THE CHEMISTS CLUB

The University of Chicago
Newsletter #18 Winter 2002

FROM THE CHAIRMAN

As I have previously reported, our faculty numbers for teaching chemistry have been dangerously low beginning with the departure of David Lynn and Bill Wulff. Presently, we are in the middle of our first year with John Light, Steve Berry, Phil Eaton and Bob Clayton as emeritus professors. They have joined Jack Halpern, Bob Gomer, N.C. Yang, Clyde Hutchison and Ole Kleppa. John Light is teaching a course this quarter to cover the faculty shortage in teaching created by the sudden departure of Joan Shea (junior physical). After July 1, 2002, we will be joined by Hisashi Yamamoto (senior organic), David Mazziotti (junior physical) and Chuan He (junior inorganic). During the past six years the department has added ten faculty [Scherer (physical), Lee (physical), Jordan (inorganic), Hopkins (inorganic), Kozmin (organic), Ismagilov (organic), Shea (physical), Mazziotti (physical), Yamamoto (organic) and He (inorganic)] while loosing eleven faculty [Fleming (physical), Burdett (inorganic), Sita (inorganic), Wulff (organic), Lynn (organic), Yang (organic), Berry (physical), Shea (physical), Light (physical), Eaton (organic) and Clayton (physical)]. Since the typical faculty size in the past has been about 25, one sees that ten additions over such a short period of time is a very large turnover fraction. Even so, at least three more faculty positions remain unfilled.

However, the important message I wish to convey regarding faculty recruitment concerns the associated cost and the role that you have already played in helping us meet the recruitment challenge. The expense of adding these ten new faculty is staggering and we are most thankful that Dean Oxtoby has found the necessary funds that are required for today's highly competitive recruitment. I assure you that the sum is quite massive and impressive. The fact that the University and the Dean have met this enormous financial challenge should fill you with considerable pride. Moreover, such a commitment provides solid evidence that The University of Chicago intends to remain a major research university.

During these six years of extensive recruitment, the Department has depleted its limited resources, funds that are necessary to be successful in any recruitment, and we seek your help in reloading the department's coffers (see page 2). In all recruitments, some relatively small resource is required to finalize the appointment and frequently, this closure is provided by the Department. In addition, the Department is responsible for moving expenses, which in some cases are considerable. Without a doubt, the resources provided by your generosity have been invaluable in these competitive times. Finally and sincerely, I want you to know that all of your gifts, large and small, have been invaluable and have been put to good use. We thank you from the bottom of our hearts.

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† = Joan Shiu Fund

A REMINDER OUR GENEROUS FRIENDS:

Many of you are eligible to have your donations matched by your and/or your spouse's present or past employers. In the year we have literally "lost" many, thousands of dollars in unmatched funds. We *beg* you to enclose the needed form. Thank you!

AWARDS AND ENDOWMENTS

As a department we have received gifts of funds which exist as endowments or awards. The majority of these funds have been designated by the donors for students - student awards, student fellowships, student emergency needs.

These funds are divided into two categories: those that are endowed and those that are not. An endowed fund is interest-bearing. The principal cannot be touched - all the Department can use is the income. Once upon a time a fund could be endowed with as little as $5,000, now $30,000 is required. Funds which are not endowed are not interest-bearing, so the principal itself is used until it is gone and the account is closed. An example of this is the $2,000 given to us for graduate student travel to scientific meetings. Four students each received $500 to help defray expenses. This fund no longer exists.

Some examples of our endowed funds are the: Closs-Sugarman Undergraduate Teaching Award, a teaching prize to a TA; The Cross Fund, a graduate student award; Knock Prize, an award for undergraduates; Donald Levy Student Activities Fund, to be used for student activities; Nachtrieb Fund, an award for undergraduate research; Norton Prize, to a student in the department; Joan Shiu Fund, an award/prize for an entering student; Friedman Personal Needs Fund, for emergencies or special personal needs of a graduate student and/or post doc in the Department; Chemistry Thesis Fund, an award for the best thesis.

We also have endowments that are primarily dedicated to faculty research and equipment. Examples are the: Will DeLoach Fund, to be used at the Chair's discretion for departmental purposes; The Kharasch Research Fund to support postdoctoral research and lab equipment; Jones Chemistry Fund used to support teaching and research; Jones Chemistry Lab Equipment Fund, to be used to purchase equipment for the Department; Gerhard and Liselotte Closs Research Fund, for faculty research; Wheland Faculty Endowment, to be used at theChair's discretion to assist faculty in their research.

Our newest fund is the unendowed Fried Fund for organic students who have need of help during personal emergencies.

Donations to ANY of these funds, or any new funds that you wish to establish, are always welcome - with our sincere thanks.

CONGRATULATIONS

BA & BS RECIPIENTS

SUMMER 2001

NONE

AUTUMN 2001

Christian John Sanvanson, BS

MS RECIPIENTS

SUMMER 2001

Stephen M. Danauskas — **Mustafa Demirplak**
Jennifer Leah Gottfried — **Yuji Ishitsuka**
Tao Jin — **Marya Katherine Jones**
Maria Jeannette Krisch — **Paolina P. Kupresanin**
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Yi Liu — **Jun Lu**
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Ambarish Nag — **Ana R. Stankovic**
Jing Su — **Chi Zhang**
Qin Sheng

AUTUMN 2001

Jelena Janjic — **Thomas A. Rammer, II**

Ph.D. RECIPIENTS

SUMMER 2001

Daniel Edward Haines - *Hopkins* - Electrochemistry of Multiply Metal-Metal and Metal-Ligand Bonded Building Blocks for Conjugated Materials. Research Scientist with Schott Gas Technologies, Duryea, PA.

Hilary Dorr Lang - *Rawal* - The Intramolecular Diels-Alder Reaction of Photochemically Generated Trans-Cycloalkenones. Scientific Advisor, Brinks, Hofer, Gilson, and Lione, Chicago.

Yish-Hann Liau - *Scherer* - Plasmonic Dynamics and Propagation in Photonic Materials. Optical Engineer at Fluidigm Corp. in South San Francisco, CA.

Bradley F. Parsons - *Butler* - Spectroscopic and Computational Studies of Molecular Photochemistry. Postdoc in Dave Chandler's Group at Sandia National Lab in Livermore, CA

Suhail Praful Shah - *Rice* - Reduced-Space Analyses of the Coherent Control of Quantum Many-Body Dynamics. Post-doc, University of Chicago.

AUTUMN 2001

Valerie Michelle Shelton - *Tao Pan* - Thermodynamics of Transfer RNA Folding: A Quantitative Framework for the Analysis of Cation-Dependent RNA Structural Transitions. Research Analyst at the CNA Corp in Alexandria, VA.

ALUMNI NEWS

Agnes Graham Riley - MS 25 - *Leslie Hellerman*
Although I have had a happy, successful life, the hurt that I was unable to work for a PhD degree at the University of Chicago is as great as it was over 75 years ago. I'll be 100 in February.
I was making good grades and the research under Dr Hellerman was going well when my father had serious financial troubles. It is famous that the Great Depression came early to some parts of the south and certainly to our part of Virginia. Dr Hellerman got me a job at a Chicago hospital, but the pay was not enough to pay U of C's tuition. Besides I felt an obligation to help my 4 brothers get a college education which was a tradition in our family. There were no scholarships or grants in those long ago days for graduate students as there are now, so I had to teach.

Ellis K. Fields - 38 - *Morris Kharasch*
Jeanette [wife] received award from Pleasant Home Foundation [Oak Park] for her dedication to preserving the historic resources of Oak Park and her tireless writing and lecture efforts to publicize the architecture of Frank Lloyd Wright, George W. Maher and others in Oak Park. Ellis received an award from the Department of Chemistry at the Reunion, August 27, 2001 for his contributions to chemistry and chemists.

Ernest M. May - 38 - *Morris Kharasch*
The Ernest M. May Academy, in Jersey City, is a private school, sponsored by Youth Consultation Service, providing special education for about 100 severely disturbed students. It receives students from numerous school districts and has a waiting list.

Howard Lemberg - 73 - *Stuart Rice*
My older daughter, Katie, is getting a fine education at U of C. Thanks in part to her major in the Chemistry Department.

Tex Horning - 79 - *Clyde Hutchison, Jr*
Hello friends, I have caught a nasty case of osteosarcoma [bone cancer] diagnosed a little over a year ago. Now I am paralyzed below the waist. My home hospice program gives me enough morphine. My wife, Shotana Song, is with me at my new address: 26381 Whitman Street #27, Hayward, CA 94544 (510) 247-1635. Please pray for us.

Zhenan Bao - 95 - *Luping Yu*
is a member of the 3-person Bell team which made a transistor from a single molecule - small enough to fit about 10 million on the head of a pin. This in contrast to the first transistor - also from Bell - which was as tall as the face of a wristwatch. Some, say this new transistor pushes the miniaturization of electronics to its final frontier.

Dave Reingold - postdoc - *Phil Eaton*
Received Beachley Distinguished Service Award, Juniata College in May. Completed 3 years as Chair of the Finance Committee, received the first ever "Volunteer of the Year" Award from the Council on Undergraduate Research in June. Published textbook, *Organic Chemistry, An Introduction Emphasizing Biological Connections*, Houghton-Mifflin in July.

Enrico Rotondo - postdoc - *Jack Halpern*
I have been called as a First Level Professor of Inorganic chemistry at the University of Messina.

FACULTY IN THE NEWS

Steven Sibener has been named the Carl William Eisendrath Professor in Chemistry. Sibener has made important contributions to chemical physics, materials research and nanoscience. He has conducted pioneering molecular beam studies of combustion processes, mechanistic studies of interfacial catalytic reactions and precision measurements on atomic-level dynamics of interfaces. In particular, his innovative use of sophisticated gas-surface scattering instruments has led to advances in these areas of research.

Sibener came to the Chicago faculty in 1979 while still a graduate student. He then spent a year at Bell Laboratories conducting postdoctoral research. He returned to Chicago in autumn 1980. Sibener also spent a year at the University of Colorado as a visiting fellow at JILA.

He served as director of the University's Materials Research Science and Engineering Center from 1997 to 2001. Last July he was appointed Director of the James Franck Institute. He is a founding director of the new multi-university Center for Materials Chemistry in the Space Environment.

Sibener's honors include the Marlow Medal of the Royal Society of Chemistry, an Alfred P. Sloan Foundation research fellowship, a Camille and Henry Dreyfus Young Faculty Award in Chemistry and an IBM Faculty Development Award. He is an elected fellow of the American Physical Society.

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The National Academies, which includes the National Academy of Science, the National Academy of Engineering, the Institute of Medicine and the National Research Council, has awarded its lifetime *National Associate* status to a number of current and retired faculty members of the University.

The National Associate designation was created last year to recognize extraordinary contributions to the organization's National Research Council and Institute of Medicine programs.

Among the honorees is **Stephen Berry**, the James Franck Distinguished Service Professor Emeritus in Chemistry. The faculty members provided their expertise pro bono to the National Academies, which advises government and the public on science, technology and health issues.

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David Grier, Associate Professor in Physics; **Milan Mrksich**, Associate Professor in Chemistry; and Daphne Preuss, Assistant Professor in Molecular Genetics & Cell Biology, were interviewed for the Chicago Tribune about their current research to develop a new class of adhesives that will be stronger and smaller than any existing ones. These new adhesives could become a powerful aid to a wide variety of new technologies and lead to the self-assembly of tiny machine parts.

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Rustem Ismagilov, Assistant Professor in Chemistry, is one of 11 scientists nationwide to receive a 2001 New Faculty Award from the Camille and Henry Dreyfus Foundation of New York City. The five-year, $40,000 award provides funding for new faculty members at the start of their research and teaching careers.

The Predoctoral Training Program in Chemistry & Biology, a relatively new program designed for students who are interested in research at the interface of chemistry and biology, held a symposium highlighting the areas of scientific research that are relevant to the interdisciplinary objectives of the program.

"Generation of Highly Diverse Small-Molecule Libraries using Ru-Catalyzed Siloxyalkyne-Alkene Metathesis"
Sergey Kozmin & Michael Schramm

"Building an RNA Active Site from the Inside-Out"
Joseph Piccirilli & James Hougland

"Model Substrates for Mechanistic Studies of Cell Migration"
Milan Mrksich & Shannon Dillmore

"Structural studies of DNA recombination"
Phoebe Rice & Adam Conway

NEW FACES

Rustem F. Ismagilov

Research at the interface of organic and physical chemistry; chemical systems that can be controlled and can perform functions; chemical complexity. We use organic chemistry to control the structure of molecules; these molecules generate function on the nanoscale (molecules that convert chemical energy into mechanical work) and on the macroscale (organic electronic materials). We use microfluidics and microfabrication to control interacting chemical reactions; these reactions detect, transmit, amplify, and analyze chemical signals. Ultimately, this research may lead to functional systems of organic molecules, materials, and reactions that interact via fluidic and electrical networks and function at the level of complexity of a living organism. We expect that our research will lead to better understanding of molecular-scale energy conversion, and of complex chemical and biochemical processes and networks.

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Sergey A. Kozmin

The power of chemical synthesis lies in the ability to create new molecular structure and function. Our research program is centered in the field of modern organic synthesis with an emphasis on the development of new chemical transformations, construction of complex synthetic targets and their application to addressing problems of biological and medical significance. We are developing an arsenal of new catalytic reactions for rapid and fully stereo-controlled assembly of building blocks for a variety of applications. In addition to natural product synthesis, we are interested in generating libraries of organic compounds capable of potent modulation of cellular processes abnormally regulated in cancer cells. Starting at the level of basic research in the area of organic and organometallic synthesis, it is our ultimate goal to provide new directions for the develo-ment of effective anticancer chemotherapeutic agents.

The 1941 Fire in Jones Chemical Lab

by James L. Rowe, Ph.D. 1946

[Author's note: the following memoir is based on my recollection of events that happened nearly 60 years ago. Any corrections or additions about that terrible day would be most welcome.]

In 1941, many of Prof. Kharasch's grad students were working on the effect of adding catalytic quantities of various metal halides on the compounds produced in various Grignard reactions. I was studying the effect of ferric chloride on the reaction of a phenyl Grignard. Eugene Ordas was working on a similar project in the same lab. Sometime in early 1941, he began working on a wartime project whose object was to develop an incendiary agent that would burn under water. Apparently, the British fleet in the Mediterranean had sunk an Italian freighter and the remaining Italian fleet was moving through an oil slick about 1 inch thick. However, the standard phosphorus incendiary bomb did not ignite the oil, and the Italian fleet survived to fight another day. I believe that the basic material Prof. Kharasch was studying was the diperoxide of divinylacetylene. Apparently this compound was known as an incendiary-explosive because a workman cleaning out a DVA tank car dropped his hammer which hit solid peroxide in the bottom of the tanker and he was killed in the subsequent explosion. Hal Graham was also working on this project and there were probably others. Certainly, Sid Weinhouse [who had been recalled from a job in Philly to help supervise some of Prof. Kharasch's war projects] and Frank Westheimer, the youngest faculty member ever to become a full professor, were also involved. The incendiary bomb project was carried out in the end lab on the second floor of Jones. The project also had an abandoned squash court under the west stands of Stagg Field for "field trials". One day in the fall of 1941, when I was working in the lab, I heard an explosion and then someone yelled "Fire". Apparently, under the supervision of Sid and Prof. Westheimer, Hal and Gene were making a large quantity of incendiary material containing an explosive booster material [tetryl?]. Apparently, the incendiary material in the hood caught fire and exploded. At that moment Gene was standing directly behind Hal, holding a beaker of tetryl, which then exploded. This explosion and the fire took off all of the skin on Gene's hands and arms, up to where he had rolled up the sleeves of his lab coat. Hal's back was badly burned. The incendiary material was in the hood next to the only door to the lab and the hood fire prevented any escape via the door. There were also about twenty liter bottles of solvents which kept exploding and feeding the flames. The door being unavailable, the four tried to escape via the window. However, Gene and Hal's hands and arms and bodies were so badly burned that they could not hold on to the outside of the window or the ledge and had to pull down the window over their arms which were still inside where the flames continued to lick them. Sid fell on leaving by the window, hit the parapet around the basement windows and broke his thigh. In the meantime, the U of C building and grounds crew had brought a ladder and stationed it at the windows so that Prof. Westheimer could climb down to safety. Hal and Gene, however, because of their burned hands and arms, could not hold on and thus could not follow him; so Prof. Weldon Brown climbed the ladder and brought the two of them down one at a time. The fire was, of course, still raging. Somebody had gotten the fire hose from down the hall and they were busy fighting the fire from the adjacent lab. The explosion had blown out some cement blocks at the top of the wall separating the labs and a steam pipe had burst so there was both smoke and steam coming through the opening, which these people holding the hose were trying to put out. At some point Art Erickson and Bob Denkewalter who were working on a gas mask project in the lab directly above, felt the explosion and rushed down the stairs. They were able to open the lab door and the hose was brought around so that the fire could be fought directly. The force of the water in the hose unfortunately also knocked over more solvent bottles which broke and their contents contributed to the flames. Eventually, the fire was extinguished. The four occupants of the room, now on the ground, were carried by stret-cher to Billings Hospital across the street. The only spare beds were in the Children's Hospital, and there many of us went daily to see the patients. I believe Dr. Westheimer went home the same day and Sid had his leg in a cast but was otherwise OK. A large area of Hal's torso including his face was badly burned and he required many pints of blood and plasma to replace what he had lost. I was told that Hal had broken the record for percent of body subject to third degree burns who survived. Gene's burns were bad but he did not have as extensive body burns as Hal. The Billings MDs used a new treatment, sulfathiazole ointment, on the burned areas to prevent infection. I was told that this treatment was then used on burn victims of the Pearl Harbor raid. Gene eventually had to have 17 pinch grafts to replace the skin on his burned hands and arms.

Two other memories of this episode: Mrs. Westheimer coming over every afternoon to read to Gene who could not hold a book in his bandaged hands, and Sunday afternoon, Dec. 7 1941, as I walked in the door on my daily visit, Gene said, "The Japs just bombed Pearl Harbor".

What really sticks out in my memory is the courage of Prof. Weldon Brown in bringing Hal and Gene down the ladder from the window ledge while the fire still raged, the courage and will to live on the part of all four of them, the expertise of the Billings MDs who saved Hal's life and restored skin to Gene's hands and arms, and the graciousness of Mrs. Westheimer. How fortunate we all were to be associated with such people.

OUR LOSSES

Jules D. Porsche - 33 - *Morris Kharasch* 4-1-98

Bernard Rice - 48 1-14-00

Josef Fried 8-17-01

the Louis Block Professor Emeritus in Chemistry, Biochemistry & Molecular Biology, died Friday, August 17, in Chicago. He was 87.

Josef "Gus" Fried was a pioneer in making subtle alterations in the chemical structure of steroid hormones to produce tailor-made drugs that relieve inflammatory diseases. "He was an outstanding, highly creative scientist who straddled the worlds of pharmaceutical research and academic science," said EJ Corey, 1990 Nobel Laureate in Chemistry and Professor in Chemistry at Harvard. "He was one of my heroes, I've always thought of him as a model scientist of great character and human warmth."

"He was one of the few who was able to bridge the chemical gap between the laboratory, making new compounds and using those compounds in medicine," said William Elliott, Professor of Preventive Medicine at Rush-Presbyterian-St. Luke's. Fried's work led to patents on a class of compounds called fluorosteroids. Elliott added. "These compounds revolutionized the treatment of many endocrine disorders." *Squibb founded a business based on the manufacture of one of Fried's compounds, which is widely used to treat skin conditions.*

Born in Przemysl, Poland he attended elementary and high school in Leipzig, Germany followed by the universities of Leipzig and Zurich. A German Jew he fled the Nazis and came to the US in 1938 to study at Columbia, where he earned his PhD in 1940, and remained as an Eli Lilly Fellow until 1943.

Fried joined the Squibb Institute for Medical Research in 1944. He remained there as a research associate, department head, then director of the Division of Organic Chemistry, until he joined the Chicago faculty as a professor in the departments of Chemistry and Biochemistry and what is now called the Ben May Institute for Cancer Research. He was appointed the Louis Block Professor in Biological Sciences in 1973, and served as Chairman of the Chemistry Department from 1977 to 1979. He became Professor Emeritus in 1984.

Fried held nearly 200 U.S. patents, including 43 as sole inventor, of biologically active chemical compounds, many of which were developed early in his career at the Squibb Institute for Medical Research in New Brunswick, N.J.

After joining the Chicago faculty in 1963, Fried turned his attention to the synthesis of prostaglandins. Similar to hormones, prostaglandins are highly active hormone regulators. Fried's successful synthesis of prostaglandins contributed both to their use as drugs and to the study of their effects on the body.

An amateur violinist, Fried was a man of culture as well as science, said Philip Hoffmann, Professor Emeritus in Neurobiology, Pharmacology & Physiology. "He was a man of old-world culture, very learned in fields outside of science."

His honors include the Knapp Memorial Lectureship at the University of Wisconsin; the Third Annual Outstanding Patent Award from the New Jersey Council for Research and Development, 1968; elected to the National Academy of Sciences, 1971; the American Chemical Society's Medicinal Chemistry Award in 1974; elected a fellow of the American Academy of Arts and Sciences, 1981; and the Roussel Prize, an industry recognition given for his development of drugs that alleviate inflammatory diseases, in 1992.

He is survived by his daughter, Carol Fried, Chicago, and a brother, John Fried, Atherton, Calif. His wife, Erna, died in 1986. A memorial service was held at the University on October 21, 2001.

Wayne B. Hadley - 54 - *Willard Stout* 11-17-2001

received his bachelor's degree summa cum laude in chemistry from The Ohio State University in 1950. He was elected to the honor societies Phi Beta Kappa, Phi Lambda Upsilon and Sigma Xi. He was a Phi Beta Kappa Scholar and a National Science Foundation Fellow while at The University of Chicago, where he got his degree in physical chemistry. Following this degree, he taught at the University of California, Berkeley and The Ohio State University. In 1961 he moved to industry, first to Zenith in Chicago then to AMP in Harrisburg, Pa, where he did research in fiber optics. While at AMP he taught classes part-time at Harrisburg Area Community College. After his 1989 retirement he became an adjunct associate professor at the MS Hershey Medical Center.

A man of many interests, he was a Sunday school teacher, as well as superintendent and president of the church choir. As a member of the ACS he served as chairman of the Southeastern section of the society. He was club secretary for 18 years of the Palmyra Lions Club, a charter member of the Hershey Museum and a volunteer in the curatorial and education departments. The National Parkinson's Foundation, the National Genealogical Society, the Genealogical Society of Pennsylvania, the Friends Historical Society of Haverford College all benefited from his time and efforts.

Mrs Hadley writes that she and her husband met while they were both graduate students here. They were married in a chancel wedding at Rockefeller Memorial Chapel - either the first student wedding there, or the first in many years. The Rev Virgil A Kraft, advisor to the Methodist Student Fellowship, performed the ceremony. Heinrich Fleishcer, the University Organist, played the wedding music.

The University of Chicago chemistry community was deeply saddened by the death of one of our most beloved members, **Mary Joan Shiu**, on December 6, 2001. After a long illness, Joan passed away in Marin Co., California, where she had recently moved to be near her daughters, Pat and Erin, and her grandchildren. She was 68 years old.

Joan joined the University of Chicago Chemistry Department as a secretary in March, 1963. Most of us know Joan through her many years of dedicated service as the Manager for Administrative and Student Services in the Chemistry Department. For many generations of chemistry graduate students, she was a tireless proponent for their rights and welfare, and was a loud and effective voice in fighting their battles against administrative bureaucracy and, on occasion, faculty pigheadedness. Joan knew just about everyone who was someone in the University, and her contacts developed over the years meant that it usually took just one well-placed phone call to solve seemingly unsolvable problems. She was a caring, loving, and loyal friend of the graduate students, and she made herself available to help them with personal issues as well as academic ones. Joan appreciated the value of human diversity in all its aspects, and this trait was a key to her successful interactions with the wide range of students that make up our Department.

Joan's unique ability to effectively deal with the various complex problems affecting Chicago's graduate students was not overlooked by the University administration. In July, 1996, Joan was appointed Dean of Students in the Physical Sciences Division, a position in which she served with distinction until her retirement to the land of the rich and beautiful on Chicago's Gold Coast in July, 1998. Upon her retirement, an endowed Joan Shiu Fund for chemistry graduate students was established from generous donations from students, staff, faculty, and friends.

Joan lived her life with gusto, grace, and class. Few others have touched and affected so many lives in such a permanent and positive manner as she . Joan will be fondly remembered by many many people, and those memories will always bring smiles to our faces.

Mitchell J. Szwedo, Jr

1-8-02

lost his struggle with cancer in Chicago he was 50 years old. Mitch did his undergraduate work at IIT, and his graduate work on vitamin A analogs under William Prout and James Babler (DePaul and Loyola). He joined Josef Fried for an extended collaboration focusing on fluorinated thromboxanes (1984-1988). After an entrepreneurial period devoted to orphan drug discovery, Mitch returned to assist David Lynn in discovery chemistry on analogs of the b-ketoamide homoserine lactone that mediate bacterial cell density regulation in *Agrobacterium*. He also contributed to the SBIR-funded research of Dr A Gharavi of Shayda Technologies, development chemistry on NLO monomers/polymers for biosensing applications. Mitch is remembered for his devotion to his family and friends, nieces and nephews in particular; for his generosity and sense of humor; for his commitment to knowledge and practical ability in classical and modern chemical synthesis; for his faith and for the non-materialistic nature of his life; for his voracious appetite for ideas and reading; and for his enjoyment of close magic, comic books, the Harp and Shamrock, the Bears, and other Chicago things. A gathering of friends will take place in Chicago in the spring. Queries should go to Ron Glowinski (birogo@csu.edu).