to his assistant? Yes, I said that I would be willing to talk to his assistant. I told the assistant everything that happened. I explained the whole story to him (it took 20 minutes to do this) and he said he would inform the Secretary of State about this and would do what he could to help. The Secretary of State at that time was Dean Rusk. I decided not to wait for him to inform the Secretary of State, so I called Dean Rusk directly. His secretary was also a very nice lady and she also said that he is out of the country now. Would I be willing to talk to his assistant (who was a different person from the one I had just spoken to)? So I

talked to his assistant (20 minutes) and explained everything to him. He said he would try to help. Then I decided I would call the President's Science Advisor without waiting. The Science Advisor to John F. Kennedy was a man named Jerome Wiesner, who later became President of MIT (Massachusetts Institute of Technology). I called Wiesner on the phone and his very pleasant secretary said that he was out of the country. I began to wonder whether anybody was minding the store. She asked if I would be willing to speak to his assistant. I spoke to his assistant for another 20 minutes and he said he would do what he could to help. Then I said to myself that I am going to call President Kennedy without waiting. So I dialed the operator, who asked if I knew the President's telephone number. I said, "No, I don't know the telephone number." She said I had to speak to the Information Operator first, which I did, and then I was able to obtain the President's telephone number. The White House switchboard answered and I told her that this was person-to-person call for President Kennedy. She put me through to President Kennedy's office and the President's secretary answered. Her name was Evelyn Lincoln. 'Well, the President is in conference at the moment'. However, she said it in such a manner that, if he had not been in conference, she would have put me right through. She was wonderful. I wanted to hire her away from Kennedy as fast as possible. But I didn't do it. 'Would you be willing to speak to his assistant?' she said. 'Oh yes, I would be willing to speak to his assistant,' I replied. The assistant was very quiet, as I explained everything to him. It took me another 20 minutes and the assistant proved to be an amazing person. After I finished, he said, 'I wrote down every word you said in shorthand. I shall type it up and have it on the President's desk in 1 hour. Goodbye.' End of story, just like that! One hour and 30 minutes later, I received a telephone call from the White House telling me that Yatsimirskii has his visa. So I was very happy about this.

About four days before the start of the Conference, I received a telephone call from my friend at the State Department. He told me not to expect any Soviets to come to the ICCC meeting. I said, 'What do you mean that I should not expect any Soviets, we have a letter from them saying they are coming, and I have an abstract from Yatsimirskii, but not from the others? The abstract was already printed in the Book of Abstracts and I have a full paper from Yatsimirski that is also printed in the book of full papers. We have everything arranged, why should I not expect at least Yatsimirskii?'

'Well,' he said, 'there is some organization, maybe you have heard of it, the International Union of Pure and Applied Chemistry...something like that'. 'Oh yes', I have heard of that,' I said. 'Well', he said, 'they had a meeting in Montreal, you may remember, about a week or two ago'. 'Yes, I remember that they were meeting there, they were to have a Congress there, that's true.' 'Well,' he said, 'a Soviet inorganic chemist defected to the West there, in Montreal. We believe they now have to reevaluate all the approvals they gave or are about to give for all the Soviet chemists to leave the Soviet Union. That will take them some time.' He also said, 'We gave him his U.S. visa. I do not know how you did it, but we think he was not able to get an exit visa to leave the Soviet Union because of the fact that they are reinvestigating all these exit permits for scientists, especially chemists.' And

in the end, he didn't come. Professor Yatsimirskii sent me a letter some weeks later saying that he was sorry that he was unable to attend the ICCC.

In those early years multiple simultaneous sessions at scientific conferences were also introduced. At our meeting in Detroit we had four simultaneous sessions, each centered on a specific topic, which some people liked and some people did not, but it allowed much more flexibility for the presentation of a larger number of oral papers. We did not have posters then; posters came in many years later. The poster sessions solved the very difficult problem of how to allow many people, especially the younger scientists, to present their work.

ABPL: Could you tell us about some of the people whom you have come across in your career who have made particular memories for you, for example Madame Boguslawa Jezowska-Trzebiatowska, whom we in the inorganic fraternity knew very well. I am sure you have some interesting stories to tell about her.

SK: Yes I do. Madame Boguslawa Jezowska-Trzebiatowska was a very interesting and responsible person who influenced many people and activities in inorganic chemistry to a great extent in Poland. Students both respected and feared her. Madame Jezowska-Trzebiatowska was married to the President of the Polish Academy of Sciences at that time. She invited the ICCC conference to come to Poland in 1970, which broke a formidable barrier and built a strong bridge between eastern and western countries. She was the first person from behind what was then known as the 'Iron Curtain' to invite the ICCC to hold a conference there. It was to be held for the first couple of days in Krakow, then to be moved to a resort area in Zakopane, which had lots of hotel space during the week. During the weekend in Krakow, a very interesting incident occurred. It turns out that there was a flag exhibit that was located between the hotel and the Plenary Lecture Hall, and I noticed that the flag of my own country (the USA) was there, along with the flags of Israel, Great Britain and of all the other countries in attendance. There must have been about 40 flags (I think that there were 40 countries in attendance). I walked to the Plenary Lecture Hall and I met the Israeli delegate and asked him if he had seen his flag in the flag exhibit. He said that he had not, but that he hadn't really looked for it because he did not have time to look today, but he would look tomorrow morning. He saw me later in the morning of the next day and he said, 'I thought you said that my flag was in the flag exhibit.' 'Yes, I saw it,' I said. 'Well, I didn't see it,' he said. 'I just looked for it and I couldn't find it.' So we went together to look and sure enough his flag was not there. So we went upstairs to the flag exhibit itself and we found a flagpole on the floor, identical to the other flagpoles, but it had a piece of blue and white cloth attached to it. It looked to me as though someone had taken down the Israeli flag and removed the flag. So we informed Madame Jezowska-Trzebiatowska of this incident and she and her associate, Professor Joseph Ziolkowski summoned the Chief of the Secret Police. Normally, behind the Iron Curtain, no one summons the Chief of the Secret Police! Anyway, he came to see Madame Jezowska-Trzebiatowska at her summons because she was so highly respected. And she said: 'What kind of secret police do you run here in Krakow? What ministry in Warsaw must I inform about the quality of the Secret Police in Krakow? It can't even protect a flag exhibit?' He said to her, 'Calm

down, we will take care of this.’ What happened was that the American flag, the British flag, and the Israeli flag were all taken down and stolen. ‘Some hooligans did it,’ the Chief said. ‘The hooligans took those flags and used them to make shirts. I will have the police tailor work all night, this night, so that tomorrow morning those flags will be there—all flags in place, well guarded—none will be taken, you can rest assured of that. And when we move to Zakopane, we will have the flag exhibit there and nothing will happen to the flags there.’ And he did what he said he would do. The flags were up the next day, obviously home-made. He informed Madame Jezowska-Trzebiatowska that it was a particularly difficult situation for the police tailor, especially with the American flag, because he almost went blind trying sew all those tiny little stars in the blue field of the American flag. The flag exhibit stayed up Krakow with no trouble and went to Zakopane, and there was no trouble with the flag exhibit thereafter. This is only one of many stores about Madame Jezowska-Trzebiatowska in action.

She represented Poland with a strong hand at the ICCC, and she gave much to inorganic chemistry, in general, and to coordination chemistry and the ICCC, in particular. I miss her presence very much.

ABPL: Can you name any other people who were active in the early years of the ICCC?

SK: Yes, there are many and unfortunately, I can’t name them all here. I would like to say a word about an adventure that Ronald Nyholm, later Sir Ronald Nyholm, had at the Polish meeting, one of the best remembered of all the ICCC meetings. Nyholm was the first Plenary Lecturer. Madame Jezowska-Trzebiatowska was very unhappy with past ICCCs with regard to slide projection equipment. She said that at the ICCC Plenary Lectures, where everybody was present, you could have several hundred to a thousand people, and one couldn’t read the slides, because the projector was very far from the screen, in order to have a large image. However, although the image was large, it was also very faint. She was determined not to have that problem at her ICCC. So the lamp in the projector that was used was a carbon arc lamp, which was very bright. It was far back in the room, and projected a large image and the image was very bright indeed. However, the lamp was very hot, and when Nyholm called for his first slide, it appeared on the screen; it was brilliant, large, and easy to read, but he noticed that, when he started to talk about it, a brown line appeared at the bottom of the slide and it began to creep up. As that brown line crept up, it destroyed what was below it, all the way to the very top. The slide just disappeared. He asked for the second slide and the same thing happened. So he gave one of the fastest lectures of his life, because he had to talk about each slide quickly before it burned up, and he did! I think that the projectionist underestimated both the lamp temperature and the amount of time that speakers would keep a slide on the screen.

I would also like to tell you something about Professor Lars Gunnar Sillen of Stockholm, Sweden. This was where the 1962 ICCC was held (number VII). Sillen accepted quite a large number of papers, especially from abroad. So many people came to the Swedish meeting, that the average length of time allowed for each paper had to be reduced to 7 minutes. He realized that this could be a problem, and

that people would have to stick to the timetable very carefully. Professor Sillen instructed the moderators and session chairmen to make sure to follow this timetable very carefully, (and this included the chairman of the opening session, at which Sillen was now speaking). For example, he said, 'I have 7 minutes to give you this discussion about how to handle your time.' He was telling this to the entire audience, and there must have been about seven or eight hundred people there. He said, 'You notice that in front of each speaker, available for control by the chairman, is a set of three lamps, red, yellow, and green. As long as the speaker is within the first 6 min, the lamp is green. If a speaker wants to have discussion, he or she must stop as soon as the lamp turns yellow, because that signifies that he or she has 1 minute left. The speaker must stop then, or there will be no discussion. If the speaker continues 1 minute more,... as you see my own lamp has now turned yellow and I shall therefore have no discussion here, but I want to continue for 1 minute more to emphasize how we are running this thing so it will be quite clear to everyone,' he said. 'If you go 1 minute more, then the red light appears and you must stop. If you don't stop at the end of the 7th min, then'... and just at this moment his lamp turned red... 'a two meter Swede will come from behind the wings and carry the speaker off.' And indeed a two-meter Swede came just then from behind the wings and carried Sillen off. He was horizontal and still talking as he was being carried out of the auditorium. That is a true story! It brought down the house and emphasized his point clearly. What a wonderful person he was.

ABPL: Stanley, you have been extensively involved with the ACS, in particular with governance, education committees and conferences. Can you tell us something about that aspect of your life?

SK: Yes, I was very much involved with the ACS for most of my professional life. I have served as Councillor of the Detroit Section of the ACS for many years, some 25 or 30 years. I have held offices in the areas of inorganic chemistry and of chemical education, and rose through the ranks to be elected to membership on the Board of Directors of ACS, on which I served for 5 years. I was Secretary-Treasurer of the Division of Inorganic Chemistry and also did a lot of work with the Division of Chemical Education, and I ultimately became Chairman of the Division of Chemical Education. During my term as Chairman of the Society Committee on Chemical Education (as it was called then), which is a different group from the Division of Chemical Education, the ACS undertook many important activities in the field of Chemical Education, among them participation in the International Chemistry Olympiad, the publication of 'Chem Matters'; a chemistry publication for secondary school students, and the publication of 'Wonder Science', a science publication for elementary school students. In addition, I have been active in professional and international activities of the ACS.

ABPL: In your long career, many people have passed through your office (and signed your guest book) and through your lecture halls. Can you remember people whose lives you have affected in any particular way that come to mind?

SK: Well, yes, I can give you an example. I learned about this from a colleague. We were at a social event and the colleague came over to me to tell me that he met someone who was now a physician. The physician said that while she was an

undergraduate student, she was walking along the halls while I was lecturing to elementary chemistry students. She heard the lecture, walked in, sat down, listened, and decided to take some courses with me. She finally entered medical school and became a physician and told my friend that her happening to come into my lecture that day changed the course of her entire life.

ABPL: Of course you have not spent your entire life, thought it may seem so, at Wayne State University; you have made trips to other universities for varying periods of time. Are there any special areas that you would like to talk about, particularly Latin America, with which you seem to have many connections?

SK: Yes, that is true. I was a Visiting Professor for more than a year at University College, London and made many fast friends in the UK. I was also a Visiting Professor at the University of São Paulo, in Brazil and I have an interesting story about that. I decided to learn Portuguese before going down to South America, so I took 20 lessons over a 10-week period of time at the Berlitz School of Languages in Detroit, on a one-to-one basis, one teacher/one student. I recorded those lessons and practised in the car going to and from work, about 25 minutes each way. When I arrived in Brazil in March of 1969, I gave my first lecture to an advanced group of graduate students on the Stereochemistry of Coordination Compounds. I gave that first lecture in (poor) Portuguese. After the lecture, a young Brazilian graduate student came over to me and said to me in perfect English, 'you know, I never heard Portuguese like that before.' However, I spent about 6 months there and during that time my Portuguese improved.

In England, I became a friend of Professor Sir Ronald Nyholm, FRS (Fellow of the Royal Society) who one day brought me a copy of the 'New York Times' with an advertisement in the middle section. The advertisement spread out over two pages and it was written like a news story, with a large headline, which read 'How to become an FRS'. He clipped that article and posted it in the Department. The article went on to state that all you have to do become an FRS is to buy Four Roses Whiskey. Then you would automatically become a member of the Four Roses Society and that was their definition of FRS.

Among other people I befriended was Professor Christopher Ingold, with whom I discussed many philosophical matters. He was very near retirement, if not already retired officially. His philosophy, which I adopted and which I would like to commend to all of your readers, is that the most important thing for a chemist (or any other scientist or professional) to do in his or her lifetime is to be sure to leave the profession in a better state than he or she found it.

I was very fortunate indeed to be able to have Visiting Professor or Visiting Scientist positions in many institutions in the world, and with many really superb colleagues and their research groups. In addition to my Visiting Professorships at University College, London (with Professor Ronald Nyholm) and the University of São Paulo (with Professors Paulo Krumholz, Simao Mathias, Paschoal Senise and Ernesto Giesbrecht). I also had magnificent experiences at Tohoku University in Sendai, Japan (with Professor Kazuo Saito), the Center for Chemistry in Timisoara, Romania (with Coriolan Dragulescu) and the Institute for Chemistry in Cluj-Napoca, Romania (with Professor Gheorghe Marcu), the University of Oporto,

Portugal (with Professor Joao Cabral), the Technical University of Lisbon, Portugal (with Professor Armando Pombeiro), and the Laboratory for Coordination Chemistry in Florence, Italy (with Professor Luigi Sacconi). I cannot over-emphasize the magnificent contributions of these scientists to chemistry in their own countries and to the world, in general, as well as their profound influence and effects on me as an individual scientist and colleague, in particular.

Also, many of my students have gone on to do great things. For example, of my Pakistani students, Christi Munir and Nasir Ahmad, have gone on to become professors in Pakistan (in Rawalpindi), and many others have gone into chemical education, including John Bergman, Marvin Albinak, Sanat Dhar, Dinesh Bhatnager, Bob Halliday, Ron Pollock, Ken Magnell, Karl Pearson and Tony Sonnessa. Others have gone into industry, including Dawn Francis, Stan Kravitz, Dick Moraski and Yung-Kang Wei.

One additional point I wanted to mention about my activities concerns 'Inorganic Syntheses,' the series of books (now published by John Wiley and Sons, Inc.) devoted to publishing checked syntheses of important inorganic compounds. I was the Editorial Secretary of that organization for about 15 years, starting in 1965. In addition, I was the editor of Volume 23 of 'Inorganic Syntheses'. With regard to the question of awards that I received, some are the President's Award for Excellence in Teaching (from Wayne State University) and the Chemical Manufacturer's Association Catalyst Award, which is a national award for excellence in teaching. I also received the Heyrovsky Medal of the Czechoslovak Chemical Society when Czechoslovakia was still one country, at the same time that John Bailar received this same medal in 1978. Recently, I received the Gold Award of the Engineering Society of Detroit for my contributions to science and education.

Finally, I cannot conclude without acknowledging the important contributions to my career of my family, including my parents, Abraham and Rebecca, my brother, Robert, my wife Esther, my daughter, Susan, my son Daniel, my daughter-in-law, Zehra, and my granddaughter, Leyla.