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2004 BADGER CHEMIST
Matthew Sanders
Editor

Designed by the Instructional Media Development Center
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Linda Endlich
Art Direction
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Production Assistance
Dear Badger Chemists,

I am now five months into my three–year term as Chair of the Chemistry Department, and am beginning to learn the ropes. It is indeed a tremendous privilege to serve the Department in this way. But with this privilege comes an awesome responsibility. I intend to do my very best to live up to the standards of the previous chairs, and the expectations of the Department, the College, and the University.

The Badger Chemist, under the exceptional editorship of our Executive Director, Matt Sanders, is a wonderful vehicle for communicating our activities to alumni and friends. As you flip through these pages I think you will be stunned by the breadth of these activities: research accomplishments and awards, chemical education and teaching awards, outreach activities, prizes and lectureships, student awards, and much more. This is one vibrant department! No one is content to “do the minimum,” but rather we (students, staff, and faculty) are all working together, making equally valuable but different contributions, toward the common goal of being the best department that we can be.

We have an opportunity this year to hire at least three new faculty members. Two of these positions are in the interdisciplinary areas of functional organic materials, and biological mass spectrometry. Successful hires in these areas will allow us to build bridges with other departments, and indeed, with other colleges. These appointments emphasize the ever–increasing role that chemistry, which truly is the “central science,” plays in all of science, medicine, and technology. We also have a departmental position to fill, and in doing so we have adopted the strategy that has been so effective in recent years of searching broadly for the very best candidates, essentially independent of research area. To this end we interviewed 8 outstanding candidates in November and December, and are poised to make one or more offers in the next few weeks.

These are difficult financial times for the University of Wisconsin, as we are still trying to recover from the budget cuts of last year. Nonetheless, we will approach the future with grace and optimism, and will work with the College to maximize the impact of our resources. This issue of the Badger Chemist lists various trust funds and departmental accounts set up and maintained by the UW Foundation to which you can contribute if you are so inclined. We are all truly grateful for your past and future generosity.

The next few months promise to be stimulating and busy, as we put together faculty offers, begin the graduate student recruiting process, and generally go about our diverse businesses. We hope that your scientific pursuits continue to be rewarding. Keep in touch!

Jim Skinner
Chair, Department of Chemistry
cchair@chem.wisc.edu
DEPARTURES

Sheila Aiello retired in February from her position as Tom Record’s secretary. Sheila had been with the Department since 1985. Letters and Science Dean and Chemistry Professor Phillip Certain retired in June 2004 after 34 years of service to the University as Professor, Vice Chancellor, and Dean of the College of Letters and Science.


Jerry Lancaster retired from Chemistry in February 2004; he had worked in the Electronics Shop since 1991.

John Lange retired from the Chemistry Machine Shop in January 2004. He had been with the Department since 1995.

Professor Hyuk Yu retired in January 2004, after coming to the Department in 1967. Hyuk will continue as an emeritus professor.

ARRIVALS

Phill Bloedow joined the Department in September 2002 as a Program Assistant. He is the cheery voice you’ll get if you call Chemistry at 608-262-1483.

Charlene Entwistle joined the Department in November 2003, coming to our Business Office from Biochemistry. She replaced Sharon Foster.

Song Jin started as an Assistant Professor in August 2003. He and his wife

Ying Ge moved from Massachusetts, where he had been a postdoc at Harvard, after receiving his PhD at Cornell. Research in the Jin group is centered on the chemistry and physics of materials at the nanometer scale. To address these challenges in nanoscience and nanotechnology, we not only explore chemical synthesis and carry out the structural characterization of nanomaterials, but also investigate their physical properties, especially through device fabrication and physical property study. The emphasis is on developing rational strategies for chemical synthesis, assembly and integration of nanomaterials, and on elucidating fundamental synthesis–structure–property relationships, yet this interdisciplinary endeavor will also lead to a broad range of applications in nanoelectronics, optoelectronics and biotechnology. Research in our lab is highly interdisciplinary in nature. Many research projects will involve collaborations within the group, with other research groups in the department, or with physicists and/or engineers on campus.

Hieu Tran (PhD ’98, Nelsen) returned to the Department in December 2003, working to support research applications in the Chemistry Department Computer Center. Hieu’s wife, Nguyet Tran (PhD ’98, Dahl) has worked as a Postdoc and Scientist in the Dahl group since her graduation, and lectured in general Chem for the Department in summer and Fall 2004.

Craig Trewartha returned to the Chemistry Department in April 2004, replacing Jerry Lancaster. Craig was with the Department from 1991-1999, then worked at PSL in Stoughton for 5 years before returning to Chemistry.

Andrew Tseng joined the Department as a temporary assistant to Allen Claus in the Organic teaching labs in August 2002. In January 2004, he accepted our offer of a renewable position as Assistant Organic Lab Director. Andrew got his PhD in 2002 under the direction of Professor Judith Burstyn.

FACULTY AND STAFF NEWS

Thomas Brunold finished 8th in the Ironman competition held in Madison in summer 2003, and 5th in 2004, cutting 20 minutes off his time. In each case Thomas was the top finisher from the Madison area. Thomas finished second in the Madison Marathon in spring 2004, and Thomas Clark, a Clark Landis student, finished fourth.

Robert Kirchdoerfer and Paul Ellison, two second year undergraduates working in the research group of Silvia Cavagnero, received NSF REU fellowships to do research in my laboratory for the 2004-05 academic year. Jamie P. Ellis,
a first year graduate student in my group, received a 1-year graduate fellowship and became Molecular Biophysics Graduate Trainee. This is an NIH-sponsored program. **Lisa Jungbauer**, a fifth year graduate student in my group, received the Finn Wold Travel Award from the Protein Society to present the results of her research at the 18th Protein Society Annual Symposium in August 2004. **Nese Kurt**, a postdoctoral fellow in my group, received a scholarship to attend a workshop on Women in Science and Training to pursue an Academic Career offered by COACH in S. Francisco (CA).

In December, **Mark Ediger** received the James W. Taylor Excellence in Teaching Award from the Department of Chemistry. In January, Mark started serving on the Editorial Advisory Board of the Journal of Chemical Physics, and in May, he helped to organize a symposium for **Hyuk Yu**, on the occasion of Hyuk’s retirement. This year Mark also organized the Polymer Physics Gordon Conference to be held in August, and gave invited talks at Berkeley, NIST, Tohoku University (Japan), and the national ACS and APS meetings.

**Sam Gellman** delivered the Merck Sharpe & Dohme lecture at the University of Liverpool in November 2003, and the Wyeth Research Lecture at Princeton in December. In March 2004 Sam was the Merck-Frost Distinguished Lecturer at Laval University in Quebec. In June he spoke at the 30th Reaction Mechanisms Conference, in Evanston.

**Lingjun Li** gave an invited talk at the 31st Annual Meeting for the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) in Portland, OR, at a symposium entitled “Analytical Methods to Characterize the Nervous System”. She also gave presentations at the Society for Neuroscience Annual Meeting (2004) in, San Diego; at the 52nd American Society for Mass Spectrometry (ASMS) Conference on Mass Spectrometry in Nashville, TN, in 2004; at ASMS in Montreal in 2003; at the 2004 Pittsburgh Conference on Analytical Chemistry and Allied Spectroscopy (PittCon) in Chicago; at the Proteomics Workshop, Wisconsin Symposium III: From DNA to Molecular Medicine, in Madison in 2003; and at The Fourth North American FT–ICR MS Conference in Marshall, CA, in 2003. **Jim Maynard** reports that the demo lab was busy again this year. We supported both SPICE and the fledging WISL outreach programs. We assisted with setting up science weekends and **Phil Certain’s** last demo lecture, and supported area high schools with dry ice and liquid nitrogen for their science demo lectures. We assisted with **Bassam Shakhshiri’s** demonstration segment on WKOW Channel 27. One of my original student assistants, **James Broesch**, graduated this year, and traveled to Costa Rica on the thirty-first of May to study primates in the wild. **Jesse Wilkins** (’05), another of my student assistants, has received a $2500 grant and is moving upstairs to **Laura Kiessling’s** lab. **Ryan Baxter**, another student in the lab, had similarly gone upstairs to the research labs the previous semester. It has been a great pleasure watching these young people grow into competent talented academics. I am sure they will become great scientists as well. I also received a professional development grant from the Academic Staff PDRC, which I used to “observe and discover best practices” at four big ten conference demonstration labs from 18-28 May 2004. The colleges I will visit are: Minnesota, Indiana, Michigan, and Northwestern.

**Bob McMahon** is a co-organizer for the series of workshops funded by the NSF Organic Chemistry Dynamics program. The workshops afford the opportunity for research discussions among early-career faculty, established faculty, and members of the NSF organic chemistry program staff. Participants at the 2003 workshop, held in Newport, RI, included **Art Cammers-Goodwin** (Kentucky; PhD ’94, Vedejs), **Natia Frank** (Washington; MS ’90, West), **Tyler McQuade** (Cornell; PhD ’98, Gellman) and **Sandro MecoZZi** (UW-Madison). Participants at the 2004 workshop, held at the Heidel House Resort in Green Lake, WI, included **Igor Alabugin** (Florida State; PD ’96-’00, Zimmerman). **Dan Appella** (Northwestern; PhD ’98, Gellman). **Rustem Ismagilov** (Chicago; PhD ’97, Gellman). **Gustave Clément** (Northwestern; PhD ’98, Gellman). **Phil Appella** (Northwestern; PhD ’98, Gellman). **Rustem Ismagilov** (Chicago; PhD ’98, Nelsen), and **Alan Kennan** (Colorado State; PhD ’97, Whitlock). Bob presented invited lectures at the International Symposium on Reactive Intermediates and Interesting Molecules (Reykjavik, Iceland), the Kyushu International Symposium on Physical-Organic Chemistry (Kyushu, Japan), and the Heron Island Conference on Reactive Intermediates (Heron Island, Australia). Also attending the conference in Iceland were **Roger Alder** (Bristol; organic visitor), **Henning Hopf** (Braunschweig; PhD ’67, Goering), **Asgeir Konradsson** (PhD ’04, Nelsen), **Pete Ogilvy** (Aarhus; BS ’77, Zimmerman), and in Australia were **Tim Clark** (Erlangen; organic visitor), **Armin de Meijere** (Göttingen; organic visitor), and **Josh Schantl** (Innsbruck; PD Zimmerman and organic visitor). Bob also presented lectures in Europe, where he had the opportunity to visit several former organic chemistry visitors to the Department: Essen-Duisburg (Frank Klärner), Amsterdam, Cologne (Albrecht Berkessel), Kiel, Bochum (Wolfgang Kirrme), and Aachen (Carsten Bolm).

The Reaction Mechanisms Conference (Northwestern University, June 2004) had strong Wisconsin participation. **Igor Alabugin** (Florida State), **Sam Gellman**. **Bill Jones** (Rochester; PD, Casey), and **Frank Klärner** (Essen; organic visitor 1982) presented invited lectures. **Dave Ballweg** (grad student at Northwestern; BS ’02, West), **Margaret Biddle** (Reich), **Nate Bowling** (McMahon), **Amanda Jones** (Reich), **Seol Kim** (McMahon), and **Susie Przybylinski** (McMahon) presented posters. **Randy Seburg** (Merck; PhD ’93, McMahon) poster was selected for oral presentation. **Rustem Ismagilov** (Chicago; PhD ’98, Nelsen), **Bob McMahon**, and **Howard Zimmerman** served as session chairs. Participants included many other Wisconsin alumni: **Dan Appella** (Northwestern, PhD ’98, Gellman), **Ed Clennan** (Wyoming; PhD ’77, Nelsen), **Dave Crumrine** (Loyola; PhD ’71, Zimmerman), **Richard Johnson** (New Hampshire; PD Zimmerman), **Andrei Kutateladze** (Denver; PD Zimmerman), **Tyler McQuade** (Cornell; PhD ’98, Gellman), **Caroline Pharr** (McMahon), **Paul Scudder** (New College; PhD ’77, Trost), **Greg Slough** (Kalamazoo; Visiting Professor ’92-’93, Casey), **Lynn Sousa** (Ball State; PhD ’71, Zimmerman), **Stu Staley** (Carnegie-Mellon; PD Zimmerman), **Phillip Thomas** (McMahon), and **Gary Weisman** (New Hampshire; PhD ’76, Nelsen). **Bob McMahon** serves on the Governing Board for the conference.

**Cathy Middlecamp** will be teaching in the ILS program starting spring 2005, the first Chemistry instructor to do so since **Aaron Idhe**.
Ron Raines presented invited lectures at the 3e Symposium annuel du CREFSIP in Québec City, the 227th National ACS Meeting in Anaheim, CHI symposium on Engineering Protein Therapeutics, and Gordon Research Conferences on Collagen (2003) and Bioorganic Chemistry (2004).

Dan Rich was awarded a “Distinguished Alumni Award” from the University of Minnesota Institute of Technology at the May 7, 2004 U. of M. Commencement. He received his B. Chem. degree in 1964. University of Minnesota Professor and UW-Madison alumnus, Wayland E. Noland, who was his undergraduate research advisor, was his escort at the graduation ceremony. Dan chaired the 29th National Medicinal Chemistry Symposium, which was held in the Union Theater on the Madison campus, June 27–July 1. Over 350 registrants attended the meeting, mostly from the pharmaceutical industry. He was selected one of the 2003–2004 Novartis lecturers, and he presented lectures at the Novartis research institutes in Japan, Basel, and Vienna. Dan was a plenary lecturer at the International Proteolysis Society, Nagoya Japan, and at the International Society of Protease Inhibitors, Kyoto, Japan, in November 2003. He presented the Varcoe Tyler Lectures at the Purdue University School of Pharmacy in 2003.

In 2003 Jim Skinner was elected Fellow of the AAAS, received the UW Chancellor's Distinguished Teaching Award, and gave the Reilly Lectures at Notre Dame. He became Department Chair in July 2004. Bob West, Director of the Organosilicon Research Center, continues to have a highly international group. Currently the group contains researchers from Russia, Ukraine, People's Republic of China, England, Japan, Korea, and the United States. This year Bob has presented the group’s research at several international conferences in the United States as well as in Germany and Russia. Last November, while doing research at the Technion in Haifa, he was an invited lecturer at three Israeli universities. Bob went to Japan in October 2004 for a few weeks and hopes to return to Israel next November. Bob is currently in the process of helping organize the 3rd Research Trends in Science and Technology conference, to be held in Lebanon in March 2005.

Martin Zanni received the Beckman Young Investigators Award and a National Science Foundation CAREER Award. He organized the symposium “Frontiers in Biophysical Methods” at the 2003 National ACS Meeting in New York City. He now has five graduate students, his group has purchased a second femtosecond laser system, and they have published their first three papers!

Howard Zimmerman made his usual April trip to Washington, D. C. However, the most rewarding event was his chairing a session at the Reaction Mechanisms Conference where his former student, Igor Alabugin (PD ’96–’00) gave an especially brilliant lecture. At that meeting there were a number of his former students. Besides, Igor, others attending included Andrei Kutateladze (PD ’82–’85), Professor at the University of Denver, Stu Staley (PD ’63–’64), who is a Professor at Carnegie-Mellon, and Richard Johnson (PD ’77–79), a Professor at the University of New Hampshire. Zimmerman has been organizing the Pacificchem2005 Symposium on Organic Photochemistry to be held in Honolulu. There are speakers from the U.S., Canada, Japan, England, Germany and Italy.
When I joined the Chemistry Department in the fall of 1964—the Chemistry Building was the old chemistry building, now remodeled as Chamberlin Hall. What is now the Mathews wing was the new Chemistry Research Building (CRB). The first floor of CRB was devoted to macromolecular research, including the Ferry and Williams groups. The second floor included the Theoretical Chemistry Institute (south side) and the NMR lab and Paul Bender’s office. Upper floors were for organic chemistry.

For lack of space elsewhere, my office was on the first floor of CRB in the northeast corner, next to the receiving room and loading dock. All theoretical chemistry graduate students were in an old house across Johnson St. Both Johnson Street and University Avenue had trees along the sides. I had laboratory space in the southeast corner of the basement of the old building and office space for experimental graduate students on the third floor of the wooden, central old section. Prior to setting up our own ESR spectrometer we shared one with the Willard group and some physics groups. It was located in Sterling Hall, then the (only) physics building.

At that time the University of Wisconsin was the Madison campus. The state colleges, later state universities, were a separate system. Within the next few years the Milwaukee school was converted to UW-Milwaukee. In principle there was just one university, with two campuses, and one faculty that met in Madison. There was no Faculty Senate; all faculty meetings were open to whatever faculty came. A little later UW-Green Bay and UW-Parkside were established and UW-Milwaukee was recognized as a separate university. A University Faculty Assembly was created as the representative faculty body for the system.

Freshman chemistry teaching was the responsibility primarily of faculty in the inorganic division, although John Willard also regularly taught freshmen. Emery Fisher, who was chair of center system chemistry, and Aaron Ihde, with responsibilities also in History of Science and Integrated Liberal Studies, also taught freshman chemistry.


Our Awards

UW Chemists continue to garner significant awards.

**FACULTY AND STAFF AWARDS**

**Helen Blackwell** was selected as a recipient of the 2004 Shaw Scientist Award. These awards were established by the Milwaukee Foundation in 1992 and they are intended to advance research in the fields of biochemistry, biological sciences, and cancer. The program is designed to give encouragement to young scholar-scientists who show great promise of substantial scientific achievement. These awards are very competitive and it is a distinct honor to be chosen.

Professor **Steve Burke** received the 2004 Chancellor's Award for Excellence in Teaching. This award is the highest recognition at the University for teaching excellence and is a particularly important recognition.

**Qiang Cui** was selected as a Sloan Research Fellow for this year. These awards are intended to enhance the careers of the very best young faculty members in specified fields of science. There are typically only 116 fellowships awarded annually in seven fields: chemistry, computational and evolutionary molecular biology, computer science, economics, mathematics, neuroscience, and physics, so this is a real honor that recognizes the excellence of Qiang’s scientific program.

**Mark Ediger** received the 2003 James W. Taylor Excellence in Teaching Award, sponsored by Pharmacia. The company made a large gift in 2003 to permanently endow the award.

Chemistry Building Manager: **Tom Foseid** received one of two 2003-04 Classified Staff Excellence Distinguished Service Awards given this year, for classified employees with 16 or more years of experience. Tom has been with the Department since 1984, and he was very instrumental in facilitating the recently completed remodeling of the older wings. This award continues a tradition of campus awards given to the excellent staff we are blessed with here in Chemistry.

**Lingjun Li** received the American Chemical Society Mass Spectrometry Research Award in 2004. The award was presented at the opening ceremony of the 52nd ASMS Conference on Mass Spectrometry on May 24, 2004, in Nashville, TN. 5800 researchers in the mass spectrometry field attended the conference this year. The award was selected based on a proposal entitled “Developing New MS Strategies for Probing Neurochemical Communications”. Three awards are given each year to selected young investigators within four years of their tenure-track position. In addition to being a nice recognition in the field, the award also comes with $25,000 research money.

The American Association for the Advancement of Science has announced that **Bob McMahon**, **Cathy Middlecamp**, and **Jim Skinner** have been selected as Fellows of the AAAS. Each year since 1874, the AAAS Council has elected members whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished. Bob was honored for his “distinguished contributions to organic and organometallic photochemistry and the study and characterization of reactive intermediates and thermal and photochemical rearrangement mechanisms for organic and organometallic compounds.” Cathy was honored for her “exemplary leadership in both chemistry and higher education, for service on national projects related to the learning of science, and for the development of culturally inclusive curricular materials.” Jim was honored for his “distinguished contributions to statistical mechanics, particularly dephasing, spectral line shapes, single molecule spectroscopy, and vibrational relaxation in condensed phases.” This gives our department the remarkable number of three people who have been selected this year for this honor.

**Ron Raines** was named a 2004 recipient of the Arthur C. Cope Scholar Award by the American Chemical Society. The Cope Scholar Award is given to recognize and encourage excellence in organic chemistry, and consists of $5,000, a certificate, and a $40,000 unrestricted research grant. It is a terrific honor and it speaks to the significance and quality of Ron’s research program.

**Bassam Shakhashiri** was elected to the Hall of Fame for the Alpha Chi Sigma fraternity. Alpha Chi Sigma is the Chemistry Fraternity started in 1903 at Wisconsin by J. Howard Mathews (our middle building is named after Mathews). The significance of this election is best appreciated by examining the list of distinguished chemists who make up the Hall of Fame: Roger Adams; Arnold O. Beckman; Herbert C. Brown; Wallace Hume Carothers; James Bryant Conant; Elias J. Corey; Frederick Gardner Cottrell; Farrington Daniels; Peter J. W. Debye; Paul J. Flory; Mary L. Good; Joel H. Hildebrand; Darleane C. Hoffman; Charles James; Gilbert Newton Lewis; Warren K. Lewis; Carl Shipp (Speed) Marvel; Thomas Midgley, Jr.; James Flack Morris; Lars Onsager; Donald F. Othmer; Linus C. Pauling; John Howard Perry; George C. Pimentel; Kenneth S. Pitzer; Glenn T. Seaborg; Frank Clifford Whitmore; Hobart Hurd Willard.

Professor **Ben Shen** has been selected to hold the first Charles Johnson Chair of Pharmacy. In addition, he was promoted to the rank of full Professor. Charles Johnson was an alumnus of the UW School of Pharmacy and had a long and distinguished career in the pharmaceutical industry before retiring to northern Wisconsin some years ago. He was a great friend of UW Pharmacy and helped support many research initiatives over the years since his retirement. The Chair was established through an endowment provided in his will last spring. This appointment is a direct reflection of the strength and significance of Ben’s research program.

President Katherine Lyall and the Board of Regents have approved the appointment
of **Lloyd Smith** as John D. MacArthur Professor. This faculty Chair recognizes Lloyd’s pioneering research work in DNA sequencing, analysis, and applications and it is a great honor. Professor Jamie Thompson holds the only other John D. MacArthur Chair.

Professor **John Wright** has been elected as a Fellow of the American Physical Society. His Fellowship Certificate reads “For fundamental contributions to the development, understanding, and applications of multiresonant four wave mixing methods for electronic and vibrational molecular condensed phase spectroscopy.”

**STUDENT AWARDS**

Student scholarships and research awards are made possible by generous donations from alumni, friends, and companies that recognize the value of awards allowing both graduate and undergraduate students to spend more time on research, one of the strengths of this institution. Gifts like these from alumni, faculty, and friends of the Department allow us to make a difference in the academic and professional lives of our students. Teaching awards come from both Departmental and campus sources, and recognize the Department’s second fundamental mission - exceptional teaching at both the undergraduate and graduate levels. In this section we salute not only the fine students who have worked hard to earn these honors, but also the donors who have made them possible.

The Outstanding TA Awards for 2002-2003 were presented in November 2003 at the Excellence in Teaching Symposium. TAs and Faculty Assistants are selected to receive these awards each year on the basis of excellent teaching evaluations from students and faculty. Awarded students included (left to right): **Patti Shafer** (Cui), **Sam Pazici** (Bursten), **Brian Majestic**, and **Kim Kutz** (Li).

Graduate scholarships and fellowships come from industrial and alumni donors, and also from the Graduate School and outside organizations. Awards and the students who received them during 2003-2004 included: The Abbott Fellowship went to **Eric Voight** (PhD ’04, Burke), **Jennifer Lawrence** (PhD ’04, Nathanson) was the Martha Gunhild Week Fellow; a Merck Fellowship went to **Yiyong He** (Ediger); and **Jordan Schmidt** (Skinner) continued on the Hertz Fellowship. **Arianne Baker** (Hamers), **George Barnes** (Crim), **Anne Bentley** (Ellis), **Andrew Crowther** (Crim), **Adam Fiedler** (Brunold), **Jonathan Grimm** (Lee), and **Jack Sadowsky** (Gellman) were all National Science Foundation Fellows. **Emily Payne** (Gellman) was a National Defense Science and Engineering Fellow. **Michael Santiago** (Bursten) received an NRSA fellowship from NIH. New student **Soo Hyuk Choi** (Gellman) received a Fellowship from Samsung, and **Sang-Hee Shim** (Zanni) received a fellowship from the Kwanjeong Educational Foundation in Korea.

ACS Division of Organic Chemistry Fellowships went to **Jeffrey Johnson** (Casey); **Emannuel Troyanski** (Raines; Abbott Laboratory Fellowship) and **Matt Soellner** (Raines; Abbott Laboratories Fellowship).

**Amanda Brooks** (Brunold), **Tim Jackson** (Brunold), **Lisa Jungbauer** (Cavagnero), and **Margaret Schmitt** (Gellman) were Biophysics Trainees during 2003-04. **Dalia Dhingra** (Schwartz) is a Computations and Informatics in Biology and Medicine Trainee. **Erin Carlson** (Kiessling), **Emily Dykhuizen** (Kiessling), **Wayne Kontur** (Record), **Sannali Matheson** (Markley), **Justin Murray** (Gellman), and **Susan Reslewic** (Schwartz) were Biotechnology Trainees. **Melisa Cherney** (Bursten), **Heather Johnson** (Thorsen), **Kimberly Kutz** (Li), **Eric McElroy** (Kiessling), and **Reagan Miller** (Lee) were Chemistry-Biology Interface Trainees.

Divisional Awards for Excellence in Research were presented to **Van Chen** (Analytical, PhD ’04, Smith), **Timothy Jackson** (Inorganic, Brunold), **Wensha Yang** (Materials, sponsored by Rohm and Haas, Hamers), **Eric Voight** (Organic, Burke), and **Chris Elles** (Physical, PhD ’04, Crim). Excellence Award recipients are advanced graduate students in each division who are selected as leaders in their fields. The award is made possible through donations to the Department.

Two special organic Citizenship awards were given this year to **Greg Hanson** (Burke) and **Matt Bowman** (Blackwell) who went above and beyond to institute an organic “boot camp” review session for Chemistry 343 students. Matt and Greg are shown below receiving their awards from **Professor Hans Reich**.

Undergraduate research support was provided during Summer 2003 from the following sources: Edwin M. and Kathryn M. Larsen Scholarships were presented to **Melissa Ecker** (Weisshaar), **Emily Guerard** (Blackwell), and **Ryan Jeske** (Blackwell); Wayland Noland Undergraduate Research Fellowships went to **Kyle Pape** (Landis), **David Pribe** (Casey), and **Stephen Steiner** (West); the Edward Panek Memorial Scholarship went to **Fatlume Berisha** (Hamers), Walter and Young-Ja Toy Scholarships were given to **Fatlume Berisha**, **Nick Kotloski** (West), **Gwyneth Lee** (Casey), and **Laura Luther** (Burke). The following undergraduate students received scholarships during the academic semesters: **Anthony Perry** from East High received the first Ackerman Scholarship; **Ben Knox** also received an Ackerman Scholarship; **Nathan Aumock** received the Dr. Norbert Barwasser Scholarship; **Shasta McGee** and **Michelle Stengel** received Margaret McLean Bender Scholarships; **Melissa Ecker**, **Chris Painter**, and **Nicole Temple** received Don Brouse Memorial Scholarships; **Fatlume Berisha** and **Ryan Casey** received Richard Fischer Scholarships; and **Ryan West** won the Kimberly-Clark Scholarship. **Ryan Baxter**, **Amanda Bowman**, **Craig Holler**, **Ryan Jeske**, **John Kaminski**, **Gwyneth Lee**, **Laura Luther**, **Jordan Olson**, **Priscilla Shih**, and **Jennifer Yang** received Student Support Scholarships.

(Continued on page 9 ...)
New Badger Chemists

DECEMBER 2003

John David Bak (Wright)
Fluorescence and Atomic Defect Properties of Rare Earth Doped Barium Titanate

Jeff D. Ballin (Record)
Binding Studies of Model Oligopeptides to Nucleic Acids: DNA Length Dependence, Coulombic End Effect, and Amino Acid Composition Effects

Martin Joseph Bevan (Reich)
I. Dynamic and Thermodynamic Investigation of Thienyllithium Based Lithium/Tellurium and Lithium/Iodine Ate Complexes

Xiaoyu Chen (Smith)
Mass Spectrometry in Biopolymer Analysis

Weiguo Cheng (Yu)
Part I. Viscoelastic Properties of Random Copolymer at Air/Water Interface and the Frequency Dependence Part II. Magnetic Resonance Imaging of Surface of Medical Devices and its Biocompatibility

Jennifer Lynn Craft (Brunold)
Spectroscopic and Computational Insights into Nickel Biocatalysts

William David Thomas (Kiessling)
Synthesis of Glycoconjugates for the Study of Carbohydrate-Protein Interactions

MAY 2004

Heike Blad (Markley)
Dynamics of Biological Macromolecules as Probed by NMR

John Emmerson Campbell (Burke)
C3-Symmetric Macrocyclic Thiotrihydroxymethyl Scaffolds for Templated Synthesis of Cyclic Natural Products

Joshua James Higgin (Raines)
Small-Molecule Enzyme Inhibitors Utilizing Active-Site Metal Chelation: Prolyl 4-Hydroxylase and Microbial Ribonucleases

James Matthew Hutchison (Crim)
Photodissociation Dynamics and Spectroscopy of Small, Isolated, Vibrationally Excited Molecules: Ammonia and Methanol

Jennifer Rae Lawrence (Nathanson)
Surfactant Control of Gas Uptake into Supercooled Sulfuric Acid Solutions

Hunkyun Pak (Yu)
Physical Properties and Application in the Confined Geometrical Systems

Greta Jasmine Wegner (Corn)
Surface Plasmon Resonance Imaging Studies of Protein Interactions Onto Peptide and Protein Microarrays

Juan Xie (Brunold)
Spectroscopic and Electronic Structure Studies of FE- and MN- Dependent Superoxide Dismutases: Geometric and Electronic Factors Contributing to Catalytic Activity

AUGUST 2003

Daniel Michael Besemann (Wright)
Inhomogeneous Broadening, Dephasing, and Interference Effects in Multidimensional Vibrational Spectroscopy

Wei Cai (Hamers)
Chemical and Biochemical Modifications of Silicon Surfaces

Rakwoo Chang (Yethiraj)
Computer Simulation and Theoretical Studies of Polyelectrolyte Solutions and Diffusion in Random Media

Jeffrey Steven Dougan (Treichel)
Trinuclear Rhenium(III) Halide Clusters with Carboxylate Ligands

Liang Fang (Hamers)
Attachment of PI-Conjugated Molecules on Si(001) Surfaces and Its Application in Molecular/Organic Electronics

Michael Aaron Gelman (Gellman)
Synthesis and Biological Applications of Cationic Beta-Peptides and Styrenic Polymers

Joseph Michael Langenhan (Gellman)
Investigations of Strand-Forming Foldamers

Manchun Lu (Smith)
Surface Invasive Cleavage Reactions for Single Nucleotide Polymorphism Analysis

Robert McKenzie Owen (Kiessling)
Development of Specifically Functionalized Antagonists for the Exploration of Multivalent Receptor-Ligand Interactions

Douglass Rodger Sillars (Landis)
Mechanistic Investigations in Metalloocene-Catalyzed Alkene Polymerization Through Direct Observation of the Catalytic Species
AUGUST 2003

Jamie Allan Coleman (Stahl)

DECEMBER 2003

Michael John Birkeland (Markley)
Jodie Lynn Brice (Stahl)
Melisa M. Cherney (Burstyn)
Beatriz Calma DeGuia (McMahon)
Bryan Charles Katzenmayer (Casey)
Andrea J. Lee (Burstyn)
Christopher Paul Pawela (Farrar)
Samuel Robert Pazicni (Burstyn)
Ting Zheng (Smith)

MAY 2004

Mithra Beikmohamadi (Crim)
Megan Catherine Hyland (Cui)
Johanna Yin Hoi Kwok (Corn)
Diane Loretta Nutbrown (Moore)
Margaret Regine Pancost (Stahl)
Michael Santiago (Burstyn)

Our Awards

(continued from page 7)

2004 Daniel L. Sherk Awards for Excellence in Undergraduate Research were given to Zach Heiden (BS ’04, Treichel), Kari Midthun (Smith) and Jordan Olson (Mecozzi). These awards are sponsored by the Sherk Fund, the Chemistry Department, and the ACS local section. Each student presented a poster at this year’s Chemistry Undergraduate Poster Session.

The College of Letters and Science Faculty Honors Committee named Lawrence Klein the 2004 F. Chandler Young Distinguished Senior Honors Student. The award, including a certificate and a prize of $2,500, was presented at the Honors Reception at the Kohl Center in May. Lawrence has maintained a 4.0 GPA in Comprehensive Honors while double majoring in Biochemistry and Physics and completing research, which led one of his referees to call him “the most scientifically mature undergraduate researcher I have come across in 22 years in Madison”. He has worked most recently with Jim Weisshaar, and his research has already resulted in a poster paper delivered at the Biophysical Society Annual Meeting. Funds for this award were generously provided by the Norman Bassett Foundation in honor and memory of F. Chandler Young, who once served the Foundation as Vice President. Mr. Young for many years was Associate Dean in the College of Letters and Science and Vice Chancellor for Student Affairs at the UW-Madison.

The ACS has awarded the 2004-2006 Irving S. Sigal Postdoctoral Fellowship to Matthew G. Woll (PhD ’04, Gellman). Matt is already the recipient of a 2002 ACS Organic Division Graduate Fellowship and the 2003 Excellence in Research Award. He began his postdoctoral studies in August at Harvard University in the laboratory of Professor Eric Jacobsen. There, he will be studying the use of natural biological catalysts to guide the development of synthetic substitutes that will be more broadly useful in synthetic organic chemistry. The goal is to make better medicines with less environmental impact. The award is named in memory of Irving S. Sigal, a chemist who died in the 1988 bombing of Pan Am Flight 103 over Lockerbie, Scotland. This postdoctoral fellowship is awarded each year to a scientist whose work addresses a significant problem involving both chemistry and biology. Dr. Irving S. Sigal was a medicinal chemist working at Merck & Co. Inc. when he died at the age of 35. In 1995, Dr. Sigal’s widow, Catherine T. Sigal, Ph.D., established the fellowship that is currently valued at $45,000 per year. Sigal, herself a biochemist, is employed by the Juvenile Diabetes Foundation of New York City.
The first Chemistry Colloquium of the year was presented by Professor Theodore Brown from the University of Illinois-Urbana Champaign. His talk was titled “The Metaphorical Origins of Scientific and Artistic Creativity.” Fleming Crim spoke in October on “Controlling Reactions and Watching Energy Flow in Vibrationally Excited Molecules.” Bob Hamers talked about “Interfacing Microelectronics with Organic, Biological, and Nanoscale Materials” in November. Dr. Joel Nelson from WARF spoke on “PHASE TRANSITIONS: Perspectives on Alternative Careers for Chemistry Graduates.” Ron Raines spoke in March on “Nature’s Rope: The Chemistry of Collagen.” Hyuk Yu spoke in April on the lessons he learned over nearly four decades in this University. Jim Skinner completed the series in May, speaking about “Dynamics in liquid water and aqueous solutions of biologically relevant molecules.”

Kurt Binder from the University of Mainz presented the 2003 Ferry Lectures in September. He spoke on “Computer Simulations of the Glass Transition in Thin Films,” and “Computer Simulation of Polymer Brushes.”

Kevin Gardner from the University of Texas Southwestern Medical Center presented the Physical Chemistry Meloche Lecture in March. Professor Carol Robinson from Cambridge University presented the Analytical Meloche Lecture in April.


**MCELVAIN SEMINAR SERIES**

The McElvain seminar series continued to sponsor talks from a variety of speakers across industry and academia. Robert Bergman (Inorganic) from the University of California, Berkeley, and Albert Stolow (Physical) from the Steacie Institute for Molecular Sciences, presented talks in November. Professor Gavin MacBeath from Harvard was a January Analytical speaker. Professor Erik Sorensen (Organic) from Princeton spoke in February. William Nugent (Organic) from Bristol-Meyers Squibb and Professor Michael Fayer (Physical) from Stanford visited in April, and Dr. Charles Cantor (Analytical) from Sequenom Inc. and Lou Noodleman (Inorganic) from Scripps Research Institute spoke in May.

**LINCOLN SEMINAR SERIES**

This student presented seminar series continued in 2003-04, with talks from senior students in a variety of organic research groups. The seminars are named after Aza- riah Thomas Lincoln, the first person to be awarded a chemistry Ph.D. at the University of Wisconsin-Madison.

**HIRSCHFELDER PRIZE**

Eric Heller (Harvard) gave the 2003-04 Hirschfelder Prize Lectures in October 2003. Titles were: “Making waves: From quantum corrals to concert halls”; “Time-dependent methods in spectroscopy”; “The many faces of tunneling”. The lectures were stimulating and beautiful and it was overall a terrific visit. Casey Hynes (Colorado) will give the 2004-05 lectures October 18-20, 2004.

TCI received a handsome and generous bequest of over $2M from Betty Hirschfelder. (Betty died in 2002.) The money is targeted for various TCI programs, and for example provides a permanent endowment for the Hirschfelder Prize.

**DEPARTMENT NEWS**

Chemistry 201, “Environmental Chemistry & Ethnicity” was selected as a 2004 national model for the SENCER program (Science Education for New Civic Engagement and Responsibilities,” a project of the AAC&U. It was featured at this summer’s SENCER Institute in San Jose, CA. This course, taught by Cathy Middlecamp and Omie Baldwin, is the first chemistry course in the UW System to meet the Ethnic Studies Requirement.

Bob West and Bob Hamers are listed among the most cited scientists in the last two decades. Twenty-nine UW-Madison faculty members are among the most cited researchers in their fields, according to a recent citation survey by Thomson ISI, a leading citation indexing company. Citations of published research are key indicators of the influence of scholarly work. The survey, which covered 21 broad subject areas in the life sciences, medicine, the social sciences, the physical sciences and engineering, covers the period from 1981 to 1999. Less than one-half of one percent of researchers who published during that time are listed, giving some indication of the broad influence of their published works. “Having your work cited by your colleagues is high praise,” says Martin Cadwallader, dean of the UW-Madison Graduate School. “It tells you that your work is valued by others and is being used by many people in your field as a foundation for understanding and advancing new knowledge.” Cadwallader says he was pleased to see not only the high number of faculty who made the exclusive list, but to see that the UW-Madison faculty on the list represent a broad range of disciplines, from the natural sciences to the social sciences, education and engineering. Those UW-Madison faculty listed among the most highly cited include: Lyn Y. Abramson, psychology; Ross B. Barmish, electric and computer engineering; George E. P. Box, industrial engineering and statistics; Larry L. Bumpass, sociology; Stephen R. Carpenter,
zoology and limnology; Y. Austin Chang, material science and engineering; Carl de Boor, mathematics; Hector F. DeLuca, biochemistry; Dennis Charles DeMets, geology and geophysics; John S. Gallagher, astronomy; Oliver J. Gimther, animal health and biomedical sciences; Ric R. Grummer, dairy science; Robert J. Hamers, chemistry; Franz J. Himpsel, physics; John E. Kutz-bach, atmospheric and oceanic sciences; Elmer H. Marth, food microbiology and toxicology and food science; John S. Mathis, astronomy; Alexander Nagel, mathematics; Norman F. Olson, food science; Thomas Reps, computer science; Larry Samuelson, economics; Blair D. Savage, astronomy; Mark S. Seidenberg, psychology; Thomas D. Sharkey, botany; John W. Valley, geology and geophysics; Grace Wahba, statistics; Kenneth D. West, economics; Robert West, chemistry; Kenneth M. Zeichner, curriculum and instruction.

Something noteworthy: new passenger elevators for the Mathews and Daniels buildings will be installed next summer.

The Chemistry Building Addition/Renovation project received a “Citation Award” in the 2003 Design Share Award competition. You can see the details at http://www.designshare.com/Awards/2003/projects/project_view_narrative.asp?project_id=386. Design Share is an international forum for innovative schools and learning environments. The purpose of the award program is to share exemplary design ideas, case studies, and best practices that enhance learning in projects from preschool through higher education.

Professor Timothy Lodge (PhD ’80, Schrag) from the University of Minnesota Departments of Chemistry and Chemical Engineering & Materials Science won the 2004 Polymer Physics Prize from the American Physical Society. The prize was awarded at the March 2004 Annual Meeting. Tim’s citation reads “For outstanding contributions to the fundamental understanding of polymer chain diffusion and segmental-chain dynamics.”

“ONCE UPON A CHRISTMAS CHEERY”

Bassam Shakhashiri’s 34th annual Christmas presentation played to packed houses on the weekend of Dec. 6 and 7, 2003. As usual, it was later broadcast on Public Television stations. The 2004 shows will be Dec. 3 and 4.

NATIONAL MOLE DAY

The theme for National Mole Day, October 23, 2004, was “PI a la Mole”. Chemists, especially chemistry teachers, are encouraged to celebrate National Mole Day as a way to show how chemistry is a vital, positive force in everybody’s lives.

GLASS SHOP NEWS

Tracy Drier has had a busy year in the glass shop, with 1,000–1,500 projects completed. He also attended the annual scientific glassblowers symposium in Saratoga Springs, New York. The symposium is a great opportunity to share information and techniques with other scientific glassblowers and stay current with the latest techniques and equipment. This year’s agenda included technical seminars on glass-related topics, hands-on workshops, technical papers, presentations and technical posters. Tracy presented a poster on our own Wisconsin Schlenk line (Stahl). There was encouraging feedback from around the country regarding glass shops making Wisconsin lines for their customers. Tracy will be in charge of planning the seminar program for next year’s symposium, to be held in June 2005.

With a generous grant from the Institute of Chemical Education, we completed the construction of a portable glassblowing podium. The podium was designed to be used for educational outreach programs. Tracy participated in Professor Shakhashiri’s annual “Once upon a Christmas Cheery” program and visited a local junior high school.
A DECADE OF CHANGE FOR THE CHEMISTRY LIBRARY

By Emily Wixson
Chemistry Library/Reference and Instruction
ewixson@library.wisc.edu

Visit the Chemistry Library, Room 2361, Chemistry Building, for the first time in ten years, and you will observe many changes. Apart from the journal and book stacks standing in the same location at the back of the library, the physical layout was changed during the 2001 remodeling project. The circulation desk now stands to the left of the entrance. A half-glass wall encloses the copy center to the right of the entrance. Staff offices and a computer terminal room line the far-left wall. These spaces have windows and half-glass walls that create a sense of openness. Round tables and lightweight chairs replaced the dark, heavy, wooden, rectangular library tables and chairs.

Most noticeable is the light in the library. The wall separating the library from the second floor balcony was pushed out and replaced by a floor-to-ceiling glass wall. This glass wall lets in light and affords an eye-level view of the colorful glass mobile hanging in the first floor lobby entrance. Sunlight filters through the mobile and casts a glow in the library at different times of the day. A low shelving unit holds the most recently received issues of current journal subscriptions. Comfortable lounge furniture makes this area an inviting space to peruse the new journal issues, prepare for class, or read a book.

You will not see the greatest difference between the Chemistry Library of 1994 and today’s Chemistry Library. The greatest difference is the transition from print copy to electronic versions of library materials during the last decade. Electronic access to library materials has revolutionized the way libraries do business and the way scientists access information for their research and teaching. Journal articles and reference works such as CRC Handbook of Chemistry and Physics are now delivered directly to the researcher’s desktop via the UW-Madison Libraries’ web site (www.library.wisc.edu). Requests for articles not owned by campus libraries are processed and delivered electronically. Students access electronic course reserve readings through their “MyUW” accounts. Fewer people visit the library because they can conduct literature searches and access scientific literature from their offices and labs. The Chemistry Library maintains a web site (www.chemistry.library.wisc.edu) to provide information about the library and guide users to library resources.

What follows are some examples of the electronic library world chemists at UW-Madison now inhabit.

* The Chemistry Library maintains subscriptions to print and online versions ACS journals. Library users can still find the Journal of the American Chemical Society Volume 1, 1879, to present in the journal stacks. Users can also access the entire JACS online via the UW-Madison Libraries web site.
* Beginning with 2004 issues, Royal Society of Chemistry journals are available electronically only. We no longer purchase print subscriptions to RSC journals.
* Along with the most current edition, the Chemistry Library retains print versions of older editions of the venerable CRC Handbook of Chemistry and Physics. Users may now access and search the web edition via the CRC web site.
* Knovel Engineering & Scientific Online References provides online access to standard chemistry handbooks like Lange’s Handbook of Chemistry, Hawley’s Condensed Chemical Dictionary (14th Edition), Smithsonian Physical Tables (9th Revised Edition), and Chemistry of the Elements (2nd Edition). It also indexes reference books in related fields like adhesives, biochemistry, ceramics, food science, environmental science, pharmaceuticals, polymers, and safety.
* During a recent book-shifting project, space was preserved for the latest print edition of the Kirk-Othmer Encyclopedia of Chemical Technology. This 25+ volume set is also available online.
Gmelin retains its place in the reference collection, but you will not find the print Beilstein Handbook in the Chemistry Library. Access to both Gmelin and Beilstein is via MDL CrossFire software. CrossFire is searchable in multiple ways, including chemical structure, formula, physical property parameters, chemical reaction, and bibliographic data. Chemistry Library staff maintain the Beilstein Help site (http://chemistry.library.wisc.edu/beilstein/home.htm) to assist users with searches and client accessibility.

* Black bound volumes of Chemical Abstracts no longer line the back shelves. SciFinder Scholar interface provides access to Chemical Abstracts, CAS Registry file, a reaction database (CAS Reacts), a commercially available substances database (ChemCats), domestic and international regulatory information (ChemList), and Medline. Many types of searches are possible: author, natural language, chemical structure (partial or exact), name, formula, chemical reactant or product. Links to citing and cited references from 1999 forward are provided. The chemical substance record contains calculated property data for many substances.

With the delivery of so much information via the Internet, one might question the necessity of library staff. On the contrary, library staff is vital to connecting users with the complex and vast network of available information. We pursue campus-wide licenses and deliver multidisciplinary library resources to a dispersed audience across the library network. We assist users in navigating the electronic library and provide reference assistance. We provide document delivery for materials not available on campus. We instruct users in the use of various electronic interfaces and troubleshoot access problems. We conduct course-related instruction to guide students to appropriate and relevant information. We maintain the Chemistry Library as a place for researchers to pursue research interests and ideas. We advocate for sustained library support of the work of the chemistry community.

If you haven't been to the Chemistry Library lately, the Chemistry Library staff invites you to stop by during your next visit to the Chemistry Building. We would be happy to give you a tour and introduce you to the myriad online chemistry information resources. For more information, contact Sharon Mulvey (608-262-2254, smulvey@library.wisc.edu) or Emily Wixson (608-262-4423, ewixson@library.wisc.edu), or use our email reference service, askchem@library.wisc.edu.

SciFinder Scholar

* Gmelin retains its place in the reference collection, but you will not find the print Beilstein Handbook in the Chemistry Library. Access to both Gmelin and Beilstein is via MDL CrossFire software. CrossFire is searchable in multiple ways, including chemical structure, formula, physical property parameters, chemical reaction, and bibliographic data. Chemistry Library staff maintain the Beilstein Help site (http://chemistry.library.wisc.edu/beilstein/home.htm) to assist users with searches and client accessibility.

MDL Crossfire interface for Beilstein and Gmelin
Retirement Party

Dean Phil Certain and Professor John Harriman
The Hyuk Yu Symposium and Reception Fall 2003
Scenes from one of the Madison PEOPLE Programs

Run in Chemistry by Professor Shakhashiri
During the 2003-2004 school year the Wisconsin Initiative for Science Literacy began new programs and expanded existing ones, reaching audiences across the country through National Public Radio and PBS, at professional society meetings, and at schools in several states. New programs included a cooperative effort involving science, arts and the humanities, and expanding the popular "Conversations in Science" series to UW dorms. WISL also expanded the participation of undergrads in "Science is Fun" presentations, sponsored further appearances on campus by distinguished speakers, offered new "Science Saturday" courses, and expanded its web site. In addition, the Madison Metropolitan School District recorded on video many WISL-sponsored programs and broadcast them on the district's cable TV channel (channel 10).

**Conversations on Creativity**

Creativity, expression, and passion are essential qualities that inspire science, the arts, and the humanities and form common bonds among them. Conversations on Creativity explored this connection through a series of discussions by distinguished faculty from all three disciplines. WISL invited the Center for the Humanities and the U.W.-Madison Arts Institute to collaborate. Two scientists participated, Chemistry Professor Charles Casey and Oncology Professor Richard Burgess. Representing the humanities were Professor of History Emeritus Stanley Kutler and English Professor Henry Turner. Professor of Dance Li Chiao Ping represented the arts. The talks were free and open to the public, and each drew audiences of 80 to 100. The speakers discussed elements of creativity in their work and how they go about thinking creatively. The goal of Conversations on Creativity is to explore and celebrate the intellectual and emotional links between science, the arts, and the humanities and to de-mystify science. These conversations were telecast several times on cable channel 10 in Madison.

**Conversations in Science for Teachers**

Conversations in Science for Teachers has completed its fourth year. The series is open to all Dane County teachers. It offers them a two-hour conversation with top University researchers. The purpose is to re-invigorate the teachers' enthusiasm for science by exposing them to cutting-edge research, and to encourage researchers to communicate with a broader audience. The series is co-sponsored by WISL, which arranges for the presentations, the Madison Metropolitan School District, which enrolls the teachers, and Edgewood High School, which provides the auditorium in the new Sonderegger Science Center. This year, all presentations were recorded by the school district and shown on cable channel 10 in Madison. The presentations were:

- Associate Professor of Electrical and Computer Engineering Daniel W. Van der Weide, "How Will Microelectronics and Molecular-scale Biology Converge?"
- Professor of Psychology and Women's Studies Janet Hyde, "Science Versus the Media on Psychological Gender Differences"
- Professor of Chemistry and Genetics David C. Schwartz, "Single Molecule Approaches for the 'New Biology'"
- Professor of Journalism Deborah Blum, a Pulitzer Prize winner, "Tales of the Cloth Mother: A Story of Science, Love and Primate Research"
- Professor of Industrial Engineering and Engineering Physics Vicki Bier, "Infrastructure Protection Against Terrorism"
- Professor of Chemistry and Material Science Robert Hamers, "The Nanotech Revolution"
- Professor of Medicine Molly Carnes, "Estrogen Replacement Therapy-Where Did We Go Wrong?"

**Conversations in Science in the Dorms**

As the popular Conversations in Science for Teachers completed its fourth year, WISL began Conversations in Science in the Dorms, co-sponsored by University Residence Halls. The Conversations drew up to 100 students. The programs were offered on weekday evenings in dormitory commons areas. The six presenters were:

Medical Science and Pharmacology Professor Timothy Mulcahy (also Associate Dean of the Graduate School), "Bioterrorism and University Research", on September 9, 2003.

Agriculture and Life Sciences Professor Nancy Mathews, "Chronic Wasting Disease and Deer", November 17, 2003 (shortly before deer hunting season).

Sociology Professor John DeLamater, "The Science of Love" (on Feb. 9 and 10, timed for Valentine's Day).

Political Science Professor Don Kettl, "Speaking Science to Politicians: Making Sense While Making Policy" (on Feb. 16, just before the Spring primary election).

Physiology Lecturer Dr. Kevin Strang, "Ethanol's Effects: Brains, Brats, Barf and Beyond" (on March 9, just before spring break)

Professor of Pediatrics Greg Landry, "Sports and Steroids" (on April 6, just before the NCAA basketball tournament).

Assistant Professor of Pathology Michael Stier, (medical examiner for many counties), "Medical Forensics from an Examiner's Perspective", April 22. Professor Stier is a former student of Professor Shakhashiri in Chemistry 103 and 104.

All the presenters were pleased and impressed by the intelligent and informed questions and comments from the students at each of the presentations. WISL and Residence Halls are both eager to continue the series this fall.
**Science is fun presentations**

Graduate and undergrad students participate in presenting “Science is Fun” demonstrations. **Professor Shakhashiri** and **Dr. Rod Schreiner** (M.S. 1973, Ph.D. 1981) have trained the students in past years. This year **Dr. Linda Zelewski** (Ph.D. Water Chemistry, 1999) taught Chemistry 299/699, an independent study course open to all university students (though all the participants had chemistry or chemistry-related majors). Most of the students have little public speaking experience and practice their presentations before participating in public presentations. Learning how to do the demonstrations is essential, but students must also learn to project enthusiasm and engage the audience, which often includes young children. Linda says it’s very rewarding to do demonstrations for young children because they get very excited. “They are very uninhibited”, she says, “and you get a huge response that you don’t get with college students or older adults.” Linda says, “It’s rewarding because they see that science really is fun.”

The chem 299/699 students wrote reflections on their experiences at the end of each semester. **Vicki Tuen** (B.S., biochemistry 2006) wrote that many people don’t share her view that science is fun. “Take for example the pencil markings on the door of a girl’s bathroom stall which states, ‘I hate chemistry.’ These words make me feel bad, and I wonder how it is that someone doesn’t share the same feelings that I do about chemistry and science. Hopefully by putting on these shows we teach kids that science is fun, and in the future there won’t be any more ‘I hate chemistry’ written on bathroom stalls.” **Elizabeth Chapman** (B.S., biochemistry 2004) learned, “It is one thing to understand the chemistry behind an experiment, but it is quite another to articulate this explanation to another person. Above all, Science is Fun has taught me that science is fun, that science isn’t just a high art reserved for laboratories but a way of better understanding the world around us.” **Caitlin Iverson** (B.S. 2006) learned from watching how Professor Shakhashiri engages audiences of all ages and gets them excited about science. “I am so inspired from this presentation; I wish all teachers had his passion. I regained my faith in teachers because of him. This was the most unexpected aspect of this course.”

**Communicating Science and Art to the Public**

During the last school year, WISL sponsored or co-sponsored four free public lectures and a play reading on the U.W.-Madison campus.

On September 26, 2003, WISL co-sponsored a lecture by Chemistry Professor Emeritus **Theodore L. Brown** of the University of Illinois-Urbana Champaign on "The Metaphysical Origins of Scientific and Artistic Creativity" as part of the University of Wisconsin-Madison Chemistry Department Colloquium series. Professor Brown says the use of metaphor shapes the process of thinking and discovery in the sciences—for example, referring to a cell as a chemical factory or to the “folding” of proteins. Prior to his lecture in Madison, Professor Brown appeared on “The Larry Meiller Show” on Wisconsin Public Radio and on WORT-FM to talk about his book *Making Truth: Metaphor in Science* (University of Illinois Press, 2003).

On November 17, 2003, WISL co-sponsored the appearance on the Madison campus of science writer **Dava Sobel**, author of best-selling books *Longitude* and *Galileo’s Daughter*. Her appearance was co-sponsored by the Center for the Humanities at the University of Wisconsin-Madison. Her talk, “Galileo’s Daughter: Counselor and Confidante in the Search for Truth,” and book were based on letters written to Galileo by his daughter, Sister Marie Celeste, a cloistered nun, and reveal the human side of scientific endeavor. While in Madison, Sobel also delivered an enrichment lecture to Professor Shakhashiri’s first year chemistry class, appeared on Wisconsin Public Radio, and visited with faculty and students in the departments of English, astronomy, communication arts, and history of science.

On February 19, 2004, WISL sponsored a lecture by **Frank Drake**, Professor
Emeritus of Astronomy and Astrophysics at the University of California-Santa Cruz and former director of the Arecibo Observatory. Drake’s topic was “Searching for Extraterrestrial Intelligence.” Drake is one of the founders of the SETI Institute (Search for Extraterrestrial Intelligence) and is considered the “founding father” of the search for intelligent life elsewhere in the universe. During his time in Madison, he also appeared on Wisconsin Public Radio prior to his lecture and gave an enrichment lecture to Professor Shakhashiri’s first year chemistry class and a colloquium in the astronomy department.

On April 14th, WISL co-sponsored a lecture by Professor Charles H. Dowding of Northwestern University, “Carving Crazy Horse: Art and Engineering of Blasting Massive Rock Monuments.” In addition to WISL, the talk was sponsored by the Department of Geological Engineering, Department of Art, Department of Art History and the Department of Civil and Environmental Engineering.

On May 3, 2004, WISL joined several other organizations in sponsoring a play reading of “Comet Hunter” by Chiori Miyagawa. The play is based on the life of astronomer Caroline Herschel, who is credited with discovering eight comets while working with her brother William Herschel, who is most famous for discovering the planet Uranus. The event was co-sponsored by UW Space Place, UW-Madison Astronomy Department, UW-Madison Division of Continuing Studies, Wisconsin Academy of Sciences, Arts and Letters and the Wisconsin Alumni Association. The play, a work in progress, was read by professional actors. The reading was followed by a panel discussion including the playwright, Professor Shakhashiri, Historian of Astronomy Jim Lattis, and Historian of Science Peter Sobol.

“Science Is Fun” Web Site

The WISL web site has been expanded with new sections on recommended reading and recommended web sites, more “Chemical of the Week” articles and more “Experiments you can do at home”. Visit www.scifun.org to check it out.

Science Saturdays

WISL continued to offer Science Saturdays, a series of Saturday morning sessions of science fun and learning designed for middle school children and their parents. Science Saturdays include a variety of subjects to suit many interests. Sessions feature many hands-on activities and include projects to take home and observe or experiment with.

Science Saturdays subjects have included Polymers (both natural and artificial), Electrical Energy, The Sky at Many Wavelengths, Nanotechnology, How Does It Sound, Bottle Biology and Energy and Simple Machines. The sessions involved faculty and staff from the Chemistry Department as well as the departments of physics, plant pathology, astronomy, engineering physics, and the School of Music.

America in Chemical Society President’s Event at Philadelphia Meeting

Professor Shakhashiri organized a special presidential event at the American Chemical Society national meeting August 22nd designed to combine science, the arts, and the humanities. Notable scientists and authors explained how they use theater, poetry, photography and other tools to communicate science to the public. The President’s Cultural Event: Science, the Arts, and the Humanities included a reading of excerpts from the acclaimed play “Oxygen”, written by chemists Carl Djerassi (Ph.D. U.W.-Madison, 1945) and Roald Hoffmann. Other participants were award-winning science writer Dava Sobel, author of best sellers Longitude and Galileo’s Daughter, and photographer Felice Frankel, Director of the Envisioning Science Project at MIT and author of Envisioning Science: The Design and Craft of the Science Image. Frankel is also co-author, along with Harvard Chemistry Professor George M. Whitesides, of On the Surface of Things: Images of the Extraordinary in Science. Also at the symposium, four students from the mid-Atlantic area were given Chemagination awards for writing articles for ChemMatters magazine about imagined scientific breakthroughs or innovations 25 years in the future. The session was opened by the President of ACS, U.W.-Madison Chemistry Professor Charles P. Casey.

Science in the City

As part of Science in the City offerings, WISL provided intensive chemical workshops for inner city students from Milwaukee, Kenosha and other school systems, offered in conjunction with the PEOPLE Program. PEOPLE (Pre-college Enrichment Opportunity Program for Learning Excellence) is a college pipeline for minority and disadvantaged students offered by the U.W.-Madison. Dr. Rod Schreiner wrote the curriculum for the courses prior to last year’s classes. The coordinator for the classes this year was Mike Modica, (B.S., biochemistry, 2002) who served as an instructor last summer. Our other Mike, Mike Boll (B.S. 2004), was an instructor for the PEOPLE program. Mike (Boll) says, “It amazed me how bright the kids were-they were eager to learn and picked things up quickly. I wish I could have had a similar opportunity at that age.” Mike says the kids were also very entertaining so the time went quickly. Mike will be a teaching assistant for chem 103 this fall. Also assisting at the PEOPLE workshops were Dr. Linda Zelewski and undergraduate volunteers who had taken the “Science is Fun” chemical demonstration course.
This n’ That

Igor Alabugin (PD ’96-’00, Zimmerman), has been an Assistant Professor at Florida State University. He has received a number of awards. Most recently he gave a Plenary Lecture at the Reaction Mechanisms Conference held in June at Northwestern University.

Diego Armesto (PD ’75-’77, Zimmerman), a Professor at the University of Madrid, is on the local Organizing Committee of the July 2004 IUPAC Symposium on Photochemistry. He and his wife Mercedes, (PD ’75-’77, Zimmerman) think fondly of their time in Madison. Diego is one of the most active of European organic photochemists.

Paul Bonvallet (PhD ’01, McMahon) completed postdoctoral research with Fraser Stoddart (UCLA) and accepted a position as Assistant Professor of Chemistry at the College of Wooster (Wooster, OH).

Wensheng Chen (PhD ’01, Zimmerman) has taken a position with UOP in Illinois following a postdoc at Notre Dame. He reports that it was his Wisconsin experience which helped him obtain an excellent position.

John Dodd (PhD ’70, Zimmerman) notes that he is doing patent and other work for DuPont Electronic and Communication Technologies since moving to this area 12 years ago from R&D. Prior to starting IP work, he was in R&D with DuPont Electronics for 7 years and R&D with Conoco for 9 years after leaving Emory U.

Sergei Egorov (PhD ’96, Skinner) was promoted to Associate Professor with tenure at U. Virginia.

Bill Gruenbaum (PhD ’75, Zimmerman) writes that he is now at Heidelberg Digital L.L.C. He writes also for Sue Boettger (BS ’74). He spoke of his many pleasant memories of his years in Madison. He also sent information about some of his classmates:

- Nick Buehler (PD ’73-’74) is part of a team at Ciba. Some time back he had contact with Byron Cotter (PhD ’74) who he remembers as being a Research Director at Unilever. He also reported that Tim Cutler (PhD ’77) is a Manager at Kodak, and Mike Haire (PhD ’74) is still at Chevron in the San Francisco Bay area.

Russ King (PhD ’85, Zimmerman) writes with some thoughts about solid-state photochemical host molecules, which might work in Wisconsin research.

Yuri Lapin (PD ’94-’96, Zimmerman) writes that Albany Molecular Research Inc. has bought the Great Lakes Chemical Co. He notes that he is still in the same building but with just a different company name.

Chris Lawrence (PhD ’03, Skinner) will be an Assistant Professor at Grand Valley State (Michigan) starting in July 2004.

Dan Little (PhD ’74, Zimmerman) a Professor at the University of California, Santa Barbara, writes that he is doing well. He also sent information about E-mail addresses for former Zimmerman students.

Ed McBride (PhD ’66, Zimmerman) notes that he is still at DuPont’s Jackson Labs.

John McCall (PhD ’71, Zimmerman) is with Pfizer. He was with Pharmacia-Upjohn where he has been Executive Director of Discovery Research for many years.

Jacques Nasielski (PD ’64-’65, Zimmerman) is an Emeritus Professor at Brussels in Belgium. He writes that he is still at the university although not as active in research.

Evgueni Nesterov (PD ’98-’02, Zimmerman) was promoted to an Assistant Professorship at LSU. He and his wife, Irina, are driving to Louisiana at the end of July.

Luther (Nick) Roberts (PhD ’76, Zimmerman) reports that he is in a Kodak division called Image Sensor Solutions, doing program management.

Jess Sager (BS ’91, Zimmerman) wrote to let us know that he has changed jobs and locations: I have left Merck and have taken a position as an Application Specialist with IntelliChem. IntelliChem is a leading provider of electronic notebook software. In my new position, I go out and talk to chemists in the industry about our product, providing demonstrations and training and funneling requirements from the chemists back to the programmers. I think it’s going to be a good fit for me. Oregon has provided a nice change from the crowded hustle that I left.

Jeff Saven (PhD ’93, Skinner) was promoted to Associate Professor with tenure at U. Penn.

Marty Semmelhack (BS ’63, Zimmerman) is a full professor at Princeton. He wrote to send some E-mail addresses for classmates.

Grigoriy Sereda (PD ’97-’02, Zimmerman) is with the Solid-State Chemical Information Company in West Lafayette, Indiana. She visits Madison regularly, since it is one of her favorite cities.

Eric Stoner (BS ’86, Zimmerman) received an award at Abbott Laboratories, and gave the keynote address for the award ceremony. He was honored for “development of a process for the commercial production of a common intermediate for HIV-1 protease inhibitors Ritonavir and Lopinavir, and an optimized commercial process for the production of Lopinavir.” The award was presented by the ACS as part of its Industrial Innovation Program.

Louise Stracener (PhD ’98, McMahon) was promoted to Associate Professor at Edgewood College (Madison, WI).

Patricia Wang (PhD ’92, Zimmerman) notes that she left Hewlett-Packard to take a position at Xerox on the West Coast in Oregon. She didn’t have to move far geographically but thought a change in companies might be interesting.

Drew Weber (PhD ’88, Zimmerman) was promoted to a new position as Business Director with DuPont Fuel Cells. The family will move to the Wilmington, DE area in summertime. His new boss reports directly to the DuPont CEO. Drew had been General Manager of DuPont Photonics Technologies, LLC.

Dave Wilson (PhD ’94, Zimmerman) also was at the Great Lakes Chemical Company. He moved to Cincinnati and is a section head at Girindus America Inc.
The Chemistry Department is blessed with many generous alumni and friends, and nowhere is that more evident than in the array of funds of various types that we can draw on for support of our activities. These funds include those that support general operations, scholarships and fellowships for students, lectures, seminars, research, awards and publications. We have listed here all of the funds the UW Foundation administers, plus the trust funds that have been set up to benefit Department activities. For contributions to Foundation accounts, checks should be made out to the UW Foundation, not to the Chemistry Department. Gifts to the UW Foundation are tax deductible, and many companies provide matching contributions, allowing you to multiply the value of your gift. When you send your donations to the Foundation, you can specify that your gift go to Chemistry, and further specify any of the funds. Donations to trust funds must be made out to the Chemistry Department, with the particular trust noted on the memo line.

Address gifts/correspondence to the UW Foundation, 1848 University Ave., Madison, WI 53708 or to the Chair, Department of Chemistry, University of Wisconsin, 1101 University Ave., Madison, WI 53706

OF SPECIAL INTEREST in 2003-2004

Department of Chemistry Fund
Supports research and teaching activities in the Department
1222137

Chemistry Building Fund
Supports the construction of the New Chemistry Building
Addition, and remodeling of the Mathews and Daniels Buildings - Remodeling was completed in 2003, but bills remain to be paid
12221293

Andrew Dorsey Memorial Scholarship Fund (Undergrad)
Undergraduate scholarship in memory of Andrew Dorsey. A musical fundraiser was held on campus in March 2004.
12223281

Community-Building Fund for Chemistry
Provides funds for receptions, retirement parties, funeral memorials, and other similar activities; established in 2001.
12223316

Farrington Daniels Ethical Leadership Fellowship Fund (Grad)
Established in 2004 by William G. and Virginia Hendrickson.
12223955

Harlan L. and Margaret L. Goering Organic Chemistry Fellowship Fund (Undergrad)
Established in 2004 by Margaret Goering's will, in honor of her late husband, Professor Harlan Goering. The fellowship will support a graduate student in Organic Chemistry.
12223401

Henry Firminhac and Eleanor Firminhac Chemistry Scholarship Fund (Undergrad)
12223644

James W. Taylor Excellence in Teaching Award
Established in 2002 and first awarded in 2003, this provides an endowed fund to support awards to outstanding teachers in the Chemistry Department.
12223590

Jean Irene Love Fund
Established in December 2003 by the family of Jean Irene Love and John Edmund Wright, to remember Jean’s kindness, her self-sacrifice, and her deep and unconditional love for all people.
12223870

STUDENT SUPPORT

Ackerman Scholarship Fund (Undergrad)
Supports undergraduate students in Chemistry, especially those from East High School in Madison.
12223212

Alfred L. Wilds Scholarship in Chemistry (Undergrad)
Undergraduate scholarship in memory of Professor Al Wilds.
12220072

David F. and Donald G. Ackerman, Jr. Wisconsin Distinguished Graduate Fellowships
Supports graduate students in Chemistry.
12223244

Don Brouse Memorial Scholarship (Undergrad)
Undergraduate scholarship in memory of Don Brouse.
32220536

Edwin M. and Kathryn M. Larsen Fund (Undergrad)
Supports undergraduate students in Chemistry.
12222308

Elizabeth S. Hirschfelder Endowment for Graduate Women in Chemistry
Supports graduate students in Chemistry research.
12223191

Eugene and Patricia Kreger Herscher Fund (Undergrad)
Supports undergraduate students in Chemistry, especially women.
12223562

Gary R. Parr Memorial Fund (Grad or Undergrad)
Scholarship in Bioanalytical or Biological Chemistry, in memory of Gary Parr.
12222192

Harry and Helen Cohen Graduate Research Fund (Grad)
Supports graduate students in Organic Chemistry.
12222250

John and Elizabeth Moore Awards in General Chemistry
Provides funds for awards to the best students in the Fall Chemistry 108 and Chemistry 109 courses.
12223663

Kimberly-Clark Undergraduate Scholarship
Supports undergraduate research with an annual award.
12222807

Leah Cohodas Berk Award for Excellence in Chemistry Research (Grad)
Honors an outstanding female graduate student.
12543124

Norbert Barwasser Chemistry Fund
32225010

Roger J. Carlson Fund (Grad)
Graduate Fellowship in Analytical Chemistry, in memory of Roger Carlson.
12220918
### BADGER CHEMIST

<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>J.D. Ferry Lectureship in Macromolecular Science</td>
<td>12222793</td>
<td>Provides funds to support a Lecturer in Macromolecular Sciences.</td>
</tr>
<tr>
<td>John E. Willard Lectureship</td>
<td>1222829</td>
<td>Funds a special seminar in Physical Chemistry.</td>
</tr>
<tr>
<td>Joseph O. Hirschfelder Professorship Fund</td>
<td>12220310</td>
<td>Provides funds to support an endowed chair.</td>
</tr>
<tr>
<td>McElvain Seminar Fund</td>
<td>12220241</td>
<td>Supports the ongoing seminar series organized and run by graduate students.</td>
</tr>
<tr>
<td>Ralph Hirschmann Lectureship</td>
<td>1222295</td>
<td>Funds a Visiting Professor in Organic, Bioorganic or Physical Organic Chemistry.</td>
</tr>
<tr>
<td>V.W. Meloche-Bascom Professorship</td>
<td>1222889</td>
<td>Provides funds to support an endowed chair.</td>
</tr>
<tr>
<td>V.W. Meloche Lectureship</td>
<td>1222825</td>
<td>Funds a special seminar series in Chemistry.</td>
</tr>
</tbody>
</table>

### CHEMISTRY EDUCATION

<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Institute for Chemical Education Fund</td>
<td>1222929</td>
<td>Supports activities in Chemical Education.</td>
</tr>
<tr>
<td>Michael S. Kellogg Chemistry Fund</td>
<td>12223655</td>
<td>Provides funds to support an annual prize, a lectureship, or other support of science education.</td>
</tr>
<tr>
<td>Project SERAPHIM Fund</td>
<td>12220404</td>
<td>Supports activities in Chemical Education.</td>
</tr>
<tr>
<td>Shakhashiri Science Education Fund</td>
<td>12221133</td>
<td>Supports activities in Science Education under the direction of Prof. Bassam Shakhashiri</td>
</tr>
</tbody>
</table>

### LECTURESHIPS/PROFESSORSHIPS

<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evan P. Helfaer Fund</td>
<td>32225081A</td>
<td>Provides funds to support endowed chairs in the Chemistry Department.</td>
</tr>
<tr>
<td>H. L. and M. L. Goering Visiting Professorship Fund</td>
<td>12222391</td>
<td>Provides funds to support a Visiting Professor in Organic Chemistry.</td>
</tr>
</tbody>
</table>

### GENERAL DEPARTMENTAL SUPPORT

- These untargeted funds provide key support for our new initiatives.

- **Badger Chemist Fund** 1222534 Provides funds to support the Badger Chemist and other Department publications.

- **Farrington Daniels Memorial Fund** 1222324 Funds special projects relating to the benefits of science to society.

- **Harry L. and A Paschaleen Coonradt Fund** 12221413

- **John and Caroline Dorsch Fund** 1220322

- **Les Holt Memorial Endowment** 12223535 A general fund established with a gift from the estate of Professor Les Holt.

- **Lloyd L. Withrow Fund** 12221190

- **Paul A. and Jane B. Wilson Fund** 32220550

- **Thomas B. Squire Fund** 1221796

### INDIVIDUAL RESEARCH GROUP SUPPORT

- **Analytical Chemistry Fund** 1222679 Supports research and educational activities in the Analytical Sciences Division, including conferences and grad recruiting.

- **Analytical Research Fund** 12220448 Supports research and programs in the Analytical Sciences Division — Originally established in 1990 with a gift from the Olin Corporation Charitable Trust.

- **Center for Chemical Genomics** 12223086 Established in 2001 by a gift from the W. M. Keck Foundation.

- **Inorganic Chemistry Seminar Fund** 12221344 Supports the Inorganic Division seminar and research programs.

- **J.O. Hirschfelder Prize Fund** 12220984 Awards an annual Prize to an internationally prominent scientist to recognize outstanding work in Theoretical Chemistry.

- **J.O. Hirschfelder Visitors Fund** 12220912 Supports visits to the Theoretical Chemistry Institute by outstanding scholars.

- **John L. Schrag Analytical Research and Teaching Fund** 12223637 Provides funds for activities that will enhance the excellence and humanity of the Analytical Sciences Division.

- **Organic Synthesis Fund** 1222548 Supports research activities in Organic Chemistry including symposia and visiting lecturers.

- **Bio-Analytical Chemistry Fund** 12223068 (Lloyd Smith; Upjohn)

- **Carbohydrate Chemistry Research Fund** 12221999 (Laura Kiessling; Zeneca Pharmaceuticals)

- **Chemistry Catalysis Fund** 12223733 (Shannon Stahl)

- **Eastman Kodak Professorship** 12221901 (Hyuk Yu; Eastman Kodak)

- **Kocher Award** 12223165 (Thomas Brunold; Kocher-Preis Komission, University of Bern)

- **Lawrence Dahl Research Fund** 12222076 (Larry Dahl)

- **Nuclear Magnetic Resonance Research Fund** 1221877 (Tom Farrar; Johnson Controls)

- **Organic Chemistry Research** 12220190 (Hans Reich; Bell, DuPont)

- **Organic Research Studies Fund** 12220747 (Howard Zimmerman, Alumni and Friends)
In addition to the above Foundation accounts, the following trust funds have been established to support Department programs.

**STUDENT SUPPORT**
- Belle Crowe Fellowship
- Daniel L. Sherk Award in Chemistry
- Edward Panek Memorial Scholarship
- Hoechst Celanese Foundation Chemistry Department Fund
- Krauskopf Chemistry Award
- Mabel Duthey Reiner Scholarship
- Margaret McLean Bender Scholarship in Chemistry
- Martha Gunhild Week Scholarship
- Richard Fischer Scholarship
- Sam Charles Slifkin Award in Chemistry
- Willard W. Hodge Scholarship in Chemistry

**DIVISIONAL and INDIVIDUAL SUPPORT**
- Arthur C. Cope Scholar Grant (Casey)
- Chemistry Department Special Library Fund
- Chemistry Research Fund (Reich)
- Dreyfus Teacher-Scholar Award (Nathanson)

**LECTURESHIPS/PROFESSORSHIPS**
- James M. Sprague Lectureship
- Karl Folkers Lecture Series in Chemistry

**GENERAL DEPARTMENTAL SUPPORT**
- Chemistry Building Fund
- Hoffman-La Roche Foundation Chemistry Department Fund
- Howard H. Snyder Chemistry Department Fund
- Stephen E. Freeman Chemistry Department Fund
- Thomas R. Kissel Chemistry Fund

In addition to honoring and acknowledging those people who donate to the Department to help support our Teaching, Research, and Outreach missions, we would like to also honor the people for whom funds are named. Many of you have donated to pay tribute to a mentor, colleague, friend, or relative in the Chemistry Department, and we will construct a new area on the first floor to acknowledge all of these people who are named in funds.

David F. and Donald G. Ackerman  
Norbert Barwasser  
Margaret McLean Bender  
Leah Cohadas Berk  
Don Brouse  
Roger J. Carlson  
Harry and Helen Cohen  
Harry L. and A. Paschaleen Coonradt  
Belle Crowe  
Farrington Daniels  
John and Caroline Dorsch  
Andrew D. Dorsey  
John D. Ferry  
Henry and Eleanor Firminhac  
Richard Fischer  
Karl A. Folkers  
Stephen E. Freeman  
Harlean L. and Margaret L. Goering  
Evan P. Helfaer  
Eugene and Patricia Kreger Herscher  
Elizabeth S. Hirschfelder  
Joseph O. Hirschfelder  
Ralph Hirschmann  
Willard W. Hodge  
Les Holt  
Michael S. Kellogg  

John E. Kierzkowski  
Thomas R. Kissel  
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John and Elizabeth Moore  
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Sam Charles Slifkin  
Howard H. Snyder  
James M. Sprague  
Thomas B. Squire  
James W. Taylor  
Walter W. and Young-Ja C. Toy  
Martha Gunhild Week  
Alfred L. Wilds  
John E. Willard  
Paul A. and Jane B. Wilson  
Lloyd L. Withrow
We thank each of you for making the improvement of our program possible.
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Dr. Dennis J. Murphy
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Prof Karen J. C. Muyskens

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Dr. and Mrs. Stephen M. Neumann
Professor James C. Nichol
Dr. Richard A. Niemann
Professor Wayland E. Noland
Mr. John A. T. Norman
In Memoriam

Herbert A. Beall
(BS ’61) Died on August 31st at his Rockport home surrounded by family and friends. He was born on August 26, 1939, in Chatham, Ontario, Canada, the son of Dr. Geoffrey Beall and Muriel A. (Gallagher) Beall. He immigrated to Appleton, Wisconsin when he was six years old with his parents, brother, and sister. His undergraduate degree in chemistry was from the University of Wisconsin – Madison and he received his Ph.D. in chemistry in 1967 from Harvard University with William Nunn Lipscomb Jr., who won the Nobel Prize in Chemistry in 1977. He worked in the industry at Olin Matheson Chemical Company for 18 months as a Senior Research Chemist prior to joining the faculty in the Chemistry Department at WPI in 1968. Dr. Beall especially enjoyed teaching general chemistry as well as inorganic courses. He published over seventy articles in the areas of boron chemistry, chemical education, the use of language in chemistry, and gold and coal chemistry. He was also the author and co-author of several textbooks including Chemistry for Engineers and Scientists, and A Guide to Writing about Chemistry. He published a book with his wife, Images of America-Mineral Point, recounting the history in text and early photos of the Wisconsin town outside of Madison where they had a summer home for a decade. He was an avid long-distance runner and greatly enjoyed singing and writing songs, traveling, playing rugby, cycling, hiking, and canoeing. A life-long non-smoker, Dr. Beall was diagnosed with advanced lung cancer after having breathing difficulties while running a race in October 1999. Despite the effect of his cancer and its treatments, Dr. Beall spent the last four years of his life engaged in the activities he loved and with the family and friends he loved. He will be remembered by his surviving family members; his wife, Barbara Straus Eder, who preceded him in death, and a devoted father to his children, Rebecca Eder, Ph.D. (Peter Shile, M.D.), Susan Eder, M.D. (Jonathan Fleischer, M.D.), and Michael Eder (Gundhild Eder). He was a wonderful grandfather and source of great amusement for his five grandchildren, Elizabeth Edershile, Sam and Max Fleischer, and Daniel and Robert Eder. He will be missed greatly by his family and friends for his brilliant intellect, his incisive wit, his moral steadfastness, and the great pleasure he took in the life of the mind. Donations may be made to the Nation Institute, 33 Irving Pl., NYC 10003; or to American Heart Association, PO Box 5216, Glen Allen, VA 23058.

Barbara J. Blaedel
Died on Saturday, January 24, 2004, at the age of 88. Barbara was the wife of Walter J. Blaedel, a long time faculty member of our Analytical Division.

Dr. Howard A. Eder
(BS ’38) Died January 13, 2004. He was born September 23, 1917, in Milwaukee, and graduated from the University of Wisconsin in 1938. He received his M.D. from Harvard Medical School in 1942, and his M.P.H. from Harvard School of Public Health in 1945. He was Professor of Medicine Emeritus at the Albert Einstein College of Medicine, New York. Dr. Eder dedicated his life to the study of arteriosclerosis and was one of the first investigators to discover the role of high density lipoproteins (HDL) in coronary heart disease. He was elected to the Institute of Medicine of the National Academy of Science, and awarded a Distinguished Achievement Award from the American Heart Association. He had a lifelong fascination with history and current events, and was an avid reader of nonfiction, the New York Times, and The Nation. He cared deeply for the welfare of people and firmly believed in liberal democratic principles. He was a loving husband to his wife, Barbara Straus Eder, who preceded him in death, and a devoted father to his children, Rebecca Eder, Ph.D. (Peter Shile, M.D.), Susan Eder, M.D. (Jonathan Fleischer, M.D.), and Michael Eder (Gundhild Eder). He was a wonderful grandfather and source of great amusement for his five grandchildren, Elizabeth Edershile, Sam and Max Fleischer, and Daniel and Robert Eder. He will be missed greatly by his family and friends for his brilliant intellect, his incisive wit, his moral steadfastness, and the great pleasure he took in the life of the mind. Donations may be made to the Nation Institute, 33 Irving Pl., NYC 10003; or to American Heart Association, PO Box 5216, Glen Allen, VA 23058.

Clifford A. Erickson
(MS ’50, King) Died November 28, 2002, in Trenton, NJ, at the age of 77. He was born in Fargo, ND, graduated from North Dakota State University in 1946, then received a masters degree in Chemistry from the UW-Madison in 1950. He participated in atomic tests in Nevada while he was in the Army Chemical Corps from 1950 to 1952. He worked for FMC Corp. from 1952 to 1982 and received patents on compounds to improve bleaching performance of peroxygen compounds. He then joined Jacobus Pharmaceutical for 20 years as manager of the information retrieval department. He was a member of the American Chemical Society for 50 years, the Audubon Society for 35 years, the American Association for the Advancement of Science for 46 years, the Nature Conservancy, the North American Mycological Association, the Philadelphia Area Trenton Naturalists Association, the Hewlett-Packard Hand Held Computer Club, and the American Birding Association.

Randy Hayashi
(PhD ’93, Dahl) Died Saturday Oct 4, 2003, in Hawaii, following a car collision near his home. Randy came to our department in 1986 and left for a teaching position at the University of Hawaii-Hilo in 1998. After receiving his PhD, Randy worked in the NMR lab and our Computer Science Department.
Support Division, was a lecturer for undergraduate courses and helped the General Chemistry Division in more ways than can be listed. He will be missed by all who knew him.

Mark Christopher Hsiao
Written in loving memory by Elaine P. Hsiao
(PhD ‘92, Crim) Dr. Mark C. Hsiao of Tracy, California was killed in a horrible and tragic plane crash July 8, 2003 near Chicago, Illinois. He is survived by his parents Christopher and Beatrice Hsiao; younger sister Elaine; younger brother Michael; “favorite nephew” Nicholas; girlfriend of 2½ years Adelyn Hu; and many other family members and friends. Born in Chicago on May 12, 1965, Mark always had a remarkable thirst for knowledge. He continuously excelled in school and rarely got into trouble. His childhood interests included building and launching model rockets, playing piano and violin, golfing, swimming, and running. He was a gentle child that grew into an honest, patient, gentle, and very smart man. With a strong sense of family instilled in him by his mother, Mark took responsibility for his younger sister and brother, even in adulthood. With love and only the need to work, all the while devoting many long hours and weekends to work, he pursued was noted and admired by his family, many friends, and co-workers. After graduating high school with honors, Mark attended Southwestern University in Georgetown, Texas. After only three years, he graduated Magna Cum Laude with a Bachelor’s of Science in Chemistry. Mark then continued on to graduate school at the University of Wisconsin-Madison, proudly earning his Ph.D. in chemistry. The determination in whatever he pursued was noted and admired by many. Everywhere Mark went, he was able to make friends and develop solid and life-long relationships with others. Even more remarkably, he was able to strengthen and continue building these relationships despite moving away. His relationship with his family only became stronger despite their physical distance. From Chicago to Texas, and then to Wisconsin, Mark moved to California for a post-doctoral position at Lawrence Livermore National Laboratory. Mark worked very hard professionally. His dedication continued when he later went to work for Applied Komatsu/Applied Materials. He devoted many long hours making it look so easy. Mark got along with all kinds of people and he really had a positive impact on everyone who knew him. Overseas colleagues were comfortable enough to call and wake him in the middle of the night at home, seeking work-related help. Mark, who would be happy to help, was modest and never expected any thanks or even acknowledgement for his kind acts. He was always supportive and encouraging to his family, many friends, and co-workers. Since coming to California, Mark lived in Livermore, Fremont, Mountain View and San Jose. In 2001, he bought a house and moved to Tracy with family members. Despite his daily commute to San Jose, Mark still found time to discover Tracy and he liked living there. He appreciated the area for both flying and running.

In addition to being extremely intelligent, Mark was an accomplished athlete. Since he was 13 years old, Mark ran a minimum of 5 miles every day. Illness, adverse weather, or vacations could not stop him. He never missed a day. He was always challenging himself to run faster and for longer periods of time. Just one month prior to his accident, Mark ran the Suzuki Rock ‘N Roll Marathon in San Diego at his best time yet—3 hours 29 minutes. Not only was he a runner, he was an avid swimmer, biker, snow skier, jet skier, golfer, and hiker who enjoyed lifting weights and keeping himself fit. He was always expanding his athletic abilities and activities, he was never afraid to try something new and he encouraged those around him to do the same. Mark also loved to fly. As a child, he would fly his model rockets and pretend he was an astronaut. As he got older, he dreamed of flying. In 1996, he got his pilot’s license and was so excited. He was driven to learn as much as he could about flying and airplanes. He enrolled in flight school to further his training and he joined various flying clubs and groups. He dreamed of eventually building his own airplane and flying it all around the country. Last year, Mark bought his first airplane, a Cessna 150L and treasured it. Everyone who knew Mark, knew that they were invited to go fly with him anytime. Mark would proudly show his plane to anyone who would ask. His friends trusted him to take their young children up for flights that would sometimes last over an hour. His enthusiasm was infectious. Mark used to take his nephew Nicholas flying after school almost once a week. Nicholas loved to go and he so enjoyed this special time alone with his uncle up in the sky. The week before his accident, Mark embarked on a trip of a lifetime. For two days, he flew his single-engine airplane approximately 2000 miles to Chicago, finally arriving on the night of July 2. He was so proud to have accomplished such a flight solo. He spent the next few days visiting with family who had already arrived from Tracy. In the late morning of July 8, Mark dropped off his parents and other family members at the mall and went to go check on his airplane. There had been a severe hail storm earlier that morning and he wanted to assess any damage to his plane. He never came back to pick them up. Apparently Mark decided to take the plane up for a quick flight, as he often did. At 1:24 pm, Mark’s plane crashed after takeoff about a quarter mile from the Schaumburg airport runway. Mark and his beloved airplane were engulfed in flames by the subsequent fire. Mark was the only fatality. In fact, no one else was involved or hurt in the crash. Mark’s last act on earth characterized how he lived in consideration of others; according to aviation experts and witnesses, Mark was maneuvering the aircraft to avoid all the homes, highways, and commuter train that surrounded the grassy area where he ultimately crashed.

Services for Mark were held July 13-15, 2003, in Buffalo Grove, where Mark grew up. A memorial service in California was held September 5, 2003, at 12:30 pm at the First Baptist Church of Los Altos.

Losing Mark has been extremely painful for his family and all who knew him. The suffering is unbearable. As the shock wears off, reality will set in and events surrounding his death will be revisited again and again. It will be a long time before loved ones can focus on the way Mark lived instead of the way he died. To all who knew him and those who had yet to meet him, the death of this smart, energetic, and kind person is an insurmountable loss. If you would like to learn more about Mark and visit a beautiful memorial to him, please visit http://mark.hsiao-group.com/.

A memorial scholarship fund in Mark’s honor is being planned through the UW Chemistry Department. Please contact Jim Janetka at janetka@earthlink.net for further information and how to donate to the fund.
Donald A. Roth  
(BS ’40, MS ’41, PhD ’44, Schuette)  
Died in Wauwatosa August 22, 2003, at the age of 85. Dr. Roth was born in Slinger, WI. His wife, the former Marie Mercury (PhD ’51, Johnson), and his four children survive him. After receiving his PhD in 1944, he served two years in the U.S. Navy as a lieutenant on an LCT in the South Pacific, then returned to UW-Madison as a member of the Chemistry Department teaching staff before entering medical school. He graduated from Marquette University School of Medicine in 1952 and interned at Milwaukee Lutheran Hospital. A pioneer in the development of kidney dialysis, he was a professor of clinical medicine at the Medical College of Wisconsin and chief of the renal disease section at the Wood VA Medical Center. Memorial donations to the Medical College of Wisconsin, Froedtert Hospital, St. John Vianney parish of Brookfield, WI, or the charity of your choice will be sincerely appreciated.

Jackie Stover  
Died from breast cancer Sunday, February 22nd, at the Hospice Care Center in Fitchburg. She was 58. Jackie worked as a program assistant in the Chair’s office for about a year during 2000-2001. She was a very pleasant woman who always had a smile for people who came to our office. She left us when a promotional opportunity came her way.

We have also been informed of the following deaths of alumni and friends:

- Paul I. Abell (PhD ’51, Goering) died January 12, 2004, at the age of 80.
- Clyde L. Aldridge (PhD ’52, McElvain) died June 29, 1999, at the age of 74.
- Roderick Arthur Barnes (BS ’39) died July 15, 1999, at the age of 79.
- Donald G. Biechler (BS ’56) died May 14, 2003, at the age of 75.
- George C. Colovos (BS ’41) died December 30, 2003, at the age of 87.
- John Royden Durland (PhD ’39, Adkins) died November 16, 2003, at the age of 89.
- Edward Louis Fiedler (BS ’36) died October 24, 2003, at the age of 89.
- Alexander Carpenter Finlay (BS ’29) died October 2, 2002, at the age of 96.
- Clarice Ann Gedeist (MS ’62, Whitlock) died December 13, 2003, at the age of 94.
- Melvin Gelman (BS ’49) died February 22, 2000, at the age of 74.
- Karen Ruth Gold (BS ’65) died July 8, 2000, at the age of 56.
- Geoffrey Alan Hall (BS ’74) died August 9, 2002, at the age of 51.
- John Baptist Hames (BS ’30) died March 9, 2002, at the age of 95.
- Mary Edith Hunt (MS ’33, Schuette) died 6, 2000, at the age of 91.
- Lothar Alfred Joos (BS ’37, MS ’38, Link) died June 6, 1999, at the age of 88.
- Ernest Irvine Kinnee (MS ’47, Schuette) died March 26, 2003, at the age of 85.
- Fred William Kopitzke (MS ’40) died December 19, 2001, at the age of 87.
- Walter E. Kramer (BS ’43) died November 27, 2003, at the age of 82.
- Boris Kruchoff (BS ’34, MS ’35, Oncley) died April 27, 2003, at the age of 92.
- Clarence Lynn Mahoney (PhD ’49, Adkins) died September 13, 1999, at the age of 79.
- James Cameron Masson (BS ’43) died at the age of 83.
- Richard Lewis Mauk (BSE ’68) died April 22, 2002, at the age of 57.
- Milan G. Maximovich (BS ’60) died May 11, 2003, at the age of 64.
- Donald Robert May (BS ’37) died February 2, 2002, at the age of 87.
- Stanley Dane McGregor (PhD ’66, Lemal) died November 20, 2002, at the age of 64.
- Carol K. Pearce (MS ’51, King) died September 16, 2001, at the age of 71.
- Carl Victor Piper (MS ’36, Sorum) died January 11, 1999, at the age of 90.
- Leslie Lee Sims (PhD ’55, Goering) died January 5, 2004, at the age of 77.
- Raymond Lee Snell (BS ’40) died June 13, 2001, at the age of 90.
- Roderick S. Spindt (MS ’44) died September 8, 2003, at the age of 84.
- Dorothy Elizabeth Stangel (BS ’28) died July 1, 2002, at the age of 95.
- Stuart C. Tiedeman (BS ’34) died May 30, 2003, at the age of 90.
- J. Wade Van Valkenburg (MS ’51, Ferry) died July 21, 1999, at the age of 74.
- David Mathew Veal (BS ’50) died December 16, 1999, at the age of 70.
- Pei Wang (PhD ’52, Larsen) died October 10, 2003, at the age of 85.
- Bruce E. Wilcomb (BS ’73) died February 14, 2003, at the age of 56.
- Edna Louise Zartman (PhD ’33, Klein) died February 15, 2000, at the age of 91.