



ALUMNINews

DEPARTMENTS OF CHEMICAL & BIOMOLECULAR ENGINEERING AND CHEMISTRY WINTER 2004

Miller and Pytosh Chair Leadership Council

Steve Miller, co-chair of the Chemical Sciences Leadership Council (CSLC), received his bachelor's degree in Chemical Engineering in 1967 and went on to become president, CEO, and chairman of the board at Shell Oil Company. Since retiring from Shell in 2002, Miller has founded, and is the chair and president of, SLM Discovery Ventures, a firm focusing on breakthrough opportunities in both the for-profit and non-profit sectors. But he spends just as much time with his other passion, that of volunteering.



Miller, who is married (his wife, Sheila, has a bachelor's in education from the University) and has two grown children, serves on numerous volunteer and non-profit organizations. He is the chair of Points of Light Foundation, a national volunteer organization of which George H.W. Bush is honorary chair; and is chair of the Board of Trustees of the United Way of the Texas Gulf Coast, which is one of the largest United Way chapters in the nation. Miller also is on the Board of Trustees of Rice University, and on the University of Illinois Foundation board. Miller has been recognized for his work with numerous awards, including the 2002 Alumni Achievement Award from the University of Illinois.

"I enjoy bringing together people with disparate views and finding a way to facilitate a conversation among them

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When Mark Pytosh received his chemistry degree in 1986, he became, not a chemist but a Wall Street investment banker.



"When I graduated from the University of Illinois, business was a more interesting field for me," says Pytosh, co-chair of the Chemical Sciences Leadership Council.

Pytosh, who is currently executive vice president of Waste Services, Inc., spent close to 20 years with Lehman Brothers, where, as head of the Global Industrial Group in Investment Banking, he advised the senior management of industrial companies on financial and strategic matters.

"What chemistry taught me in terms of analytical and problem-solving skills has served me well on Wall Street and now in business," says Pytosh.

Pytosh, who lives in New York with his wife and five-year-old son, is now directly involved in managing a business, Waste Services, Inc., which he is enjoying immensely.

Like his co-chair Steve Miller, Pytosh has been a very active alumnus and deeply loyal to the School of Chemical Sciences and to the University. So, when he was approached to serve on the Chemical Sciences Leadership Council (CSLC), Pytosh gladly accepted.

"The establishment of the CSLC as a means to bring alumni and supporters to the long-term planning process was a relatively new and forward-thinking

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SCS's Strategic Plan

In 2002 the School of Chemical Sciences inaugurated the Chemical Sciences Leadership Council (CSLC), a group of business and academic leaders. The CSLC, co-chaired by Steve Miller and Mark Pytosh, systematically evaluated factors critical to advancing the School leading to the formulation of a strategic plan.

The strategic plan focuses on faculty as the linchpin for SCS's educational and research mission. Through faculty, the School will provide the best education for its students. Three main recommendations of the CSLC are:

- Expand the endowment for professorships and chairs to support faculty leadership in education, research, and national policy.
- Construction and renovation of laboratories, especially those focused on biomolecular themes.
- Establish a venture capital fund to support high-risk research.
- Expand fellowship programs so that our graduate students are less dependent on grants for their education.

The strategic plan was presented to Interim Chancellor Richard Herman who enthusiastically endorsed its recommendations.

Members of Chemical Sciences Leadership Council listed on page 3



From the Director's Desk

In this issue we describe the strategic planning process that results from a partnership with our alumni, faculty, and friends across America. This newsletter also illustrates the range of programs that this partnership serves and, often, directly supports: educational outreach, collaborative research initiatives, exceptional teaching.

I draw your particular attention to the new fellowship in medicinal chemistry honoring David Robertson. In his shortened life, David contributed significantly to the development of new medicines—the new fellowship allows us to honor his legacy by strengthening our ability to train new medicinal chemists. Our outstanding educational and research initiatives encompass undergraduates and graduate education, often combined, and they serve not only these students but also the world.

Thomas Rauchfuss

To reach the editor...

You can reach our office by email at scsnews@scs.uiuc.edu or by fax at (217) 333-3120. Please continue to send your news and also include comments on the newsletter, alumni and development programs and any questions you may have on any of the above. Have an idea for a story? We enjoy hearing from you.

SCS *Alumni News* is published twice a year by the School of Chemical Sciences at the University of Illinois at Urbana-Champaign. The newsletter is produced for the school by the College of Liberal Arts and Sciences Office of Publications.

Written by Deb Aronson

Student Affiliates Of ACS Help Others, Have Fun Too

Despite their challenging course load, many undergraduates find time to participate in the University of Illinois American Chemical Society-Student Affiliates (ACS-SA) chapter. ACS-SA runs a successful tutoring program, provides a social network for students, and runs the highly popular “Kids and Chemistry” outreach program.

Targeted to third graders, “Kids and Chemistry” is intended to get youngsters interested in and excited about science. First established by Dr. Angie Cannon, the former ACS-SA faculty adviser, the program now has more than 200 volunteers and serves 30-40 area elementary schools within a 30-mile radius of campus.

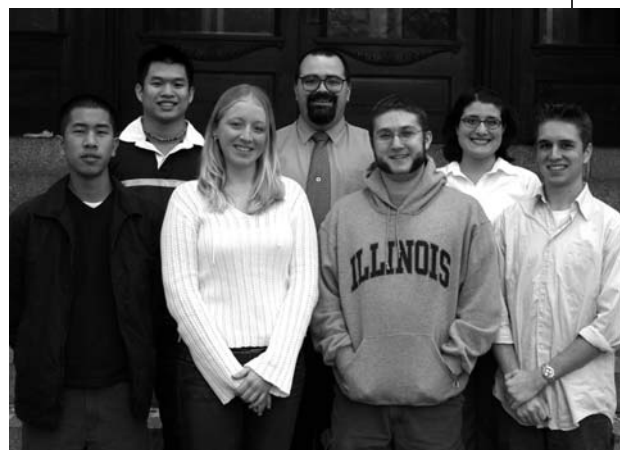
Before going to the schools, the university students get a short training session so they'll feel comfortable presenting the material.

“Talking to a professor about acids and bases is very different from talking to a third grader about acids and bases,” says Danielle Studer, who is the student director of “Kids and Chemistry” and is a junior.

The students often come out transformed, says Studer. “They didn't realize the impact they could have on students.”

“The elementary school kids think the university students are gods,” adds ACS-SA adviser Tyson Miller, visiting teaching associate. “It's really, really neat to watch. Often the university students don't know each other, they're nervous, and feeling inexperienced. But they figure it out and just really take to it. They feel like they have done something neat and changed the way science is viewed by kids. It's really rewarding.”

Both Miller and the other ACS-SA adviser, Lauren Denofrio, teaching specialist, are committed to making the ACS-SA chapter reflect the high quality and good reputation of the chemistry program. This year they already have made great strides. Miller has revived the tutoring program, which is targeted to helping



Front Row (left to right): Chi Ho Chan, Danielle Studer, Alex Clemens (President), Luke Kinsinger (Vice President)
Back Row (left to right): Victor Chan, Tyson Miller (Co-Advisor), Lauren Denofrio (Co-Advisor)
Not Pictured: Jonathan “Yoni” Glassner, Lauren Ko

“Talking to a professor about acids and bases is very different from talking to a third grader about acids and bases.”

undergraduates on campus, and middle school and high school students in the community. The demand and response has been enormous.

In addition, the ACS-SA executive board has organized several well-attended meetings, on topics like the graduate school admissions

process, and what it's like to be a medical doctor. They also had a canoe trip and held a couple fund-raising events. And the faculty advisers have successfully received ACS funding to take 10 students to the national ACS meeting in San Diego next March.

Moore Receives Teaching Award

Members of Chemical Sciences Leadership Council

William F. Banholzer, vice president, Global Technology for GE Plastics. Ph.D. '83, ChemE.

Douglas L. Cole, vice president for development, Affymax, Inc. Ph.D. '75, Chem.

Kathleen A. Coleman, founder, Lester E. and Kathleen A. Coleman Foundation. Wife of late Lester E. Coleman, former chair, CEO, and trustee of The Lubrizol Corp., former director, Harris Corp., Ph.D. '55, Chem.

James L. Foght, managing director, Vector Securities International, LLC, and founder and principal, Fought Enterprises LLC. Chair IVentures. Ph.D. '63, Chem.

Peter B. Fox, founder and principal, Fox Development Corporation. B.A. '74, Stanford.

Wilbur H. Gantz, chair and CEO, Ovation Pharmaceuticals, Inc. Former president, Baxter. B.A. '59 Princeton. M.B.A. '64 Harvard.

Dennis M. Houston, executive vice president, Exxon Mobil Corporation. B.S. '74, ChemE.

Charles R. Kotal, associate dean, University of Georgia. M.S. '68, Ph.D. '70 Chem.

Barbara E. Loughman, director and COO, Encore Pharmaceuticals, Inc. B.S. '62, (microbiology).

Meredith Mallory, owner, Meredith Mallory Jr. Investments. B.A. '41 (M.D. '44, Tulane).

Steve J. Martin, Dow Fellow and chief scientist at Dow Chemical Company. Ph.D. '78, Chem.

John T. Marvel, vice president and director, Magellan University; vice president (retired), Ethyl Corporation. B.A. '59, Chem. (Ph.D. '64, MIT).

Steve Miller, chair and president, SLM Discovery Ventures, Inc. Former president and CEO (retired), Shell Oil Company. B.S. '67, ChemE.

David V. Milligan, senior vice president and chief scientific officer (retired), Abbott Laboratories. Ph.D. '65, Chem.

Mark Pytosh, executive vice president, Waste Services, Inc. B.S. '86, Chem.

Thomas M. Remec, president, Beta Instruments Corporation. B.S. '74, Chem, M.S. '83, (metal-lurgical engineering).

Helen Schwarz Schaefer, director emerita and former vice chair, University of Arizona Foundation. Ph.D. '78, Chem.

John P. Schaefer, president and CEO, Research Corporation. Ph.D. '58, Chem.

Leo (Jack) Thomas, executive vice president (retired), Eastman Kodak, Co. Ph.D. '62, ChemE.



Jeffrey Moore, Lycan Professor of Chemistry, has received both the 2004 LAS Dean's Award for Excellence in Undergraduate

Teaching and the Campus Award for Excellence in Undergraduate Teaching.

"We (professors) are all here because we love research and I'm no different. But the impact you have in front of 300 people when you've captured their attention is huge," says Moore. "There's this realization that there is hardly anything else that is more significant."

Moore has taught Chem 331, the second semester of organic chemistry for non-majors, for about seven years. About two years ago he also began teaching Chem 231, the first semester for non-majors. That course, which is required, has 600 students enrolled in it. Moore refused to teach that as a single lecture course.

"The thing I try to do in class is to make it as informal as possible, to have a dialogue and engage the students as much as possible," says Moore. The enormous size of the class made that approach impossible, so Moore instead taught the course twice a day, in two 300-student sections.

His efforts were widely appreciated by his students. As one wrote, "Dr. Moore

frequently lectures while standing in the aisles of the auditorium which allows him to engage students in the lecture through regular eye contact and individually directed questions ... In his class, one always feels welcome to speak up and ask questions, which is not always common in a class so large."

Moore strongly believes that it is especially important to leave non-chemistry majors with a sense of excitement and an understanding of the role organic chemistry plays in their lives. For example, there are many pre-pharmacy majors in Chem 231 and 331, notes Moore. They should have some understanding of and knowledge about the molecular basis of the compounds they will be working with.

"Dr. Moore played a pivotal role in my undergraduate career by transforming my opinion of chemistry from one of dismay to one of appreciation and understanding," one such student acknowledged.

In addition to his teaching recognition, Moore has received numerous awards for his research, including the Arthur C. Cope award from the American Chemical Society. He is also an associate editor of the Journal of the American Chemical Society and internationally recognized for research on dendrimers, crystal engineering and synthetic foldamers.

Miller continued from page 1

which will get them to a place where they can agree how to go forward," says Miller of his numerous committee activities. "I like taking things that are important and have a big impact and bringing together the various stakeholders, and finding a way for them to arrive at *their* solution.

"Within the CSLC, we had a terrific participation and many really thoughtful ideas, all of which showed the dedication and the interest of the leadership council members. They want to make a difference, and they want to help the University achieve all that it can. So that makes it a rather special group."

Pytosh continued from page 1

approach for the University to address the significantly changing environment for public education in the United States," notes Pytosh.

"I have been impressed that the leadership in all levels of the University of Illinois are trying to stay in front of the changing dynamics and are asking for help from alumni and supporters who share the common goals of loyalty to the University and wanting to make a difference," says Pytosh.

Two Major Projects Demonstrate the Breadth Of Chemical Sciences

The School of Chemical Sciences has received funding for two major projects that will involve several faculty and students. One is called the Neuroproteomics Center, which will focus on proteomics and bioinformatics. The project, which is funded by the National Institute on Drug Abuse at the National Institutes of Health, at more than \$5 million, will study addiction mechanisms in the central nervous system and will integrate research groups with expertise in chemistry and bioinformatics with biologists and behavioral neuroscientists. The unifying

principle for the center will be cell-cell signaling. The lead investigator on the project will be Jonathan Sweedler, Lycan Professor of Chemistry. He is joined by two collaborators: Neil Kelleher, assistant professor of chemistry; and Sandra Rodriguez-Zas, associate professor of animal sciences.

The second project, which is titled the MEMS *Gas Chromatograph with Nanotube, Nanogate, and MicroM8 Detectors*, provides almost \$5 million dollars to support development of a compact, low-power, portable gas analyzer. The ultimate



Members of Professor Sweedler's research group have recently attracted national attention for their studies on serotonin, a key neurotransmitter. Clockwise from top left: Jeffrey Stuart, doctoral student in the department of chemistry; Stanislav S. Rubakhin, senior research scientist at the Beckman Institute; Jennifer A. Jakubowski and Elena Romanoava, both doctoral students in the department of chemistry.

"Nanodiscs" Help Study of Membrane Proteins

Professor Stephen Sligar and his students have consistently garnered international attention for their research at the "big intersection" where biology, chemistry, and physics meet. Most recently, the Sligar group discovered a way to solve a hard problem: keeping membrane proteins intact so they can be studied. Membrane proteins, critical in cell signaling and generally as cellular gatekeepers, are notoriously difficult to study. When removed from their native environment, these membrane proteins usually fall apart, looking like "scrambled eggs," says Sligar, who is the Gunsalus Professor in the departments of biochemistry and chemistry and the College of Medicine.

Since the late 1990s, Sligar's research group has been working to understand the "machines of the cell," those structures typically between 10 and 100 nanometers in size that make cells work. That goal

led them to engineer an environment that mimics the cell membrane, where membrane proteins are found. This engineered environment is formed by combining scaffold proteins with phospholipids to form a nanoscale disc, which looks in Sligar's words, "like sushi." The phospholipids form a bilayer just like they do in a cell membrane. The water-friendly face of the encircling membrane scaffold protein points out and the lipid-friendly face of the helix nestles up against the non-polar part of the lipids.



Adrenergic G-protein coupled receptor functionally solubilized by self-assembly into a 10 nm diameter Nanodisc.

"The magic of this is that these discs self assemble. Nature does this with an amazing degree of precision and fidelity," says Sligar.

Sligar and his students are using their nanodiscs to study G protein-coupled receptors (GPCRs), which are the target of many pharmaceutical agents.

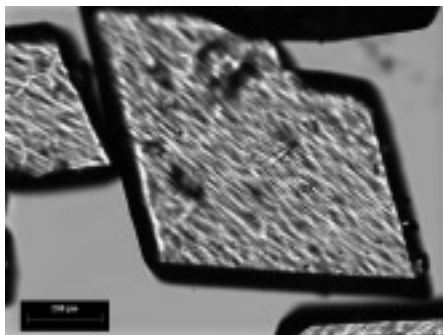
goal is to create a device that will be smaller than two cubic centimeters, can analyze gases in seconds, use hardly any power, and be as accurate and sensitive as gas chromatography or mass spectrometry. Applications for such devices include homeland security and remote sensing. The project is funded by the Defense Advanced Research Projects (DARPA), a wing of the Defense Department that funded, among other things, the Internet. The lead investigator is Richard Masel, professor of chemical and biomolecular engineering. Co-investigators include Michael Strano, assistant professor of chemical and biomolecular engineering; Mark Shannon, professor of bioengineering and of mechanical and industrial engineering; and Keith Cadwallader, associate professor of food chemistry.

ChBE Researchers Reduce Guesswork Related to Crystallization

Several laboratories in the Department of Chemical and Biomolecular Engineering are investigating various aspects of crystals, from simplifying X-ray crystallography to measuring and controlling crystallization processes.

Since the mid-1900s, X-ray crystallography has been one of the most reliable methods to determine the atomic structure of molecules, including proteins. Knowing the structure of a protein, and how it is folded, is key to understanding how it functions, including if and how the protein binds to other molecules. This fundamental information is critical to pharmaceutical development and biological research.

X-ray crystallography, however, is a complicated technique that often involves time-consuming, and sometimes



The surface of a pharmaceutical crystal, courtesy Professor Richard Braatz.

hit-or-miss, calculations. Recently Nick Sahinidis' laboratory developed a novel algorithm that enables the structure of "centro-symmetric" molecules to be determined with no ambiguity in a matter of minutes instead of days. Sahinidis' mathematical skills are the basis of a recent NIH grant in collaboration with Nobel Laureate Herbert Hauptman.

Two other ChBE laboratories are advancing our understanding of and control of crystallization processes. Both research groups' findings have important applications in the pharmaceutical field,

because crystal size, shape, and habit are critical in determining the viability of different drug formulations.

Chip Zukoski's group investigates the factors that influence the crystal nucleation and growth. His research group has developed ways to determine solution conditions leading to the formation of protein crystals — a

Both research groups' findings have important applications in the pharmaceutical field, because crystal size, shape and habit are critical in determining the viability of different drug formulations.

key limiting step in protein structure determination. These studies are already providing useful insights applicable to protein crystallization.

Richard Braatz's group combines theoretical analysis and numerical methods with state-of-the-art sensors to control crystallization. Using infrared spectroscopy, combined with video microscopy and laser backscattering, his group characterizes crystallization *in situ*. With this information, he can adjust conditions such as concentration and temperature to obtain crystals of particular size and shape. Many pharmaceutically important compounds are administered as solids, and it is well known that the microstructure of these solids significantly affects their medicinal properties.

Robertson Endowment for Medicinal Chemistry Established



The medicinal chemistry program division of the American Chemical Society (ACS) devoted an afternoon to a memorial symposium in honor of

David Robertson at the annual meeting in Philadelphia this past August. Robertson, Ph.D. '81, died suddenly August 16, 2003, at the age of 48.

John Katzenellenbogen, professor of chemistry, in his introductory remarks, spoke of Robertson as a graduate student and their work together later as colleagues. "One of Dave's favorite sayings was 'making medicine that matters,'" remembered Katzenellenbogen. "People remember Dave's passion for science and his respect for people. Even his personal email (nurxhunter@aol.com) reflected his drive to find new medicines." His other favorite saying, remembers Katzenellenbogen, was "okay, let's go find some drugs."

In addition, an endowment was established in the Department of Chemistry by Pfizer and others to fund fellowships and lectureships in medicinal chemistry and chemical biology. For those interested in contributing to the University of Illinois Robertson/Pfizer Fund, checks can be sent to University of Illinois Foundation, Harker Hall, P.O. Box 3429, 1305 W. Green St., Urbana, IL 61801, or call Leslie Vermillion; director of development for the School of Chemical Sciences at (217) 244-0826 or ljv@uiuc.edu.

Edward G. Ballweber, BS '42, died March 3, 2004, in Illinois. He is survived by four children and six grandchildren.

Arnold O. Beckman, BS '22, ChemE, and MS '23, Chem, died May 18, 2004. Dr. Beckman was a legendary philanthropist whose \$40 million gift to the University of Illinois in 1985 established the Beckman Institute for Advanced Science and Technology, one of the nation's premier centers for interdisciplinary scientific research. That gift also remains the largest single gift made to the University of Illinois. The pH meter was Dr. Beckman's best-known invention. "Arnold Beckman was inventive and creative and an ideal University of Illinois alumnus," James J. Stukel, University of Illinois president, said. "He was a practical man, modest and unassuming, generous with his time, his energy and his personal fortune. And he played a mean piano."

Former faculty member **Virgil Boekelheide** died on September 24, 2003. He was 84. Boekelheide had a long and distinguished career in chemistry. He taught at the University of Illinois from 1943-46 before he moved to the University of Rochester and later to the University of Oregon, from which he retired in 1984. He is perhaps best known for his study of cyclophanes, compounds consisting of two benzene rings held closely together by ethano bridges.

W. Scott Chilton, PhD '63, Chem (Rinehart), died August 5, 2004, while hiking on Mt. Adam in Washington State. At the time of his death, Dr. Chilton was a member of the Department of Botany at North Carolina State University.

Robert Clarkson, director of the NMR laboratory in the early 1980s, died August 12, 2004. He was 61. At the time of his death, Dr. Clarkson was a professor in the Department of Veterinary Clinical Medicine. He had served in various faculty positions at the University of Illinois since 1982. Dr. Clarkson's research involved magnetic resonance methods to characterize the molecular structure of disordered materials. He is survived by his wife, Jean, and three children.

Jean V. Crawford, PhD '50, Chem (Frank), died April 16 in Lexington, MA. Crawford was the Charlotte Fitch Roberts Professor of

Chemistry Emerita at Wellesley College. She worked as one of the first women chemists in Eastman Kodak's synthetic organic research laboratories before coming to University of Illinois for her doctorate. Dr. Crawford had a distinguished career at Wellesley, where she was chair of the chemistry department twice, dean of the classes of 1957 and 1968, and dean of students 1966-68. She also received numerous grants and fellowships from the National Science Foundation and contributed articles to many leading professional journals.

Mark A. Sprecker, who did postdoctoral work with Nelson Leonard, died March 11, 2004, at the age of 56. Dr. Sprecker, who specialized in fragrances, spent his entire career with IFF in Union Beach, NJ. He was director of global chemical development at the time of his death. He had more than 100 patents to his name.

John P. Tordella, MS '42, PhD '44 (Clark), died Feb. 2, 2004. He had spent 38 years as a research associate at DuPont Co. in Wilmington, DE. He is survived by his wife of 60 years, Mildred Rees Tordella, eight children, 25 grandchildren, and six great-grandchildren.

Peter Yankwich, a former Chemistry professor, died December 1, 2004 in Santa Barbara. Professor Yankwich was born 1923 in Los Angeles and received his BS and PhD from the University of California at Berkeley where he worked also on the Manhattan Project. At Illinois he became head of the division of physical chemistry and vice president for academic affairs. Yankwich served on many advisory councils including organizing the task force that wrote the report "Tomorrow", which strongly influenced chemical education. Yankwich was internationally recognized for his contributions on nuclear chemistry, radiocarbon tracers, and isotope effects. Among his many awards, he was Phi Beta Kappa and Wakefield Awardee for "excellence as a teacher and scholar and for outstanding service to the University, State, and Nation."

ALUMNI NOTES

Charles H. "Hap" Fisher, MS '29, PhD '32, Chem (Fuson), has been honored with the Charles H. Fisher Lecture series at Roanoke College, where he received his chemistry bachelor's degree in 1928. Fisher was Professor R.C. Fuson's first American student and has had a phenomenal career the U.S. Department of Agriculture in Texas, Louisiana, Florida and North Carolina. Under his direction, the laboratories achieved international fame for research on the chemistry of cotton, cottonseed, peanuts, sugar cane, and pine gum. He was named a Chemical Pioneer in 1966 and a Pioneer in Polymer Science in 1981 and has honorary degrees from Tulane University (1953) and Roanoke College (1963).

Philip Horwitz, PhD '57 (Moeller), received the Becquerel Medal from the Royal Society of Chemistry, in recognition for high achievement in the area of radiochemistry (166 publications and 40 patents). Horwitz remains senior consulting scientist to Eichrom Technologies and President of PG Research Foundation of Darien, IL.

Darsh Wasan, BS '60, ChemE (Hanratty), Motorola Chair Professor of Chemical Engineering and Vice President for International Affairs at the Illinois Institute of Technology, has been elected to the National Academy of Engineering for "pioneering research, inspirational teaching, and novel technology development in colloidal processing and interfacial rheology." In addition, Wasan was selected as one of two winners of the 2004 Langmuir Lecture award from the ACS division of colloid and surface chemistry.

Tom Fahidy, PhD '65, ChemE (Perlmutter), was named distinguished professor emeritus in May 2004 by the University of Waterloo. He has achieved wide recognition for his research on electrochemical engineering.

Mary-Dell Chilton, MS '60, PhD '67, Chem (Hager), was inducted in the 2004 Hall of Fame of the Women in Technology International Foundation. A member of the National Academy of Sciences, she is founder and distinguished scientist at Sygenta Biotechnology.

Jane Meinhold, BS '73, Chem, is currently working as a Neuroscience Research Scientist for Abbott Laboratories. Part of her responsibilities include visiting physicians and sharing information about the latest trials developed at Abbott.

Joel M. Hawkins, BS '81, Chem, received the Siegfried Medal, awarded jointly by the Universität Zürich and Siegfried Ltd in recognition of his contributions in process development, including the development of new synthetic methods, the elucidation of reaction mechanisms, and the automation of process optimization. After graduating from Illinois, Hawkins received his PhD in 1986 from MIT, studied as a postdoc at CalTech and spent several years Berkeley. A highlight of his research endeavors is a remarkably efficient synthesis of CP-195 543, an important anti-inflammatory drug.

John Vohs, BS '83, ChemE, is currently serving as the Carl V.S. Patterson Professor and Chair of Chemical and Biomolecular Engineering at the University of Pennsylvania. He has achieved wide recognition for his studies on surface oxides.

Thomas C. Chen, BS '84, Chem, has been appointed associate professor of neurosurgery and pathology at the University of Southern California Keck School of Medicine.

Scott L. Rakestraw, BS '84, ChemE, has founded The Branta Group, which services global life science and health care investment companies. After graduating from

Illinois, he received his PhD in biochemical engineering at MIT and then worked with DuPont Ventures, Altus Pharmaceuticals, and Orchid BioSciences. He lives in Bucks County, PA with his wife Julie and two children.

Michael Harmata, MS '85, PhD '90, Chem (Denmark), Norman Rabjohn Distinguished Professor of Chemistry at the University of Missouri-Columbia, had his work on chiral molecular tweezers featured on the cover of Accounts of Chemical Research. Harmata was also recently awarded an NIH grant to study antitubercular activity of benzothiazines, the chemistry of which he has pioneered.

Scott P. Lockledge, PhD '90, Chem (Klemperer) will be leaving the Chemical Heritage Foundation to try his hand at entrepreneurship. Remaining in the Philadelphia area, he will join with former Exxon colleagues to start a company developing advanced lubrication systems.

Michael ZumMallen, BS '90, ChemE, who went on to receive his PhD in 1995 at Minnesota, received Dow's Cramer Award for excellence for his role in the advancement of Dow's propylene-ethylene copolymerization technology. Mike lives in the Houston area with his wife Lynn and two children, ages 6 and 3.

Zhi Xu, postdoctoral fellow 1991-94 (Bohn), has won the University of Missouri's 2004 Faculty Entrepreneur of the Year award for his part in the invention and commercialization of a new ultrasensitive spectrophotometer. The award, which includes a cash prize, recognizes technical insights that allow increasing the device's sensitivity by one hundred fold.

Robert H. Havlin, BS '97, Chem (Oldfield), received a \$500,000 Career Award at the Scientific Interface grant from the Burroughs Wellcome Fund. Havlin, after publishing 12 papers with Professor Oldfield, obtained his PhD at Berkeley and a postdoc with NIH. His new grant is "transportable" to a new faculty position.

Laura Page Ford, MS '97, PhD '99, ChemE (Masel), was recently promoted to Associate Professor in Chemical Engineering at the University of Tulsa. She studies surface etching and bioremediation.

Antonios Doufas, MS '98, PhD '00, ChemE (McHugh), received the 2004 Kun Sup Hyun Award, one of Dow Chemical's prestigious awards, named after the founder of Dow's Polymer Processing Group. Aspects of this award-winning research are described in the Journal of Macromolecular Science, part C, volume 44.

Margaret E. Kosal, PhD '01, Chem (Suslick) has taken a new position as Science Fellow at Stanford's Center for International Security & Cooperation where she will focus on "the intersection between emerging science and domestic and international policy issues." Her work is highlighted in the December 13th issue of C&E News.

Cory J. Berkland, MS '01, PhD '03, ChemE, (Pack) has accepted an Assistant Professorship at the University of Kansas with appointments in two departments, Chemical and Petroleum Engineering and Pharmaceutical Chemistry.

Alumni Ensure Excellence

Chemical Sciences at the University of Illinois has a long tradition of excellence. Your generosity ensures future excellence.

Yes! I would like to support Chemical Sciences at the University of Illinois with a gift.

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Professorships. Commemorate illustrious faculty by supporting deserving successors (Adams, Fuson, and Westwater).

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For further information on additional funds or ways in which you or your company can support the Chemical Sciences at Illinois, contact:

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Your news (Please include newspaper clippings, photos, extra sheets, etc.)



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