

## **Badger chemist : the newsletter of the University of Wisconsin-Madison Chemistry Department. No. 46 2002**

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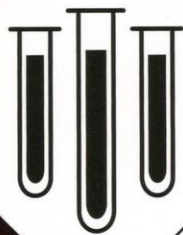
2002

# Badger Chemist

An abstract geometric pattern composed of numerous overlapping, irregular hexagonal outlines. These outlines are interconnected by a complex web of thin, white lines, creating a dense, crystalline structure that resembles a molecular framework or a complex crystal lattice. The pattern is centered on the cover, with the title 'Badger Chemist' overlaid across its middle section.

THE NEWSLETTER OF  
THE UNIVERSITY OF WISCONSIN-MADISON  
**CHEMISTRY DEPARTMENT**





# Badger Chemist

THE NEWSLETTER OF THE UNIVERSITY OF WISCONSIN-MADISON

## CHEMISTRY DEPARTMENT

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**Matthew Sanders**  
Editor

**Linda Endlich**  
Art Director

**Elizabeth Nicklaus**  
Designer

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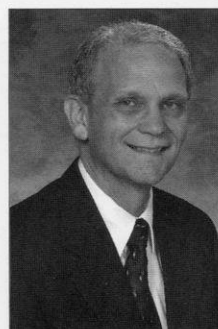


# From the Chair

Summer 2002

Dear Badger Chemists,

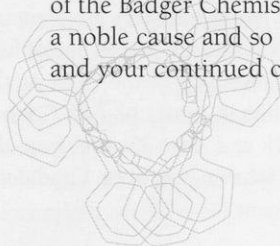
In my first year as the Chairman of the Department of Chemistry, I have often found myself asking the question: What makes a great Department? As you read through this issue of the Badger Chemist, you will find many possible answers:



- Our new building (any good ideas for a name?), our new seminar hall (it also needs a name) and the remodeling of the Daniels and Mathews Buildings. Modern chemistry needs modern facilities. In particular, the building project has transformed our research laboratories and provided the space required to alleviate our crowding. The Project could not have happened without the support of many people, including many of you, who recognized its importance and made it happen.
- Our new faculty. A Department is driven by the creativity and excellence of its faculty and the additions to our faculty over the last 10 years have created a youthful atmosphere that is crackling with excitement and accomplishment. There are so many great ideas being pursued. The number of patents and disclosures from the Department has skyrocketed and there are many examples of faculty with new companies that have resulted from the Department's research.
- Our staff. The Department of Chemistry is blessed with a staff who make the Department actually work everyday. They are truly dedicated to their jobs and work incredibly hard, especially because we will never have enough hands for the jobs or money for the operations. This department would collapse without them.
- Our students. The students are the reason for our existence. A Department is great because the students are great. Students come to the UW in order to get the best education possible and they in turn define who we are.
- Our alumni and industrial friends. You are our window to the world and it is through you that people know the UW. Many of you have provided more tangible contributions. One only has to look on page 22 to see the support that the alumni and industrial friends have provided and to realize that this support forms the foundation upon which the entire enterprise rests. There are simply not enough resources to have a great Department without the continued commitment of the alumni and friends. And we are truly thankful to you for your support.

So, have we arrived at the answer? Maybe. Clearly, we are united as a team that is dedicated to the future of this Department. But I don't think we have quite hit the answer for our team's success. I believe the real answer focuses on the traditions, the Departmental atmosphere, and the sense of shared mission that motivate the faculty, staff, students, and alumni and friends. It isn't an accident that J. Howard Mathews formed the Alpha Chi Sigma Honorary Chemistry Fraternity at the University of Wisconsin. We are a Department that places its humanity at the front and we recognize that the key to helping a young person reach his or her potential lies in establishing a partnership of everyone that is based on our dedication to excellence as we explore nature together. We all recognize our place in that partnership and we do our part to the best of our ability. This issue of the Badger Chemist will give you lots of examples of how this partnership is working. We are all engaged in a noble cause and so on behalf of our Department, I would like to thank-you for your part in this partnership and your continued commitment to our mission.

John Wright  
Chair  
[wright@chem.wisc.edu](mailto:wright@chem.wisc.edu)







# Current Chemistry News

## DEPARTURES

The Department lost one of its longest-serving employees when Academic Department Manager **Jan Froding** retired in January 2002. Jan had been with the University since 1966, and Chemistry since 1967. She worked as a typist, Gen Chem secretary and payroll officer, before being selected by Paul Treichel to become the Department Secretary.



Jan Froding



Ken Rouse

**Ken Rouse** retired after many years as the head of the Chemistry Library. Ken has been extremely helpful to the Department, helping to develop and establish here many modern library tools for chemists.

In recognition of his expertise, Ken received a certificate as an "Honorary Organic Chemist."

Organic Lab Director **Paul Schatz** retired in June. Paul received his PhD from Professor Howard Whitlock's group in 1971, and started as Organic Lab Director in the same year. Paul was replaced by **Dr. Allen Clauss**, who had been the Assistant Organic Lab Director, and was an Organic Chemistry Lecturer before that.

Computer Center Director **Brad Spencer** retired after 12 years in the Department. Brad received his PhD from Purdue in 1973, and had been employed by Nicolet Instrument Corporation for ten years before coming to the Department.

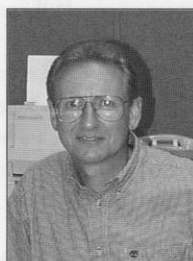
**Dan Sykes** left the Department in June after five years as the Instrumental Analysis Lab Director. Dan replaced **Matt Sanders** in 1996 after Matt moved downstairs to become Executive Director. Dan took a similar position as Physical Chemistry Lab Director and Lecturer at Penn State University.

**Professor James Taylor** retired on June 30, after 35 years as a professor of Analytical Chemistry. Jim had also been Director of the CXRL for the last ten years.

**Professor Worth Vaughan** retired in January 2002 after 40 years as a professor of Physical Chemistry.

## ARRIVALS

**Allen Clauss** accepted a position as Assistant Organic Laboratory Director in January 2001. Allen joined the Department in Summer 2000 as a lecturer in Organic Chemistry, and also lectured during the Fall semester before taking the Assistant Director position. Allen then took over as Organic Lab Director when Paul Schatz retired in June 2001. Allen has a PhD from the University of Illinois, and worked for 17 years for Procter & Gamble, spending 7 years in their overseas operations in Japan and China.



Allen Clauss

**Qiang Cui** joined the Physical Division and Theoretical Chemistry Institute as an Assistant Professor in the Summer of 2001. Qiang received his B.S. in 1993 from the University of Science and Technology of China, and received his Ph.D. from Emory University in 1997. He also spent several years as a Postdoc at Harvard. His research



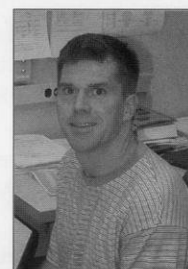
Qiang Cui

interests include computational biophysics, electronic structure, computational statistical mechanics, and quantum nuclear dynamics (enzyme catalysis, bioenergetics, electronically excited states, computational structural biology and neurochemistry, biomimetics).

**Jim Maynard** (BS '00) joined the Department in 2001 as the Lecture Demonstrator. Jim has

added the new seminar hall to his list of duties. He supervises several students in preparing demos, creating new demos, and helping to maintain the AV equipment in our diverse teaching facilities. In addition to normal course demos, Jim is helping with Bassam Shakhshiri's Chautauqua short course and Christmas show, the Engineering Expo, and other outreach activities.

**Rob McClain** accepted our offer to take over from Dan Sykes as Instrumental Analytical Laboratory Director in July 2001. Rob received his PhD in 1991 from the research group of **Claude Woods**, and has been at the University of Indianapolis for the last seven years.



Rob McClain



Jim Maynard

## FACULTY AND STAFF NEWS

Professor **Joseph O'Connor** (UC-San Diego) (PhD '84) and Professor **Richard Jordan** (U. of Chicago) (PD '83) are organizing a symposium at the Boston ACS Meeting in August 2002 in honor of **Chuck Casey** who turned 60 this year. Over 20 former students and postdocs will present papers at a session of the Inorganic Division on "Recent Advances in Organometallic Chemistry – *Chuck Casey Symposium*". Many current and former Casey group members are planning to attend. Chuck was selected as one of four nominees for President of the ACS. At the Orlando meeting in April, the ACS Council selected Chuck and Alvin Kwiram from the University of Washington to be Candidates for ACS president.

**Mark Ediger** presented invited talks at the American Physical Society meeting in Seattle, two Telluride Academy meetings, and at the Fourth International Discussion Meeting on Relaxation in Complex Systems, held this year in Crete. He was appointed to the Scientific Advisory Board for the Max Planck Institute for Polymer Research and was appointed Helfaer Professor of Chemistry.

**Art Ellis** will be at the NSF for a few years, starting in July 2002. Art has been selected as the Director of the Division of Chemistry. Professors **Wendy Crone** (UW Engineering Physics) and **George Lisensky** (Beloit College) will help with ongoing group activities while Art is gone.

**Sam Gellman** presented lectures at the University of California - Irvine Organic Synthesis Symposium; the 17th American Peptide Symposium in San Diego; the 17th International Royal Society of Chemistry Symposium on Synthesis in Organic Chemistry, in Oxford, UK; and the 16th W. S. Johnson Symposium in Organic Chemistry at Stanford.

**Laura Kiessling** went to Portugal to the European Carbohydrate Symposium to present the Award Lecture for the Carbohydrate Research Award for Creativity in Carbohydrate Chemistry. She was Chair of the Bioorganic and Natural Products NIH Study Section; presented a "Directors Lecture" at NIH; was a speaker at the Lausanne Symposium on Bioorganic Chemistry in Lausanne Switzerland; was a speaker at the Gordon Research Conference on Heterocyclic Chemistry; presented a Lecture at the Welch Symposium in Houston TX; and presented a Lecture at the UC-Irvine Symposium focused on Organic Materials. The Kiessling website has been updated so that many new email addresses are available, see: <http://www.biochem.wisc.edu/kiessling/lab/>

**Bob McMahon** presented invited lectures at the Inter-American Photochemical Society (Cordoba, Argentina), the Gordon Research Conference on Physical-Organic Chemistry, and the International Symposium on Reactive Intermediates (Nara, Japan).

See news of **Ron Raines'** honors under the "Awards" section of the *Chemist*. Ron is always happy to welcome lab alumni to drop in for a visit and update him on life after the Raines lab. If you can't visit, please send an e-mail and visit the lab website for more information: [www.biochem.wisc.edu/raines](http://www.biochem.wisc.edu/raines).



Bob West at the summit of Mt. Quadrant in the Selkirk Mountains of British Columbia.

Last Fall **Jim Skinner** traveled to Taiwan for the first time, giving a talk at a meeting on single molecules and hole burning. Two weeks later he went to Kyoto to talk about supercritical fluids. All the while he was teaching Chemistry 103 and he didn't miss a lecture!

In February 2001, the company Third Wave Technologies, Inc., that was founded by **Lloyd Smith** and his associates Jim Dahlberg (Professor of Biomolecular Chemistry) and Lance Fors (company CEO and chairman) in 1993, went public on NASDAQ, where it is now traded under the ticker symbol TWTL. The company's corporate headquarters are in the University Research Park, and it has a current headcount of around 300 people and 2001 revenues of \$34 million. Lloyd continues to serve on the Board of Directors of the company.

In May 2001 Lloyd attended a Mutation Detection Workshop organized by the Human Genome Organization (HUGO) in Bled, Slovenia. He found Slovenia (which is the northernmost piece of what was once Yugoslavia, and is adjacent to Italy northeast of Trieste) to be an absolutely beautiful small country with warm and pleasant people. Lloyd presented work his lab is doing in collaboration with Third Wave on the development of a technology for the analysis of genetic variations.

In September 2001 Lloyd accepted a position as director of the UW Genome

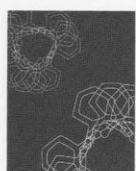
Center. The first of four new campus building projects referred to in aggregate as the BioStar Initiative will be a four story building addition to the Biotechnology Center, and the space in this addition will be shared between the Genome Center and the Department of Genetics. The building is in the final stages of design and the groundbreaking is scheduled to begin soon.

The Organosilicon research Center, directed by **Bob West**, is now in its third successful year of doing fundamental research. Its mission continues to be to provide the background essential to the needs of the organosilicon industry ten years in the future. This year Bob has had 8 researchers working in the center, including post-doctorates from England, China, Korea and Russia. Among the current projects, stay tuned to one involving research on polysiloxane electrolytes for lithium batteries.

During 2001 Bob took part in international meetings and lecture tours in Korea, Japan, France, England and Germany. He also traveled extensively around North America, usually piloting himself in a Cessna 182. In August Bob joined the Canadian Alpine Club for a week-long mountaineering expedition in the Selkirk mountains of British Columbia. There he made four ascents, all involving both snow and rock climbing. The photo shows him at the summit of Mt. Quadrant.

(Continued on page 31)





# Our Awards

UW Chemists continue to garner distinguished awards.

## STAFF AWARDS

Professors **Fleming Crim**, **Bassam Shakhshiri** and **John Wright** were awarded named professorships in university-wide competitions in 2001. Fleming was named Hildale professor, a significant honor to faculty who excel in scholarly activity and have records of outstanding research. Bassam was selected to receive the first William T. Evjue Distinguished Chair for the Wisconsin Idea, created to recognize outstanding contributions to outreach and service. John was named Andreas Christopher Albrecht Professor of Chemistry. Andreas Albrecht, a pioneer in laser spectroscopy, is on the faculty at Cornell University.

**Peter Belshaw** won a New Investigator Award in Pharmacology from the Burroughs Wellcome Fund. The award provides \$210,000 in unrestricted research support.

The Women in Engineering Programs & Advocates Network selected the University of Wisconsin-Madison Women in Science and Engineering Residential Program as a recipient of the 2001 WEPAN Women in Engineering Program award. This award recognizes an outstanding program that serves as a model for other institutions. The residential program at UW-Madison was developed by professors Caitlyn Allen, Wendy Crone, **Judith Burstyn** and Ms. Kay Reuter-Krohn.

**Silvia Cavagnero** won a Shaw Scientist award in 2001, including a \$200,000 unrestricted grant for her research in biophysical chemistry.

**Fleming Crim** was elected to the National Academy of Sciences in 2001. This is a very significant honor; Fleming joins **Chuck Casey**, **Larry Dahl** and **Howard Zimmerman** among our active faculty, and *emeritus* professor **John Ferry** in this elite group.

**Mark Ediger** and **Sam Gellman** received Helfaer Professorships in Chemistry, awarded for research excellence. These awards provide unrestricted support of \$15,000 per year for

five years, and are selected by a committee from the Department.

**Art Ellis** received an NSF Distinguished Teaching Scholar Award in 2001. Art was cited for "Research on electro-optical properties of materials, widely published and incorporated into instructional materials. National awards for developing instructional texts, kits and CDs for college and pre-college science classrooms. Project will create instructional materials on nanoscale science and engineering for undergraduates."

**Gery Essenmacher** received a 2001 Norman Bassett award for outstanding achievement in student service from the Student Personnel Association. Gery was recognized for his work in advising students in the SOAR program as entering undergraduates (and of course potential chemistry majors).

**Tony Jacob**, Associate Director of the Chemistry Learning Center, has received a Mid-Career award from the College of Letters and Science. Tony has been Associate Director for 11 years; he coordinates the Summer Enrichment Program for minority middle schoolers, he piloted a Peer Mentor Tutor program, and he has served with the National Institute of Science Education to create new educational programs. Tony was elected to the UW-Madison Teaching Academy several years ago.

**Laura Kiessling** won the first Carbohydrate Research Award for Creativity in Carbohydrate Chemistry. This award was established in 2001 by the Editors and the Publisher of Carbohydrate Research, and consists of a cash award, a certificate and a complimentary subscription to Carbohydrate Research for two years. It is presented to a Carbohydrate Chemist who has made significant original contributions to the field, in its broadest sense. Laura presented a lecture on her work at the EuroCarb meeting held in Lisbon, Portugal in September.

**Cathy Middlecamp** was selected for "distinguished membership" in the National

Society of Collegiate Scholars, an honors organization that recognizes first and second year students for outstanding scholastic ability and provides opportunities for community service. Cathy also was selected to receive the Women Chemists Committee ACS regional Award for Contributions to Diversity.

**Ron Raines** was elected a Fellow in the American Association for the Advancement of Science. He was honored for his fundamental contributions to chemical biology. Ron also received a Guggenheim fellowship for 2001-2002, providing the opportunity to spend the entire year on research. In February 2002, Ron was also given a Vilas Associates Award from the UW Graduate School.

**David Schwartz** received a Kellett Mid-career award from the Graduate School. These awards are intended to recognize and support mid-career faculty at a critical stage in their careers, and are based on the quality, significance, and productivity of the nominee's research program.

**Bassam Shakhshiri** and **Paul Treichel** received awards from Pharmacia's Clayton Jacobsen at this year's Teaching Award Symposium. This award has been presented by the Pharmacia & Upjohn Corporations since 1992-93, when **Fleming Crim** and **John Wright** received the first awards. The award includes a cash award from the Pharmacia Corporation, and the recipients present talks at a symposium recognizing teaching excellence. Bassam spoke about "(Academic) Freedom and Responsibility", and Paul addressed "The Joys of Teaching and Learning."

Winners since the first symposium have included **John Moore** and **Gil Nathanson** (1993-94); **Art Ellis** and **Hans Reich** (1994-95); **Clark Landis** and **Jim Weisshaar** (1995-96); **Jim Taylor** and **Ed Vedejs** (1996-97); **Sam Gellman** and **Claude Woods** (1997-98); **Steve Burke** and **Hyuk Yu** (1998-99); and **Cathy Middlecamp** and **Jim Skinner** (1999-2000).

This year the award was renamed the "Professor James W. Taylor Excellence in Teaching Award." The renaming honors Jim's

passionate advocacy for and practice of good teaching. Jim was influential in the establishment of these awards, and was a recipient himself. This year's symposium drew Chancellor Wiley to offer some remarks. Jim (and his passion for teaching) was profiled in the May 1, 2002 edition of *Wisconsin Week*.

**Ned Sibert** was selected as a Vilas Associate by the Graduate School. This award is intended to recognize young faculty who have established particularly strong research programs.



Mary Kay Sorenson

The Chemistry Department's Career Services Coordinator **Mary Kay Sorenson** received one of this year's five awards to the very best of the university's 5,000 classified staff. The graduate student office which Mary Kay supervises is key to the

Department's success at recruiting new students, at placing graduating students, and all the processes in between.

**Shannon Stahl** won an Innovation Recognition Award from Dow Chemical, including an unrestricted \$10,000 grant. Shannon was also named an Alfred P. Sloan Foundation Fellow. This program honors the most outstanding researchers at an early stage in their careers.

**James Taylor** was selected as the winner of the ACS Analytical Chemistry Division's J. Calvin Giddings Award for Excellence in Education. This award, sponsored by the Dekker Foundation, honors Jim's success in training graduate students, his development of graduate and undergraduate instrumental analysis instruction, his leadership in establishing peer teaching evaluation, his role in creating the UW teaching academy, his national leadership in education and research, and his commitment to his students.

**Arun Yethiraj** was elected a Fellow in the American Physical Society in November. The APS Fellowship Program was created to recognize members who have made significant advances in knowledge through original research and publication, or made significant and innovative contributions in the application of physics to science and technology. Arun was recognized "For pioneering contributions

in computational and theoretical polymer physics, especially in areas of polyelectrolytes, polymer blends, and confined polymers."

## STUDENT AWARDS

Student scholarships and 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 the 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 2000-2001 were presented in February 2002 at the Excellence in Teaching Symposium. Awardees included **Melisa Cherney** (BS '00, UMin-Duluth, with Burstyn), **Jeremiah Depta**, **Jose Laboy**, **Annabel Muentner** (BS '99, Williams College, with Nathanson), **Jason Pontrello** (BS '98, UMich, with Kiessling), **Mike Russell** (MS '96, Wright). TAs and Faculty Assistants are selected each year on the basis of excellent teaching.

**Annabel Muentner** was also selected as an L&S Teaching Fellow for 2002. The Teaching Fellows lead workshops for new TAs arriving on campus in August, and are selected based on their exemplary performance and commitment as TAs.

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 2001-2002 included: The Abbott Fellowship to **Brad Nilsson** (Raines). The Eastman Chemicals

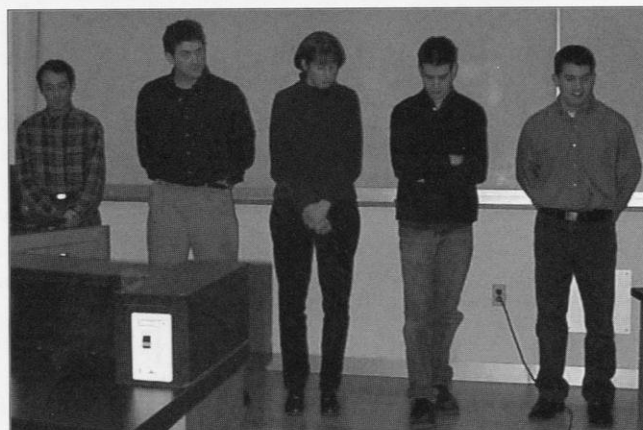
Fellowship to **Robert Owen** (Kiessling). **Chris Lawrence** (Skinner) was the Procter & Gamble Fellow for 2001-2002. **Courtney Thureau** (Ediger) was the Martha Gunhild Week Fellow. **Paul LePlae** (Gellman) completed his degree under a Kodak Fellowship in December. **John Herbert** (Harriman) is finishing the third year of a Department of Defense Fellowship. **David Castro** (Nathanson) and **Christine Morales** (Landis) are finishing the third years of Advanced Opportunity Fellowships from the Graduate School. **Jordan Schmidt** (Skinner) is a Hertz Fellow. **Joe Langenhan** (Gellman) completed the final year of his NSF Fellowship. **Jen Craft** (Brunold) is completing her third year as an NSF Fellow. **Jack Sadowsky** (Gellman) completed the first year of an NSF Fellowship, and **Justin Murray** (Gellman) and **Sannali Matheson** (Gellman) were WARF Fellows.

The Slifkin Award winners for 2001 were **Don Carpenetti** (Casey, Inorganic), **Meredith Porembski** (Weisshaar, Physical), **Xiao Hua (Sam) Qiu** (Ediger, Materials), **Steve Singer** (Casey, Organic), and **Emily Smith** (Corn, Analytical). Slifkin Award recipients are advanced graduate students in each division who are selected as leaders in their fields.

**Liman Wang** (Smith) received the **Gary Parr** Memorial Award in 2001. Gary was a Jim Taylor student (PhD '73) who died in 1993. The award was created from donations in Gary's memory. Liman was studying "DNA Computing on Surfaces."

Undergraduate research support was provided during Summer 2001 from the following sources: Edwin M. and Kathryn M. Larsen Scholarships to **Tanya Knickerbocker**

(continued on page 14)



Chemistry TAs are presented with the Outstanding TA Awards.

L to R: Jose Laboy, Mike Russell, Annabel Muentner, Jason Pontrello, Jeremiah Depta





# We are One Hundred Years

## Alpha Chi Sigma and The University of Wisconsin-Madison

By Brian P. Coppola, Ph.D., 1984 (Trost)

Alpha Chi Sigma is a national professional fraternity with over 54,000 members, 45 active Collegiate chapters, 8 Professional Chapters and 6 Professional Groups. Its quarterly publication, *The HEXAGON*, is pleased to provide *The Badger Chemist* with this interview commemorating the occasion of the centennial celebration of the founding of Alpha Chi Sigma.

**The HEXAGON (TH):** Professor Coppola, what is the connection between UW-Madison and Alpha Chi Sigma?

**Brian P. Coppola (BC):** The *Alpha Chi Sigma* fraternity was organized in Madison. A group of undergraduates who were fellow students in chemistry at the time founded the fraternity on December 11, 1902. These founding members were: Raymond Tracy Conger, Harold Everett Eggers, Joseph Gerard Holty, Alfred Emil Kundert, Joseph Howard Mathews, Edward Gustav Matke, Bart Eldred McCormick, Frank Joseph Petura, and James Chisholm Silverthorn.

**TH:** So, "Mathews"?

**BC:** Indeed, one of the most significant names in the history of the UW Chemistry department. This is the same Mathews whose career and contributions were commemorated by naming one of the chemistry buildings in Madison after him.

**TH:** In the third volume of *The HEXAGON*, Mathews and Kundert (*The HEXAGON* of Alpha Chi Sigma, 1913 3, 53) published a "Reminiscences" of the founding.

In the spring of 1902, several students of the chemistry department of the University of Wisconsin got together and decided that it was for their best interests to found some sort of an organization whose purposes should be to promote good fellowship and scholarship in the department. At the time there happened to be a number of very congenial men studying chemistry, men who had become very well acquainted with each other both in and out of the laboratory. The number of students taking chemistry as a major was much smaller in those days than it is now and it was much easier for the men to become well acquainted. Numerous

sporadic attempts had been made to found and maintain a chemical club, but after about two years of existence the club would die a quiet and apparently unmourned death. These failures made it evident that the new organization must be something more than a club, else it would follow its predecessors to an untimely end....Those who have come into the fraternity in later years can have but little idea of the discouragements which the fates hand out to a newly organized society of this character....We were told that such an organization would tend to the formation of cliques and jealousies in the department, that favoritism would be expected from any faculty members who might align themselves with us, that the organization would develop into a social fraternity, and "direst calamity of all" that there was no field for such an organization anyway.

**BC:** Members of the *Alpha* Chapter worked pretty quietly to build up their membership before going public on campus. No statement was given out to the press until February 10, 1903, when the following announcement appeared in the *Daily Cardinal* "A New Greek Letter Fraternity Alpha Chi Sigma Is Organized By Chemical Students. Membership is Limited to Those Upperclassmen Whose Major is in Chemistry. Object is to get Students in This Department More Acquainted With One Another. The *Cardinal* was not able to obtain the names of the charter members for this issue."

**TH:** History records that Mathews was a real driving force.

**BC:** That's right. He had a vision of a national fraternity quite early on, and contacted the University of Illinois in early 1903. In

order to expand beyond the boundaries of Wisconsin, Petura and Silverthorn were assigned the task of incorporating the fraternity. After a flurry of rapid correspondence between *Alpha Chi Sigma* and the Wisconsin Secretary of State, the fraternity was officially incorporated on January 22, 1904. It turned out that the second chapter of this fledgling fraternity would be at Minnesota, not Illinois. The next expansion of the fraternity came about because Mathews, who was working at the Case Institute of Applied Science in Cleveland, organized the *Gamma* Chapter. He earned his Ph.D. at Harvard, and returned to Madison as a Professor in 1911, becoming chair in 1919, a capacity in which he served for 33 years. He literally single-handedly built the department that existed in the 1950s.

**TH:** Astounding. So, we are approaching the centennial anniversary of the founding.

**BC:** Yes. As the fraternity grew rapidly, a larger governing body was established. By 1908, the first multi-chapter Convocation was held in Madison with seven different chapters represented. These Biennial Conclaves continue to be held, and *Alpha* Chapter, naturally, is hosting the 2002 meeting in Madison this August. The *Alpha* Chapter has two houses, actually, side-by-side at 619 and 621 North Lake, both with a great view of Lake Mendota.

**TH:** Anything else we should know about the fraternity?

**BC:** The first professional branch, for its non-collegiate members, was established in 1922. And the fraternity initiated its first women in 1971. Many people might also recognize that *Alpha Chi Sigma* sponsors two of the most noteworthy awards in

chemistry and chemical engineering, namely, the ACS Award in Pure Chemistry and the AIChE Award in Chemical Engineering. I think that the three objectives for the fraternity that the founders established are quite inspirational. These objects are (1) To bind its members with a tie of true and lasting friendship. (2) To strive for the advancement of chemistry both as a science and as a profession. (3) To aid its members, by every honorable means, in the attainment of their ambitions as chemists throughout their mortal lives.

**TH:** Thanks for sharing some of this history and connection between *Alpha Chi Sigma* and UW-Madison.



*Brian P. Coppola is Arthur F Thurnau Professor of Chemistry and Associate Chair for Curriculum and Faculty Affairs in chemistry at The University of Michigan in Ann Arbor. He was initiated into the Alpha Beta Chapter of Alpha Chi Sigma at UM in 1988, at which point he became faculty advisor for the Chapter. He became the Editor-in-Chief of The HEXAGON in 1998. Professor Coppola took on the position on the "recommendation" of one of his former undergraduate research advisors, Professor Robert E. Lyle (PhD '49, McElvain; Beta Eta '77), who just happened to be stepping down from the editorship of The HEXAGON that year.*

### The following article was written by Randy Guschl (BS '69).

We do not question that a good chemist works with facts, knowledge and experimental procedures. A good education at the right school develops these skills and opens doors to a successful career. So how important are other activities like membership in ACS and Alpha Chi Sigma? Everyone has their own answer for AXE or other organizations, but I would like to suggest that the contacts made and the relationships which resulted from AXE significantly enriched my life and career.

When I joined Alpha of AXE in the fall of 1967, I was a junior at UW and came to a rush function because my roommate, Dwight Nicholson (Alpha), talked me into going with him. He saw value in getting to know better fellow students and faculty. We both decided to join and went through the old ritual of meeting members and faculty to sign a pledge plaque. What an honor to meet Joseph Howard Mathews (Alpha) and get his signature. We were initiated and enjoyed our short time in Alpha until we graduated in 1969.

My choice of Illinois for graduate school in chemistry was heavily influenced by input from faculty and students who belonged to AXE, especially my thesis advisor Paul Treichel. When I arrived in Urbana that fall, there was no better place to stay than the AXE house of the Zeta Chapter. It offered low cost food and shelter and "instant access" to knowledgeable people about this new campus, the faculty, what to do socially and how to survive grad school. Somehow, a number of brothers thought that all members from Alpha are preordained to be chapter president and suddenly I was leading a very capable team to help fix up the physical and fiscal condition of this house. Being a member of Zeta was also an excellent way to meet faculty in all fields because social events in Zeta were heavily attended by faculty. I also discovered Zeta alumni as a source of funds to help fix up the house. Little did I know that those letters would be remembered when I went out looking for a job.

Despite a heavy teaching load, coursework and research under a new thesis advisor, Ted Brown, our Zeta leadership team found time to go to the 1970 Conclave at the University of Texas. We came back excited and helped pull together a bid for the 72 conclave. As soon as this bid was accepted, I appointed a team to be the Conclave committee, resigned from the chapter leadership role and discovered how this role as Conclave Chairman would open more doors for a young grad student. Suddenly I was called into the office of Roger Adams ("The Chief"), former Head of the Chem Dept and a very recognized chemist, statesman and leader in our world. He wanted to "help me" with the

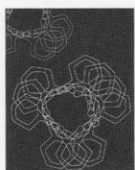
design of the Conclave and he sure did. Unfortunately, he passed away a year before the Conclave, but his ideas, speakers, etc were embodied in the program. Upon graduation from Illinois in 1973, a very bad year to get out, I discovered the value of those UI and AXE contacts and actually had job offers to pick from! Like many Illinois PhDs before me, I married a fine UI coed, Char, an official "Alpha Chi Sigma Sweetheart," and we accepted a Dupont offer to move to Wilmington (and 7 more times with transfers). We all have our own stories about lifelong friendships from graduate school but I am always amazed to see how many of these friendships reappear years later and the AXE connection continues. The social life in Illinois was heavily focused on AXE with big events like "Lobster Dinner Night." It was at this event that I first dated Char and also discovered a new postdoc, Bassam Shakhshiri, Zeta brother and now friend and partner in efforts to improve the science education of every kid in America!

Through 28 years with Dupont as a chemist, manager and R&D Director, I have had many contacts with AXE brothers both inside and outside of Dupont. Last year, I was at a dinner at the Chemical Heritage Foundation in Philadelphia and found myself next to GMC Gary Anderson. How long does it take for the AXE to come out? Long story short, I found myself on the Spring ACS program for AXE's Hall of Fame lecture series and speaking on Roger Adams. A labor of love, but preparation for this talk allowed me to connect with UI faculty and others. So often in business and travel in our profession, the AXE has come out to make a new acquaintance into someone I could easily work with!

So today I am writing a letter for the *Badger Chemist* because Bassam Shakhshiri asked me to. In two weeks I am coming to the UW Conclave, my first since 1972. I look forward to seeing old and new friends. I hope this testimony shows the value of the right school and the added benefits of professional societies and fraternities. As many of us are concerned about our nation's future and how fewer, not more kids are going into careers in Science, Math, Engineering and Mathematics (SMET), we should look at the whole pipeline from Kindergarten to Grad school and recognize that our careers are much more than skills and knowledge. Where does one place relationships and friendships, especially those which are true and lasting?

Randy Guschl — Alpha 1967





# New Badger Chemists

PHD

MAY 2001

## Christopher Michael Cheatum (*Crim*)

Transient Electronic Absorption Studies of Vibrational Relaxation and Excited-State Proton Transfer in Solution

## Sarah Kathryn Coulter (*Hamers*)

Reactions of substituted aromatic molecules on the Si(001) surface

## Michele Linnea Derider (*Markley*)

Conformational investigations:  
i. Prolyl ring conformations  
ii. Solution structure refinement of brazzein

## Laura Ann Harper (*Vedejs*)

i. Studies toward an enantioselective nucleophilic catalyst based on dimethylaminopyridine  
ii. Kinetic study of nucleophilic acylation catalysts

## Chutima Kongkittingam (*Vedejs*)

Peptide coupling of sterically hindered amino acids; application to the synthesis of (-)-hemisterlin ethyl ester

## Stefan Kraft (*Casey*)

[1,3] metal shifts and dimerizations of rhenium alkynyl carbene complexes

## Jeremy David Little (*Vedejs*)

Synthetic studies toward aziridinomitosenes

## Molly Maureen McGuire (*Hamers*)

Elemental sulfur on oxidized sulfide mineral surfaces

## Bryce Phillip Nelson (*Corn*)

Near infrared surface plasmon resonance imaging detection of nucleic acid hybridization onto DNA arrays

## N. Meredith Porembski (*Weisshaar*)

Kinetics and mechanisms of the gas-phase reactions of yttrium and zirconium with alkenes: experimental and theoretical studies

## Xiao Hua Qiu (*Ediger*)

Polymer melt dynamics by NMR relaxation measurements

## Aaron Wade Sanders (*Reich*)

i. Addition of sulfur stabilized lithium reagents to epoxides  
ii. Rapid injection nuclear magnetic resonance spectroscopy  
iii. Chelated aryllithium reagents

AUGUST 2001

## Donald Wesley Carpenetti (*Casey*)

Models of key intermediates in metallocene catalyzed alkene polymerizations: zirconium-alkyl-alkene chelates

## Nicholas Joseph Condon (*Wright*)

Doubly vibrationally enhanced infrared four-wave mixing spectroscopy of acetonitrile and crotononitrile

## Daniel David Ebeling (*Smith*)

Development of charge reduction electrospray mass spectrometry for biopolymer and synthetic polymer analysis

## Mary Josephine Smitley Hansen (*Farrar*)

Hydrogen-bonded fluids studied by theoretical calculations and nmr experiments: formamide and formic acid

## Michael Kavana (*Burstyn*)

Mechanistic and structural studies towards phosphate diester hydrolysis

## Andrew Mitchell King (*Crim*)

Time-resolved studies of isolated molecules and in solution: watching energy flow

## Yuxia Liu (*West*)

Syntheses, chemistry and applications of organosilicon dianions, organogermanium dianions and pentacoordinate silicon compounds

## Sonya Lee McKay (*Gellman*)

Investigations of aromatic-aromatic interactions using secondary and tertiary amides

## Emily Lynn Reichert (*Weisshaar*)

Velocity map imaging of cobalt ion + alkane reaction products: evidence of non-statistical energy distributions

## Ekasith Somsook (*Landis*)

NMR-based solution structures and mechanisms of metallocene olefin polymerization catalysis

## Todd Cory Strother (*Smith*)

Modification of crystalline silicon and diamond surfaces for the attachment of DNA

## Liman Wang (*Smith*)

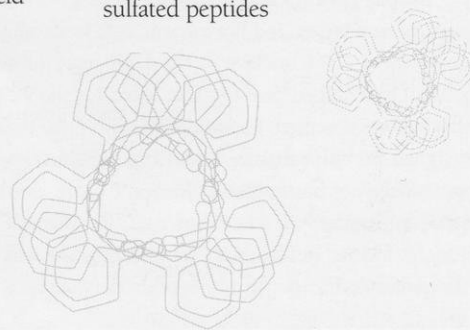
DNA computing on surfaces: destroy and readout operations

## Lei Yang (*Taylor*)

Fabrication, stimulation, and demonstration of x-ray phase-shifting masks for sub-70 nm devices construction

## Travis Young (*Kiessling*)

A strategy for the synthesis of sulfated peptides



## DECEMBER 2001

**Paul Adrien Bonvallet** (*McMahon*)

Matrix isolation and  
computational investigation of  
naphthylcarbene rearrangements

**Wensheng Chen** (*Zimmerman*)

Solid state photochemistry and diverted  
di- $\pi$  methane rearrangement

**Mary Jezl Cornett** (*Woods*)

Correlating absolute concentrations of  
gas-phase species determined by  
microwave Fourier transform infrared,  
and atomic absorption spectroscopies to  
properties of silicon dioxide films  
deposited in an electron cyclotron  
resonance reactor

**Jeffrey Hirsch** (*Burstyn*)

The inorganic and bioinorganic  
chemistry of copper thioether complexes

**Steven William Singer** (*Casey*)

Formation and reactions of a  
hydroxycyclopentadienyl ruthenium  
hydride: an organometallic complex  
containing electronically coupled acidic  
and hydridic hydrogens

**Faisal Ahmed Syud** (*Gellman*)

Design and study of autonomously  
folding antiparallel  $\beta$ -sheets

MS

## MAY 2001

**Robert Wallace Clark** (*Burstyn*)**Omar Green** (*Burstyn*)**Amy Allison Hofstra** (*Wright*)**Geoffrey Karl Krummel** (*Smith*)**Rebecca Brown Oliphant** (*Hamers*)**Soraya Pornsuwan** (*Ellis*)**Kathryn Allanah Preston** (*Smith*)**Colleen Marie Raphael** (*Ediger*)**Tian Wu** (*Schwartz*)**Aleksandar Nedeljka Zivkovic** (*Crim*)

## AUGUST 2001

**Preston Ernest Chmura** (*Mecozzi*)**Shannon Rose Fix** (*Stahl*)**Cynthia Grace Widstrand** (*Ellis*)**Ou Xie** (*Dahl*)**Laura Lynn Zakrzewski** (*Mecozzi*)

## DECEMBER 2001

**Liang Fang** (*Hamers*)**Shujuan Liu** (*Corn*)**Jianming Liu** (*Hamers*)**David Eugene Olszewski** (*Woods*)**Vinodhkumar Raghunathan** (*Cavagnero*)**Lizheng Zhang** (*Cavagnero*)

BS &amp; BA

## MAY 2001

**David Dean Anderson****Frederick Joseph Boehm****Charles Arthur Bornhoeft****Mark a. Chapman****Marla ann Chesnik****Stephanie Lynn Elmer****Adam Thomas Fiedler****Colin J. Gaul****Lynn P. Gehrmann****Romeo A. Gomez****Martha Jean Hahn****Paul David Hettiger****Mark Thomas Hyland****David Eugene King****Paweena Kreunin****John Patrick Larson****Daniel Gillett Miller****Bryan James Paradise****Jordan R. Quinn****Emily Suzanne Pfeiffer****Kara Alanna Schnell****Kari Ann Rahne****Cameron William Spahn****David Daniel Twitchell****Katherine A. Varshavsky****Lee Ann Zella****Diana Hui Zhou**

## AUGUST 2001

**Narupol Intasanta****Margo Johanna Larsen****Prem I Mansukhani****Idene Saam****Roger Warren Sands**

## DECEMBER 2001

**Janelle Marie Bailey****Joseph Mauro Calabrese****Christopher Charles Clark****Erika Elaine Englund****Joshua D. Fox****John Andrew Gillis****Brian Dale Korslin****Michael Alan Kwasny****Owen Ngo Li****Daniel John Linse****William Alexander Merrill****Jason Lee Pursian****Matthew Roy Sleeter****Eric Michael Todd**





# Other Notable News

## McELVAIN SEMINAR SERIES

The McElvain Seminar Series continued this program of seminars with speakers selected and hosted by our graduate students. This is an excellent experience for the grad students, who choose speakers, make all the arrangements, and host speakers in the Department. Generally, each division invites one industrial and one academic speaker. During 2001-2002, speakers included **Dr. Yves Chabal** from Bell Labs in New Jersey, **David Wineland** from NIST-Boulder, **Bruce Dorsey** from Merck Research Labs, **Eric Gordon** from Sunnesis, **Professors Richard Zare** and **Eric T. Kool** from Stanford, **Dr. Rudolf Tromp** from the IBM T.J. Watson Research Center, **Maurice Brookhart** from UNC-Chapel Hill, and **R. Morris Bullock** from Brookhaven National Lab.

## DEPARTMENT LECTURE SERIES

These Department lecture series are made possible through funds donated by alumni, faculty and friends of the Department. They often involve 2 to 4 lectures and a longer time commitment from the speaker, and they allow us to have outstanding scientists interact extensively with the Department's faculty, students and staff.

**Sylvia Ceyer** from MIT presented the Willard Lectures in 2001. She spoke on surface chemistry and reaction mechanisms.

**Professor Warren Warren** from Princeton University was the Meloche Lecturer in Analytical Chemistry. He spoke on Femtosecond Laser Pulse Shaping. He also presented a lecture in the Chemistry Colloquium series. **Professor Andreas Heuer** from University of Munster was the Physical Chemistry Meloche Lecturer in April.

**Professor Dudley Williams** from Cambridge University presented the Sprague Lectures in April 2002.

**Ron Breslow** from Columbia University presented the Hirschmann Lectures in April.

## FERRY LECTURE INITIATED

Through generous donations from **John Ferry's** former students and associates, the John D. Ferry Lectureship in Macromolecular Science was initiated this spring in the Department of Chemistry. The donors established the series to honor John Ferry and to bring out the important features and characteristics of his work, which include recognizing a key research area and engaging in a sustained effort to define and explain it.



A young John Ferry

The first Ferry Lectures were presented on March 4 and 5, 2002, by **Jacob Klein**, Head of Physical Chemistry at the University of Oxford and Herman Mark Chair of Polymer Physics at the Weizmann Institute. Klein spoke on "Rheology under Confinement" and "Polymer Brushes" and provided many connections between his own work and that of John Ferry.

The Department of Chemistry gratefully acknowledges the donors to the Ferry Lectureship Fund for their generous support of the Department's education and research mission. The Fund is administered by the University of Wisconsin Foundation.

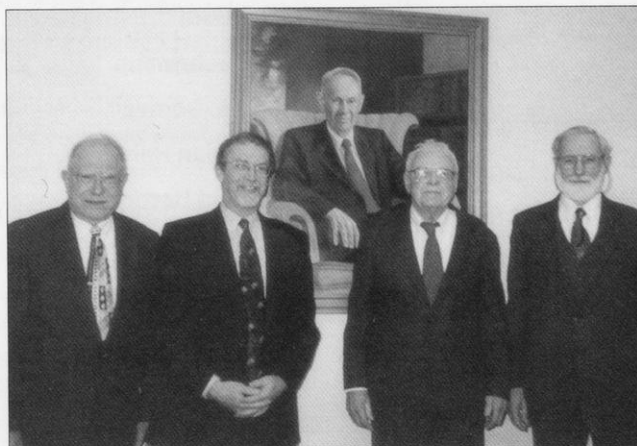
## Joseph O. Hirschfelder Prize IN THEORETICAL CHEMISTRY

The 2001-2002 J.O. Hirschfelder Prize was presented to **Professor Bruce J. Berne** from Columbia University. Professor Berne delivered a series of lectures in October. This annual prize is made possible through funds donated by **Professor J. O. Hirschfelder** and his widow, **Dr. Elizabeth S. Hirschfelder**. It has been awarded since 1991-92.

## ILM AWARDS

**Gordon Bain**, **Pam Doolittle** and **Dan Sykes** wrote successful proposals to the University's Instructional Laboratory Modernization Program. Gordon's proposal provided \$140,000 to enable us to launch a new course in Inorganic Chemistry, Chem 311, and to help with instrumentation for other courses. We received an additional \$60,000 to remodel the old computer room into a lab for 311. Gordon had a second proposal for \$45,000 in laptop computers and spectrometers for the labs funded in 2002-03. Pam and Dan wrote a proposal to provide \$107,000 to the analytical laboratory courses Chem 327 and 329.

**Paul Schatz** wrote a successful proposal to ILM and to NSF in support of a new 300 MHz Varian NMR spectrometer equipped with an automatic sample changer. Paul retired



(L to R) Malcom Williams, Jacob Klein, Ed Fitzgerald, and Bob Landel stand for photo in front of portrait of John Ferry at the Inaugural lecture of the John D. Ferry Lectureship Series.

before he could get the equipment purchased and installed, but his successor **Allen Clauss** has incorporated the new instrument into the Organic curriculum. Thanks to all of our lab directors for the splendid job they do in our teaching labs.

## Undergraduate POSTER SESSIONS

**Gil Nathanson** organized a very successful undergraduate research poster session in April 2001. Nineteen excellent students doing undergraduate research with faculty in the Department presented results from their work in the lobby of the new building. The program was well attended by faculty, grad students, and staff, and the response indicates it will become an annual event in the life of the Department.

## DEPARTMENT PUBLICATIONS

A list of faculty publications is published in the department newsletter every other week. If you're interested in keeping track of what our faculty are doing in research, log on to [www.chem.wisc.edu](http://www.chem.wisc.edu) and select "News and Events" Here you will also find advance notice of seminars being presented in the Department.

## Department Contributions Bear FRUIT YEARS DOWN THE ROAD

An article titled "Corn yields another useful product", posted 11/14/2001 at the RESEARCH Archives at [www.news.wisc.edu](http://www.news.wisc.edu) details how "An industrial chemical found in antifreeze, deicing fluids and liquid detergents could soon stand alongside animal feeds, sweeteners and cooking oil as a commercial product made from corn." The work by **Randy Cortright** and **James Dumesic** from the Chemical Engineering Department "builds upon the work of **Homer Adkins**, a UW-Madison chemistry professor from 1919-49. At a time when most chemicals were produced from agricultural products rather than oil, Cortright says, Adkins was the first to use copper catalysts to turn lactic acid into propylene glycol. "It feels like we've come full circle," Cortright says, "We enhanced the technology, but the basic ideas were known 70 years ago."

## The New Building AND REMODELING PROJECT

The Wisconsin Chapter of the American Institute of Architects (AIA) conferred an "Honor Award" to the Chemistry Building Addition in April 2001. Only 3 of 68 projects nominated received this highest level of distinction for overall design excellence. Key members of the design team from **Flad and Associates**, the project's architects, include **David Black** (Project Designer), **Mike Eberle** (Project Architect), **Mike Acton**, **Rachel Davey**, **Diane Dorschner**, **Matt Aro**, **Ray Borst**, and **A.J. Gersich**. We greatly appreciate their contributions to our excellent building.

In July 2001 the new UW-Madison Chemistry Research Tower was featured in *Design Architecture* magazine. In November the building was featured in *FM DATACOM* magazine.

**North American Mechanical, Inc.** (NAMI), the mechanical contractor for the Chemistry building project, received a 2001 Projects of Distinction Award from the Associated Builders and Contractors for their work on the Chemistry Building Addition. The award was based on quality workmanship, scope and complexity of the mechanical systems, difficulty of construction, and safety record. **Don Stando** (foreman, research tower addition), **Dan Pedek** (foreman, renovation project), **Melody Doyle**, **Kurt Wellenstein**, **Steve Ross** and the entire NAMI crew have done excellent work and deserve our appreciation.

The remodeling continues to transform the older parts of the building. Much of the Mathews Building was completed in 2001. One of the significant changes to the look of the Department is the "Main Street" corridor tying the three buildings together. Where the older configuration was somewhat maze-like on the first floor, "Main Street" allows a visitor to enter on the northeast corner of the Daniels Building near the lecture rooms, make a single turn at the southeast corner near the seminar hall, walk past the elevators into the Mathews Building, and then proceed past the mail room and administration area to exit the New Building on the west. It gives a much more unified feeling to the buildings.

Remodeling of the Mathews Building last year was slowed by the discovery of the need to replace the system of "air-mixing boxes"

which allow the hot and cold air coming into them to be mixed to respond properly to the thermostat's call for cooler or warmer air. Curtains in the 35-year-old boxes which regulated the volume of air had in many cases frozen into position, so that they no longer allowed proper mixing. After considerable study and discussion, we decided that the mixing boxes should not be repaired, but replaced. NAMI accomplished the replacements as efficiently as possible, and in July the project was completed successfully.

Another significant event in the life of the remodeling project occurred when the roofs of both the Mathews and Daniels buildings were replaced. For some years we have had to deal with leaks through holes in the roof after every significant rainfall. Of course the main victims of such dripping were the occupants of the top floors (and the Chair's office heard about it every time it happened). We had installed drip pans in the ceilings to catch the flow from all but the heaviest rains. Those drip pans were removed in May 2002.

Because the design of the ventilation system in the Daniels Building entails three main shafts, the remodeling of this part of the building has proceeded roughly in thirds, each third being defined by the shaft serving it. As of July 2002, the remodeling project was well into the area served by the third and final shaft. This phase of the project should be completed about November, and after they finish a few remaining pockets of construction, we can say goodbye to the construction crews we have shared quarters with for the last several years.

The unexpected expenses involved with getting the roof and the mixing boxes replaced put a significant strain on the approved project budget. In addition, the face of the Department has changed substantially since the original design was approved. Chemistry has hired 9 exceptional new faculty members and had 3 departures just since the building project started in August 1998, and the project design needed to be changed along the way to meet the changing research needs. Adapting the renovation project to meet the evolving needs of the Department further added to the costs. In December 2001, the State Building Commission approved an addition of \$2.4M to the budget for the Chemistry New Building and

(Continued on next page)



“OTHER NOTABLE NEWS” Continued from previous page)

Renovation Project. The State agreed to pick up \$1.8M of this increase, with Chemistry contributing an additional \$600,000. After many years of planning, design and construction, we are finally reaping the rewards of new and refurbished facilities, and we are committed to maintaining the full scope of the first-class renovations through to the final completion of the project.

The final \$41.3M cost will be shared by the State (\$18.8M), the Vilas Trust (\$13.0M), NSF (\$1.6M), NIH (\$1.0M), the UW Foundation (\$0.5M), Campus Administration (\$0.75M), Dow (\$0.5M), College of Letters & Science (\$1.55M), Chemistry Department (\$2.1M), and chemistry alumni, faculty and friends (\$0.5M). If you're counting carefully, you have realized this only comes to \$40.3M. We have yet to work out the last \$1.0M piece of the puzzle.

It has been extremely gratifying to see that the portion of the donations that were to come from alumni, faculty and friends exceeds its pledged amount of \$500,000. Our alumni and faculty have shown once again that they believe strongly in the quality of our program, and will work to keep it strong.

Photographs of many of the recently completed parts of the building are included in the centerpiece.

## DEPARTMENTAL GLASS SHOP

The glass shop has seen a number of changes in 2001, the biggest being the move to its new location in December. The glass shop is now located in room 3201 in the Mathews building. It's a beautiful space with plenty of room and great light. There will be a grand opening of the new glass shop when glassblower **Tracy Drier** hosts the Midwest Section meeting of scientific glassblowers on September 28, 2002. Everyone is welcome.

We are working on computerizing the glass shop to streamline the accounting and business aspects of the shop. The systems in place are being continually upgraded and improved. Ongoing work with **Jay Hwang** (MS '02, Yu) is also being done on the chemistry department's glass shop web page. There is currently information on the basic shop details as well as information on classes.

The Scientific Glassblowers Annual Symposium was held in Colorado Springs last June. Tracy presented a paper on the design and construction of an apparatus for refining RNA using preparative electrophoresis chromatography. This was based on the design of UW student **Lizheng Zhang**. He also presented this paper at the Great Lakes and Midwest section meetings last autumn.

Throughout the year, students and faculty have come up with a number of original glassware designs. **Lei Jiang** of the Burke group designed a powder addition funnel for air-sensitive compounds. Assistant Professor **Shannon Stahl** has designed a vacuum manifold that offers easier operation than traditional manifolds using an ergonomic design.

Looking to the future, Tracy has begun the process of gathering support and funds for a portable glassblowing podium for public lectures and community outreach. Glassblowing, and how it relates to chemistry, offers an exciting and unique learning opportunity. We'll keep you posted on how this develops.

## Mark your calendar and come to Madison for special occasion IN THE SPRING OF 2003

The play *OXYGEN* by UW alumnus **Carl Djerassi** (PhD '46, Wilds) and Nobel Laureate **Ronald Hoffmann** will be produced by the UW Theatre in the spring of 2003 in Madison. *OXYGEN* is a complex exploration of the nature of scientific achievement. Set in Stockholm, the play travels back and forth through time between the years 1777 and 2001. In its contemporary setting, we sit in on the meetings of the Chemistry Nobel Prize Committee, who are charged with the prodigious task of awarding a "retro Nobel" to the early scientist who "conferred the greatest benefit on mankind." The committee decides that the discovery of oxygen is the most significant achievement in chemistry, and sets out to determine which scientist deserves the credit. In 1777, we meet the candidates for the retro Nobel: Antoine Laurent Lavoisier,



Tracy Drier in the Glass Shop.

Joseph Priestley, and Carl Wilhelm Scheele. As the scientists engage in a struggle for credit for the discovery of oxygen (and the all-important patronage of the king of Sweden), we discover that their wives hold the key to the riddle of who found "fire-air" first. This thought-provoking play takes a new look at the question of recognition in the scientific community and gives us a fascinating glimpse into the lives of three important chemists and the brilliant women who selflessly supported their careers behind the scenes. The play will be directed by Theatre and Drama Professor Norma Saldivar and performed on March 28, 29, April 2,3,4,5,10,11, and 12 at University Theatre.

On Saturday, March 29 a one-day public symposium will be held in the Chemistry Building sponsored by the Wisconsin Initiative for Science Literacy. Speakers will include the two playwrights and faculty from UW Madison doing research involving oxygen. The symposium is aimed at the general public and will include talks about the history of the discovery of oxygen and many spectacular demonstrations involving oxygen and displaying its common and not so common properties and reactions. The symposium aims to engage the general public for the entire day and to inspire the science faculty and students who are in attendance to learn about communicating science effectively to general audiences. Other programs and activities are being organized and will be announced later.

Professor Djerassi received an honorary doctorate degree from UW Madison in 1995 and Professor Hoffmann was the 2000-01 recipient of the Hirschfelder Prize awarded by the Department of Chemistry.



# Wisconsin Initiative for Science Literacy

Our democratic society has become increasingly dependent on science and technology. It is essential for the well-being of our society that all citizens develop an appreciation of science, the benefits of technology, and the potential risks associated with advances in both. Citizens must gain "science literacy."

Science literacy does not imply detailed knowledge of chemistry or physics or biology, but rather a broad understanding and appreciation of what science is capable of achieving and, equally important, what science cannot accomplish. Science literacy will enable the public to make informed choices and to reject shams, quackery, unproven conjecture, and to avoid being bamboozled into making foolish decisions where matters of science and technology are concerned.

The Wisconsin Initiative for Science Literacy is a new program with two goals: to promote literacy in science, mathematics, and technology among the general public, and to attract future generations to careers as the

researchers, entrepreneurs, and teachers on whom the Nation's continuing economic health and national security will depend. Society makes progress in addressing critical issues by having both a skilled, creative, and productive workforce and a citizenry able to judge the risks and to enjoy the benefits of advances in science and technology. The Initiative seeks to boost opportunities for educational success for *all* students, especially those from under-represented groups, and to empower adults to participate responsibly in our cherished democratic institutions. The Initiative aims to enhance the development of talent for careers in science and in science teaching and to advance the level of appreciation of science among the non-practitioners who are its beneficiaries. The Initiative will explore and establish links between science, the arts, and the humanities.

The Initiative is directed by Professor Bassam Z. Shakhashiri of the University of Wisconsin-Madison Chemistry Department. Programs will draw on the concepts developed

by Dr. Shakhashiri during many years of innovative work in science education and through his extensive experience as a faculty member at the University, his work with the UW-Madison Institute for Chemical Education, and his six years as the chief education officer of the National Science Foundation. His very successful programs have included research and development in chemistry demonstrations, the annual Holiday Lecture, the *Chemical Demonstrations* Book Series, discussing of science on radio and television, the Science is Fun Web site, the Conversations in Science Series, and the newly launched Science in the City program.

The Initiative has its headquarters at the University of Wisconsin-Madison. Support is being sought from individuals, business and civic groups, and private and government sources. Support for this program will have a direct and continuing impact on our nation's ability to maintain its leadership in the sciences and in technology.

## PROGRAMS of the Wisconsin Initiative for Science Literacy

### Science Is Fun

This series of presentations fosters public awareness and appreciation of science. At shopping malls, science centers, schools, colleges and universities; at meetings of professional scientific and educational societies; and before gatherings of civic, religious and community organizations, in the United States and around the world, Professor Shakhashiri and other staff of the Wisconsin Initiative for Science Literacy use spectacular demonstrations to communicate the wonders of science. Glowing liquids, exploding balloons, and other vivid scientific phenomena charm and fascinate audiences everywhere.

### Science, the Arts, and the Humanities

Passion, creativity, and the urge for expression are essential human qualities that inspire science, the arts, and the humanities,


and thus constitute a common bond among them. The Wisconsin Initiative for Science Literacy helps people explore, discuss, and cultivate the intellectual and emotional links between science, the arts, and the humanities. People can value, appreciate, and enjoy science without a deep understanding of specific details, just as they can appreciate music without a specializing knowledge of music theory, or appreciate literature, the theater, and the visual arts without being experts in those fields. Programs of the Initiative focus on the relationships, similarities, and differences in inquiry, creativity, and personal expression among scientists, artists, and humanists. A specific goal is to give musicians, artists, writers, and performers – present and future – an appreciation of science and enable them to see and understand the connections between science and the arts.

### Science in the City

The purpose of Science in the City is to improve the quality of science education in urban areas, where now, especially for minority students, it ranges from merely adequate to woefully deficient. In order to elevate levels of teaching and learning, the program is designed to involve not only students, teachers, counselors, and school administrators, but also parents and guardians, families, school boards, and the community at large. By including the entire community in science education, Science in the City addresses the problems of lack of interest, understanding, and support that often exist in urban schools. The goal is to build home and community involvement through the use of innovative, complementary components; those intended for students and teachers are aligned with national and state standards for science education.

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 ("PROGRAMS FOR WISCONSIN INITIATIVE FOR SCIENCE LITERACY" Continued from previous page)

### Women in Science

Traditionally girls are not encouraged to pursue science as a regular part of their personal and intellectual development. As a result the contribution women make to science is not nearly as great as it could or should be for the welfare of science and of society. The Women in Science encourages the participation of girls and women in science by making them aware of role models and examining efforts of these models in the advancement of science. It emphasizes mentoring, decreasing isolation and stereotyping, and creating supportive environments. Special effort will be made to promote pathways to success in academic and professional settings for women at the college level and beyond.

### Science on the Web

With the Science Is Fun Web site at [www.scifun.org](http://www.scifun.org), Professor Shakhshiri and colleagues reach a worldwide audience with home experiments that let children, teachers, and others make hands-on discoveries. The "Chemical of the Week" contains facts about the importance of chemicals in everyday life. There also are links to other informative Web sites and bits of science fun. This is a rich resource of recommended reading material and media offerings.

### Science on the Radio

Professor Shakhshiri makes regular visits to Wisconsin Public Radio to talk directly with listeners about topics relating to current science, the environment, and education. He responds to listeners' questions about the role of chemicals in everyday life, such as gasoline additives, arsenic in the water supply, and highway de-icers, and explains news of scientific, educational, and social interest.

### Science on the Road

Science Is Fun takes to the road in a vehicle stocked with chemicals and equipment and staffed by teaching personnel. This project brings science education to small rural communities and inner-city neighborhoods in Wisconsin and beyond.

### The Holiday Lecture

Once Upon a Christmas Cheery in the Lab of Shakhshiri is a free annual program

that plays to packed houses wherever it is presented. This Holiday Lecture is a family event that entertains young and old and educates them about the joys of science. The show is broadcast on PBS and local cable stations, and is available on videocassette.

### Research and Development of Chemical Demonstrations

In the popular four-volume series, *Chemical Demonstration: A Handbook for Teachers of Chemistry*, Professor Shakhshiri and collaborators present a wide range of original and adapted demonstrations for displaying and teaching about chemical phenomena in science classrooms at all levels. The series has been translated into several languages. Future volumes will reflect advances in science and show how laboratory discoveries relate to everyday life.

### Conversations in Science


The Conversations in Science series brings together UW science researchers and Madison-area science teachers. Designed to stimulate discussion between scientists and science educators at all levels, these conversations connect middle and high school classrooms with the University's cutting-edge research. This concept is being expanded to establish conversations about science between scientists and the community at large, including families, non-science professionals, and civic, business, and religious groups. The UW experience serves as a model for expanded offerings involving scientists from other institutions with teachers and members of communities across the state and nationwide.

For more information about the *Wisconsin Initiative for Science Literacy*, contact:

Professor Bassam Z. Shakhshiri,  
William T. Evjue Distinguished Chair  
for the *Wisconsin Idea*  
Department of Chemistry  
University of Wisconsin-Madison  
1101 University Avenue  
Madison, Wisconsin 53706-1396  
**Telephone:** 608-262-0538  
**Email:** [bassam@chem.wisc.edu](mailto:bassam@chem.wisc.edu)  
**Web:** [www.scifun.org](http://www.scifun.org)

For information about making a gift to the *Wisconsin Initiative for Science Literacy* through the University of Wisconsin Foundation, contact:

University of Wisconsin Foundation, David H. Simon, Director of Development  
1848 University Avenue, P.O. Box 8860, Madison, Wisconsin 53708-8860  
**Telephone:** 608-263-4545 **E-mail:** [uwf@uwfoundation.wisc.edu](mailto:uwf@uwfoundation.wisc.edu)  
**Web:** [www.uwfoundation.wisc.edu](http://www.uwfoundation.wisc.edu)

 ("OUR AWARDS" continued from page 5)

(Smith) and **Andrew Krueger** (Zimmerman). Edward Panek Memorial Scholarships to **Andrew Krueger** and **Anthony Ehrbar** (Burstyn). Wayland Noland Undergraduate Research Fellowships to **Cassandra Jones** (Yu), **Steve Steiner** (West), and **Nate Taft** (Burstyn). Walter W. and Young-Ja C Toy Scholarships to **Anthony Ehrbar**, **Joseph Martinelli** (Burke), **Stephen Brown** (Kiessling), **Joseph Fowble** (Nelsen), and **Cassandra Jones**.

The following undergraduate students received scholarships during the academic semesters: **Lily Abbott** received a Mabel D. Reiner Scholarship. **Stephen Brown** received an Evan P. Helfaer Scholarship. **Charles Bui** received the Don Brouse Memorial Scholarship. **Steve Darnell** received a Student Support Scholarship. **Anthony Ehrbar** received a Norbert Barwasser Scholarship. **Tanya Knickerbocker** received a Martha Gunhild Week Scholarship. **Andrew Krueger** received Norbert Barwasser and Margaret Bender Scholarships. **Joseph Martinelli** received an Evan P. Helfaer Scholarship. **Adam Miller** received a Student Support Scholarship. **Paul Roethle** received Richard Fischer and Evan P. Helfaer Scholarships. **Anne Schuelke** received a Mabel D. Reiner Scholarship.

**Nathan M. Aumock** (Organic), **Shaun M. Lippow** (Physical) and **Kristin B. Meyer** (Organic) won awards from the ACS Wisconsin Section for outstanding performance in their classes.

Undergraduate **Clement Chow** (Cavagnero) has won the 2001-02 University Book Store Academic Excellence Award. This award recognizes outstanding undergraduate students who have actively been involved in academic research. Clement, a biochemistry major, also won a 2002 Florence Waste Pulver Scholarship.



Chemistry professor **Bassam Shakhshiri** explains to special guest **Bucky Badger** why condensed water vapor is produced when hot water is poured on dry ice during his "Once Upon a Christmas Cheery in the Lab of Shakhshiri" program, an annual holiday version of his "Fun with Science" program.



Photo by: Stephanie Judge, 2001

# Science is Fun

Chemistry professor **Bassam Shakhshiri** explains why condensed water vapor is produced and liquids change color when dry ice is dropped into cylinders during his "Once Upon a Christmas Cheery in the Lab of Shakhshiri" program, an annual holiday version of his "Fun with Science" program.



Photo by: Stephanie Judge, 2001



# Chemistry Interiors



Seminar Hall  
looking east on Johnson Street

Photo: Martha Vestling



"Light Spectra"  
Percent for Art project by Beverly Precious



Seminar Hall

Photo: Courtesy of United Visual, Inc., IL

## Places

"Light Spectra" is a suspended sculpture designed by Beverly Stucker Precious of Precious Design Studios, Inc, Indianapolis, IN for the University of Wisconsin-Madison Chemistry building. The large arc across the two-story interior lobby of the Daniels Hall entry relates to the gentle curves of the new additions. Dichroic glass panels reflect light and movement when viewed from the exterior while providing interest and color variations from inside the library. The imagery of the glass panels echo the use of lasers and light, linking chemistry students and faculty to the sculpture.



UNIVERSITY OF WISCONSIN - MADISON

## Chemistry Department

Seminar Hall from the back



Photo: Courtesy of United Visual, Inc., IL

Photo: Bruce Goldade



Main Street corridor  
looking west



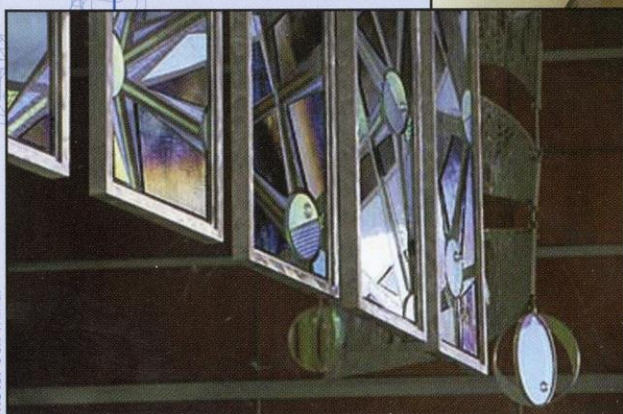
Photo: Bruce Goldade

## Spaces

Percent for Art  
project by Beverly Precious



Photo: Jeff Miller







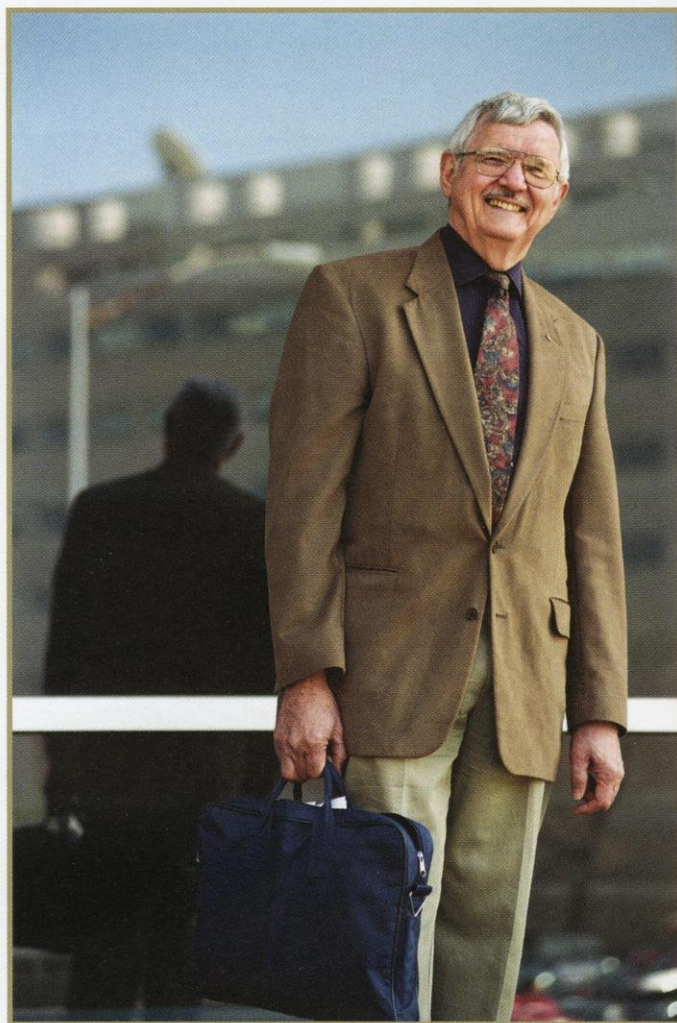
# Professor Jim Taylor Retires

A group of former students held a party for **Jim Taylor** in May, while some were attending the ASMS (American Society for Mass Spectrometry) Conference. **Kelsey Cook's** account follows:

Jim arrived in Chicago at about 5 on May 29 (over an hour earlier than planned), then spent time with **Michelle Buchanan** and me, waiting in the lobby of the Hyatt to see if any other alumni assembled. When asked who else was coming, we demurred that we weren't certain, but we knew **Gil Jones** would be there, since he lives in nearby Naperville and had picked the restaurant (Morton's of Chicago). At the designated hour (6:30), **Karl Wood** joined us, and the four of us took a cab to Morton's, where Jim was happily astonished to see an additional 15 people, including 12 alumni and 3 spouses. Morton's had set two long tables, and the group inadvertently (perhaps) divided itself such that everyone who graduated in '74 or before filled one, and the "youngsters" filled the other. Prize for farthest traveler went to **Glenn Howes** who made the trip from San Diego just for the dinner. **Larry McKeen** represented the East coast, by flying in from Philadelphia. The Gulf Coast was represented by **Dave Mehaffy**, who brought his new heart from Austin. Only Michelle, Karl, Gil, and I attended the Conference - all the others had come just for dinner! Several gathered early at Tavern on Rush (across the street from Morton's) to spend the afternoon reminiscing, but all were in place to surprise Jim when he arrived. The waiters were very patient, as much more reminiscing preceded a great meal, which was followed by presentation of "The Book," a collection of letters, pictures, and reminiscences which Michelle Buchanan collected into a 3-ring volume. Jim was persuaded to read the letter from **Ed Greer** (PhD '82), which had tickled her and her secretary as they put the materials together (the curious will have to ask Ed or Jim). We lingered until closing, then the four who had come in the cab returned to the hotel for another hour or so of discussion before crashing for the night. The festivities have been documented on a web page posted by Larry McKeen: <http://www.geocities.com/jwtgroup/index.html>. I managed to contact all but four of Jim's 47 PhD alumni (lacking only **Gary Parr** (PhD '73, deceased), **Dick Hilmer** (PhD '73), **Grant Von Wald** (PhD '87), and **Ken Skrobis** (PhD '95)), and several of his MS alums, as well.

A good time was had by all!

As a follow-up, the retirement testimonial that Jim had "authorized" — establishment of a travel fund to support attendance at MUACC by assistant professors — is still in the works. I have a tentative agreement from GFS Chemicals to host the fund; look for more information next month.



The photograph above was taken by Jeff Miller and appeared in the May 1, 2002 *Wisconsin Week*.

*Those who made the dinner were:*

<b>Paul Bohn</b> (Illinois; PhD '81, with Raylene)	<b>Jim Kinsinger</b> (Hain Celestial, PhD '72, with Becky)
<b>Michelle Brown</b> (Motorola, MS '96)	<b>Larry McKeen</b> (DuPont, PhD '78)
<b>Michelle Buchanan</b> (Oak Ridge, PhD '78)	<b>Dave Mehaffy</b> (IBM, PhD '81)
<b>Kelsey Cook</b> (Tennessee, PhD '78)	<b>Bill Stebbings</b> (3M, PhD '72)
<b>Don Graczyk</b> (Argonne, PhD '75)	<b>Carl Turnquist</b> (Genzyme Surgical Products, PhD '72)
<b>Glenn Howes</b> (MusicMatch, PhD '96)	<b>John Willey</b> (Goodyear, PhD '78)
<b>Bruce Johnson</b> (AtheroGenics, PhD '72)	<b>Bob Williams</b> (Goodrich, PhD '72)
<b>Gil Jones</b> (BP Amoco, PhD '75; with Linda)	<b>Karl Wood</b> (Purdue, PhD '78)





# The Overview

Redmodeling of the Daniels and Mathews buildings continue, and the entire building and remodeling project will be completed around the end of 2002. Theoretical chemist Qiang Cui joined the faculty in July 2001. Marti Zanni (Physical) and Helen Blackwell (Organic) start in July 2002. We are a month into the new year and we don't yet know what our budget will look like. All we know for sure is that we will feel pressure, since the state is cutting approximately \$40M from the University budget. We have changed our undergraduate curriculum; there are a few new course numbers.

## Building Addition and Renovation

The building project is nearly completed, and I hope next year to get back to a June (or earlier) publication date for the *Badger Chemist*. We have been in the new building for 2 years now. As I write, the last phase of the remodeling of the Mathews and Daniels buildings is underway. When it is completed about December, we will have a new study room and a new computer room for undergraduate students; a computer classroom for up to 24 graduate or undergraduate students; several new or upgraded seminar and conference rooms; and remodeled research space for our faculty and grad students. There have been a few stumbling blocks (see "Other News"), but we have been very pleased with the results.

## Faculty Additions and Continued Recruiting

This year we are looking forward to the additions of new professors Martin Zanni (physical) and Helen Blackwell (organic) to our faculty. They will be profiled in the next issue of the *Badger Chemist*. In this issue look for pictures and descriptions of last year's new theoretical faculty member Qiang Cui.

Faculty recruiting continues to be a focus of the Department. As expected, we have had several faculty retirements this year (see "Departures"), and we expect several more next year. **Tom Farrar** and **John Schrag** have already announced retirements in January 2003, and this, together with last year's retirement of **Jim Taylor**, leaves a hole to be filled in the Analytical Sciences Division. As always, we welcome the help of our alumni in identifying outstanding young chemists, particularly women and minorities.



## Budget Challenges

As those of you who follow news from around the nation may already know, Wisconsin's legislature was slow in agreeing on a budget this year. As this is written, the budget has been signed, and it appears that the University system will be faced with a cut of about \$40 M next year. Interestingly, as I looked back at previous editions of the *Badger Chemist*, I found that in 1992 it was reported that the University was facing cuts of \$40 M for the coming year. We don't yet know exactly how much the College of Letters & Science will lose in this exercise, nor how they will distribute the budget cuts. We expect that cuts will come in short term staffing and TA positions, as well as savings through retirements, but more drastic action may be necessary if these areas do not provide enough savings.

## Department Support

In this issue, I again wanted to acknowledge our debt to contributors to Department funds. It is through your continued support that we are able to maintain the excellence which we are known for. Significant new additions to our ability to support graduate students are two Wisconsin Distinguished Graduate

Fellowships funded by the Donald G. Ackerman and Mary Jane Ackerman Family Trust, in honor of their sons, **David F.** and **Donald G. Ackerman, Jr.** A fund honoring **Chuck Curtiss** at his retirement does not appear here; it is maintained in the Department of Chemistry Fund, 1222137. If you want money to go into this, please note that on your check. Look at the list of funds starting on page 22 to see how alumni, friends and companies are supporting the Department. We have grouped funds based on intent – general Department support, scholarship and fellowship support, divisional research or seminar support, and specific research group support.

## Curriculum Change

In 2001 the Chemistry Department instituted a series of changes in the undergrad curriculum. We added a new Inorganic course, Chem 311, with lecture and lab components. We renumbered the Analytical courses 221 and 223 to 327 and 329. Chem 110 is now incorporated into Chem 329. At this point a well-prepared student can take Chem 109 in their first semester, then proceed to take any of Chem 311, 327/329, or 341/343. Students can also take 103/104 instead of 109. For a more complete description of the curriculum changes, log on to <http://www.chem.wisc.edu/>, select "Education", then "RECENT CHANGES IN INTRODUCTORY CHEMISTRY COURSES."

## Communicating With the Department

Please continue to send updates as to what you're doing. The "This N That" section of the *Badger Chemist* is where you'll find

(continued on page 31)



# This 'n' That

**Fred Albrecht** (PD '72-'74, Zimmerman) writes that he is in Kodak's Global Manufacturing (Media and Equipment).

**Daniel Appella** (PhD '98, Gellman) completed his post-doc and became an Asst. Prof. of Chemistry at Northwestern.

**Paul A. Bonvallet** (PhD '01, McMahon) accepted a postdoctoral position with Prof. Fraser Stoddart in the Department of Chemistry and Biochemistry, UCLA.

**Rich Bunce** (PhD '81, Zimmerman) at the University of Oklahoma reports that he has been working hard on synthetic research. He and his students presented papers at both national ACS meetings and have a number of publications in progress. He is now in charge of all of the undergraduate advising in the Chemistry Department there. In September, he won an award as the outstanding advisor in the College of Arts and Sciences. His group consists of 2 graduate students and 6 undergraduates.

**Vladimir Cirkva** (PD '98-00, Zimmerman) writes that he was pleased to see us list his receiving the Alfred Bader Award in the last *Badger Chemist*. Presently he is doing research at the Academy of Sciences (Asst. Prof) on microwave photochemistry. The aim is to develop synthetic methods.

**Peter Dorhout** (PhD '89, Ellis) was promoted to Full Professor at Colorado State University.

**Wolfgang Eberbach** (PD '71-'72, Zimmerman), C3 Prof. at Univ. Freiburg, Germany, wrote that he recently met **Wolfgang Elser** (PD '67-'69, Zimmerman) who has just retired from BASF in Ludwigshafen Germany.

**Joann Eisenhart** (PhD '85, Ellis) has joined Pfizer Inc.

**David England** (PhD '43, Adkins) sent us news about a story by Linda K. Wertheimer that appeared in the December 23, 2001 edition of the *Dallas Morning News*. The front page article was about **Harold Jeskey** (PhD '42, Adkins) on the occasion of his being honored by having a lecture hall in the new Dedman Life Sciences Building at

Southern Methodist University named for him. Dr. Jeskey was Professor of Chemistry there from 1945 to 1980 and is still active in University affairs. This honor and an endowed professorship in chemistry bearing his name were made possible by his former students (some 800 physicians, 200 dentists, 125 PhD's in chemistry, 30 teaching at major universities). David England had the pleasure of being Professor Jeskey's his lab mate at Wisconsin.

**Karl Everitt** (PhD '00, PD '01, Skinner) left the group, taking a job with Epic Technology in Madison.

**Jason Gestwicki** (PhD '02, Kiessling), the first Kiessling Biochem PhD, is conducting postdoctoral research in G. Crabtree's lab at Stanford.

**Eva Gordon** (PhD '98, Kiessling) got married in Fall 2001 and has moved from Nanosphere to Infinity Pharmaceuticals in Boston.

**Jonathan Hodges** (PhD '00, McMahon; PD '01, Raines) won a postdoctoral fellowship from the NIH.

**Chris Hollinsed** (PhD '79, Nelsen) accepted a Certificate of Appreciation from the ACS for DuPont's \$100,000 contribution to the ACS Scholars Program. Chris is a senior program consultant in strategic technology planning for DuPont.



Chris Hollinsed accepts the award from ACS President Attila Pavlath.

Photo: Chemical & Engineering News

**Bill Horspool** (PD '74-'75, Zimmerman) is writing a 2<sup>nd</sup> Edition of the *Handbook of Organic Photochemistry and Photobiology* at Dundee, Scotland.

**Mark Hyland** (BS '01) worked with **Jim Maynard** in the Lecture Demonstrator lab as an undergraduate. He will be attending graduate school with the Chemistry Department here in Madison starting in the Fall.

**Alex Ignatchenko** (PD '95-'98, Zimmerman) at Eastman Chemical notes that he has written six patent applications this year. His wife Elena and daughter Varya visited Madison briefly while Alex remained home with Nina who is now 5 years old. Varya is 14 and has received several awards for creative writing and one in Arts.

**Rustem Ismagilov** (PhD '98, Nelsen) is off to a fast start as an Assistant Professor at the University of Chicago, where he has won both a Research Corporation Research Innovation Award and a Searle Scholar Award in his first year.

**Hiizu Iwamura** (PD '67-'69, Zimmerman) has been President of the Japanese Chemical Society. Also, he is being awarded the Maria Sklodowska-Curie Medal of the Polish Chemical Society.

**Markus Kalesse** (PD '91-'92, Kiessling), the Kiessling lab's first postdoc, is taking on a new and independent academic position at the Institut für Chemie / Organische Chemie, Freie Universität Berlin.

**Reinhart Keese** (PD '62-'64, Zimmerman) has retired as a Professor at the Univ. of Bern, Switzerland, where he is continuing to do research as *Emeritus* Professor.

**Mike Khoudiakov** (PhD '00, Ellis) is a postdoc at Brookhaven National Lab.

**Dennie Kreil** (PhD '81, Zimmerman) has been at Dow Chemical since leaving Wisconsin. Formerly he was R&D Manager for the Process Research Group of Dow's Contract Manufacturing Division. He is now in Dow's Custom & Fine Chemicals business and a main fraction of his work is pharmaceutical. He has now become Director



of Process Research, Pharma Services, with management responsibility for the Process Research groups in Midland and at Chirotech in Cambridge. Overall, he now has responsibility for about 95 people. Dennie reports that **Rich Swafford** (PhD '83, Zimmerman) is doing very well in Dow Agrosciences.

**Andrei Kutateladze** (PD '92-'95, Zimmerman) was promoted to Associate Professor at the University of Denver. Andrei is editing a new book on computational chemistry.

**Bob Lewis** (PhD '64, Zimmerman) formally retired from the U.S. Environmental Protection Agency November 2, 2001 but will continue with the EPA under the Senior Environmental Employment Program.

**Dave Manning** (PhD '97, Kiessling) is at Albany Molecular Research Institute. He and his wife Trish Manning are parents! They had Benjamin David in March of 2001.

**Allison Marlow** (PD '00-'01, Kiessling), and **Ron Hinklin** (PhD '02, Kiessling) both are at Array Biopharma.

**Sonya McKay** (PhD '01, Gellman) is now an Asst. Prof. of Chemistry at Denison College.

**Tyler McQuade** (PhD '98, Gellman) is currently an Assistant Professor at Cornell and feels that he is making headway. Tyler has been granted a 3M untenured faculty award and has been an invited speaker at an ACS symposium.

**Jeff Moore** (Grad Student '78-'88, Zimmerman) writes that he has changed positions and now is with Proteomics Research in the San Francisco Bay area.

**Kathy Mortell** (PhD '97, Kiessling) is moving to Abbott to join **Will Sanders** (PhD '98, Kiessling) and former star undergraduate **Andy Souers** (BS '96).

**Karen Nordell** (PD '98-'00, Ellis) joined Lawrence University as an Assistant Professor in Chemistry.

**John Penn** (PhD '81, Zimmerman), Associate Prof. at West Virginia University, has been involved with on-line chemical education and developed the "We Learn" System.

**Chris Rito** (MS '91, Gellman) was promoted to Associate Senior Organic Chemist at Lilly. He also received the Technical Achievements in Organic Chemistry (TAOC) Award from the ACS in August 2001.

**Ed Rutter** (PhD '89, Casey) sent an update. He has been promoted to Principal Scientist at Shipley. Shipley is part of the Electronic Materials Business Unit of Rohm

& Haas. Ed will be relocating to Sunnyvale, California in order to direct the R&D activities of a recent acquisition. Ed's contact information is [erutter@shipley.com](mailto:erutter@shipley.com). Ed saw **Larry Wainschel** (MS '87, Casey) recently - he is a resident in Neurosurgery at UC-Davis.

**Will Sanders** (PhD '98, Kiessling) is a new dad. Allison Laurel Sanders was born February 20.

**Forrest Schultz** (PhD '97, West; ZGroup '91-'92) reports that he has been promoted to Associate Professor at the University of Wisconsin - Stout. Also, he is going to act as Director of the Applied Science Program in the Chemistry Department.

**Pavel Sebek** (PD '94-'96, Zimmerman) writes from Prague that in the fall he started to organize a "BASF Lecture Series" trying to bring the best scientists from BASF to Prague and build up connections between the company and Czech university research. Recently he also took part in a Student Scientific Competition as referee. Most recently Pavel reports the addition of a new member of the Sebek family, born on February 16 at 15:13 (4100 kg, 55 cm).

**Grigoriy Sereda** (PD '99-'02, Zimmerman) has accepted an Assistant Professorship at U. South Dakota.

**Maynard Sherwin** (PhD '68, Zimmerman) writes that it has been a long time "since those semibullvalent days" (i.e. Maynard's Ph.D. research). He has been at Union Carbide for 16 years in South Charleston, WV and then 17 years in Cary. But then Carbide became part of Dow Chemical. Maynard indicated that he plans to retire in the coming months. He has been Technology Manager for a research group. Maynard also mentioned that he recently met **Dick Pagni** (PhD '68, Zimmerman), now Chemistry Professor at the University of Tennessee.

**Mike Shultz** (PD '99-'01, Kiessling) is currently at Novartis in New Jersey.

**Valeriya Smolenskaya** (PD '97-'02, Zimmerman) has taken a position at the Solid-State Chemical Information Company in West Lafayette, Indiana.

**Cameron Spahn** (BS '01) worked with **Jim Maynard** in the Lecture Demonstrator lab as an undergraduate. He will be attending graduate school at the University of Illinois, Urbana-Champaign starting in the Fall.

**Eric Stoner** (BS '86, Zimmerman) has been at Abbott Laboratories since graduate study at

MIT (PhD '91), and is now a Group Leader.

**Horst Sulzbach** (MS '91, Zimmerman) has been a Lab Manager in Central Research at Duesseldorf and became Director of an Applied R&D unit near Bremen effective Jan 1, 2002. He is at Cognis Deutschland GmbH.

**Faisal Syud** (PhD '01, Gellman) is now a Scientist at GE.

**B.S. Thyagarajan** (PD '58-'60, Zimmerman) recently became *emeritus* at the University of Texas, San Antonio and was honored with a symposium on "Recent Advances in Heterocyclic Chemistry."

**Drew Weber** (PhD '88, Zimmerman) writes that he is still with DuPont but has been in North Carolina for three years now. He has three children ages 9, 12 and 14. Drew's wife, Chris, does volunteer work at school. Drew now has been at DuPont for 14 years and enjoys his work, which involves a lot of travel to Europe and Asia.

**Dieter Werthemann** (PD '71-'73, Zimmerman) writes that he has retired from Ciba in Switzerland. He is now involved with Basel politics but also involved in Chemistry. Thus he has founded a new specialty chemical company together with four other former Ciba researchers. Additionally, he has started a new swing band ("The Werthemann Swing Band") and plays the piano. They play Boogie, Blues, Swing and Mainstream (the 40's and 50's in Jazz).

**Craig M. Whitaker** (PhD '95, McMahon) has been promoted to Associate Professor of Chemistry with tenure at the U.S. Naval Academy, Annapolis, MD.

**Zhi-Qiang Yang** (PhD '02, Kiessling) is currently conducting postdoctoral research in the Danishefsky group.

**Dr. Michael Yu** (PD '99-'01, Gellman) complete his post-doc; and is now an Asst. Prof. of Materials Science and Chemistry at John Hopkins.

**John Zhang** (PhD '93, Ellis), at the Georgia Institute of Technology, received a Presidential Early Career Award for Scientists and Engineers (PECASE Award).

**Zhaoning Zhu** (PhD '94, Zimmerman) writes from Schering Plough that he has two Ph.D. chemists and four associate chemists working for him, but he still tries to find some time for bench chemistry. Also he and Lin now have just had their third child.





# Chemistry Department Support

## from Alumni, Staff and Friends

As budgets are frozen or cut in many areas, it is gratifying to know that the Department has been able to count on continued support from our alumni and friends. The Department relies on your generosity to provide the resources that allow us to maintain excellence in our programs. Many of the funds that support scholarships, seminars, professorships, and so on, are maintained by the UW Foundation. There are general funds and funds for specific activities. In past years we have provided a list of some, but not all, of the funds that support the Department's activities. In keeping with our intent in this issue of the *Badger Chemist* to acknowledge the many areas in which our friends help us, we have listed all of the funds the UW Foundation administers, plus the Trust Funds that have been set up to benefit Department activities. As you can see, the list is extensive. Contributions can be directed to the Department through donations to the UW Foundation; checks should be made out to the UW Foundation, rather than 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 named funds.

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

## University of Wisconsin Foundation Accounts for the DEPARTMENT OF CHEMISTRY

### OF SPECIAL INTEREST in 2001-2002

Although we appreciate all of our donors, the following funds are of very broad application to Department activities, or had some special event occur in 2001-2002.

Department of Chemistry Fund <i>Supports research and teaching activities in the Department</i>	1222137	David F. and Donald G. Ackerman, Jr. Wisconsin Distinguished Grad Fellowships <i>Supports graduate students in Chemistry. Two fellowships established in 2001.</i>	12223243 12223244
Chemistry Building Fund <i>Supports the construction of the New Chemistry Building Addition, and remodeling of the Mathews and Daniels Buildings - Construction is expected to be completed in 2002 or early 2003.</i>	12221293	Edwin M and Kathryn M Larsen Fund <i>Supports undergraduate students in Chemistry. Ed died in 2001 - See Memorial Resolution in this edition of the Badger Chemist.</i>	12222308
Ackerman Scholarship Fund (Undergrad) <i>Supports undergraduate students in Chemistry, especially those from East High School in Madison. Established in 2001.</i>	12223212	Elizabeth S Hirschfelder Endowment for Graduate Women in Chemistry <i>Supports women graduate students in Chemistry research - Established in 2001</i>	12223191
Alfred L. Wilds Scholarship in Chemistry (Undergrad) <i>Undergraduate Scholarship in memory of Al Wilds who died July 4, 2002 - see Obituaries</i>	12220072	Kocher Award <i>Awarded in 2001 to Asst. Prof. Thomas Brunold by the Kocher-Preis Kommission of the University of Bern</i>	12223165
Andrew Dorsey Memorial Scholarship Fund (Undergrad) <i>Undergraduate Scholarship established in 2001 in memory of Andrew Dorsey - see Obituaries</i>	12223281	J. D. Ferry Lectureship in Macromolecular Science <i>Provides funds to support a Lecturer in Macromolecular Sciences. Established in 2000; first lecturer in 2002.</i>	12222793
Center for Chemical Genomics <i>Established in 2001 by a gift from the W. M. Keck Foundation</i>	12223086	Leah Cohodas Berk Award for Excellence in Chemistry Research <i>Honors an outstanding female graduate student - established 2001</i>	12543124
Community-Building Fund for Chemistry <i>Provides funds for receptions, retirement parties, funeral memorials, and other similar activities; established in 2001.</i>	12223316		





## STUDENT SUPPORT

Don Brouse Memorial Scholarship (Undergrad) <i>Undergraduate scholarship in memory of Don Brouse</i>	32220536
Gary R. Parr Memorial Fund (Grad or Undergrad) <i>Scholarship in Bioanalytical or Biological Chemistry – in memory of Gary Parr</i>	12222192
Harry and Helen Cohen Graduate Research Fund (Grad) <i>Supports graduate students in Organic Chemistry</i>	12222250
Kimberly-Clark Undergraduate Scholarship <i>Supports undergraduate research with an annual award</i>	12222807
Roger J. Carlson Fund (Grad) <i>Graduate Fellowship in Analytical Chemistry, in memory of Roger Carlson</i>	12220918
Student Support in Chemistry <i>Supports undergraduate students from Wisconsin high schools with GPA above 3.0</i>	12222068
Walter W. and Young-Ja C. Toy Scholarship Fund (Undergrad) <i>Supports undergraduate students, with preference for students of Asian descent</i>	12221917
Wayland Noland Undergraduate Research Fellowship	12222191



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Analytical Chemistry Fund <i>Supports research and educational activities in the Analytical Sciences Division, including conferences and grad recruiting</i>	1222679
Analytical Research Fund <i>Supports research and programs in the Analytical Sciences Division – Originally established in 1990 with a gift from the Olin Corporation Charitable Trust</i>	12220448
Inorganic Chemistry Seminar Fund <i>Supports the Inorganic Division seminar and research programs</i>	12221344
J. O. Hirschfelder Prize Fund <i>Awards an annual Prize to an internationally prominent scientist to recognize outstanding work in Theoretical Chemistry</i>	12220984
J. O. Hirschfelder Visitors Fund <i>Supports visits to the Theoretical Chemistry Institute by outstanding scholars</i>	12220912
McElvain Seminar Fund <i>Supports the ongoing seminar series organized and run by graduate students in the Department of Chemistry</i>	12220241
Organic Synthesis Fund <i>Supports research activities in Organic Chemistry including symposia and visiting lecturers</i>	1222548



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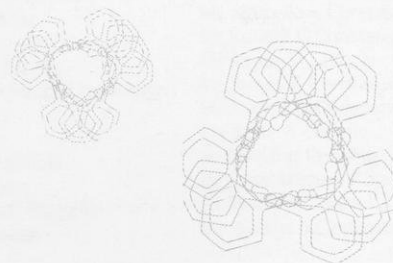
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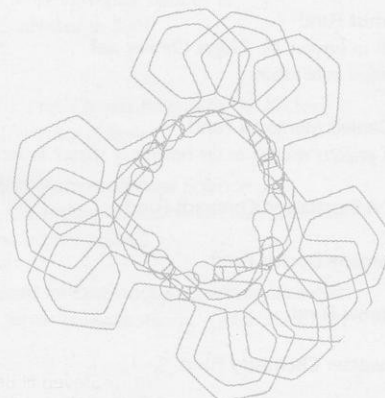
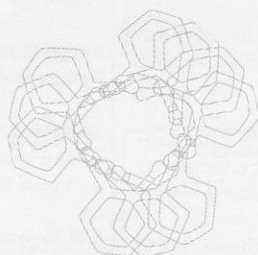
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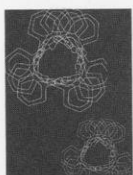
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Dr John L Parascandola  
Professor Marilyn A Parker  
Ms Thelma Parr  
Mr Dennis Parr  
Mr Harold L Parr  
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Ms Kathleen Olivia Parsons  
Mr Marc J Paskin  
Dr Dorothy E Patton  
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Mr Albert A Pavlic  
Dr Steven L Peake  
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Dr Wylie A Schaffer  
Mr Charles B Schewene  
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Mr Matthew Fred Schlecht  
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Mr Calvin H Schmiede  
Mr Walter C Schneider  
Mr Edward W Schneider Jr  
Ms Lori E Schneider  
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Mr John F Scholz  
Mr Lawrence D Schrader  
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Professor John L Schrag  
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Mr Matthew J Schroeder  
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Mr Elliot N Schubert  
Dr Harry A Schultz  
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Mr Clifford O Schwahn  
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 Mr Robert H Wopschall

Dr Eugene L Woroch  
 Prof John C Wright  
 Assist Prof Gary P Wulfsberg  
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Xerox Foundation

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 Mr Mitsuo Yamada  
 Mr Ronald A Yates  
 Mr Warren C Yeakel  
 Professor Laura C Yeakel  
 Mr Kenneth E Yelm  
 Professor Arun Yethiraj  
 Mr Howard Bruce Yokelson  
 Ms Elizabeth F Young  
 Dr Petey Young  
 Dr Austin H Young  
 Professor Hyuk Yu

## Z

Dr Jeffrey P Zebrowski  
 Mr George J Ziarnik  
 Mr Michael C Ziebarth  
 Prof Howard E Zimmerman





# In Memoriam

## Andrew Dorsey

(BS 2000) Died Aug. 13, 2001, as a result of a ruptured brain aneurysm. Andy graduated from Memorial High School in Madison. He double-majored in Chemistry and German while at the UW, worked with Professor Dan Rich, and graduated with highest honors. He was studying organic chemistry at UC-Berkeley when he died. A memorial scholarship for undergraduates studying Chemistry and German has been established in Andy's name.

## Gary Epling

(PhD '72, Zimmerman) Died of a heart attack on Sept. 9, 2001. He was 56. Professor Epling was the head of the Chemistry Department at the University of Connecticut, Storrs. Professor Epling was profiled in the October 15, 2001 edition of *C&E News*.

## John Gunnar Malm

(BS '44) Died May 11, 1999. He was in the Chemistry Division of Argonne National Laboratory, where he was a colleague of Lawrence Stein (PhD '52, Murphy) for many years before they both retired. Malm was a distinguished inorganic fluorine chemist, noted for the first preparation of hexafluorides of neptunium, platinum, ruthenium and rhodium; the first authentic binary compound of a noble gas (xenon tetrafluoride, prepared with Howard H. Claasen and Henry Selig in 1962); and many other actinide and noble gas compounds. He was awarded the Rosenburger Medal by the University of Chicago in 1964 and the Henry Moissan medal by the French Chemical Society in 1986.

## Joseph H. Paden

(PhD '36, Adkins) Died August 22, 2001 at 90. He had been Director of Research and Development for the Organic Chemicals Division at American Cyanamid Co., where he worked from 1937 until his retirement in 1972.

## Dr. Fredrick J. Stare

(BS '31) Died April 4, 2002 at the age of 91. He was the first graduate student of Conrad Elvehjem at the UW Biochemistry Department, and went on to found the Harvard Department of Nutrition in 1941. Dr. Stare retired in 1976. An obituary appeared in the April 16, 2002 edition of *The Capital Times* in Madison, WI.

## Carolyn Taylor

Wife of Professor Jim Taylor, died on January 29, 2002 at 66. Carolyn was a well-known and respected Madison educator, having worked in the Madison schools for almost 30 years. She had been an assistant principal at LaFollette High School, then principal at Memorial High School from 1982 through 1998. Jim and Carolyn were married for 45 years and have two daughters.

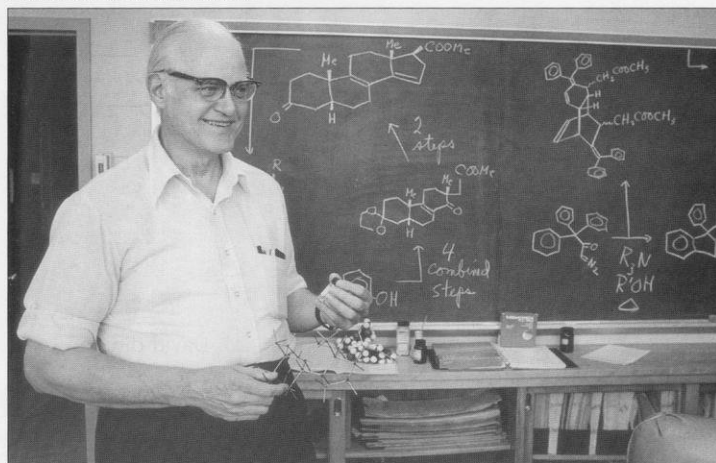
## Virginia Ann Vodak

Died July 20, 2002 in Madison, WI; she was 77. Ann worked for 12 years in the Chemistry Department mailroom, retiring at the end of 1995.

## Prof. Emeritus Alfred L. Wilds

Died July 4, 2002 in Sun City West, Arizona. Al was born in 1916 in Kansas City, Missouri

## Prof. Emeritus Alfred L. Wilds



and went to the University of Michigan where he received his doctorate in 1939 for his work in Werner Bachmann's laboratories on the synthesis of steroid-related compounds. He remained at Michigan for postdoctoral work and completed the total synthesis of dl-equilenin. He joined our Department in 1940 and was a member of the Organic Chemistry Division until his retirement in 1985. Al Wilds brought a renaissance to the Organic Chemistry Division. The Division had been steadily growing during the 1920's-1930's and was overloaded with graduate students at the time when Al joined. His group grew rapidly and he reached the rank of full professor in 1948. His addition along with the addition of William Johnson brought Wisconsin to the forefront of the new work in steroid chemistry. Al was a good teacher and an aggressive researcher. He was a key faculty member in establishing Wisconsin's strength in organic chemistry.

## J. Jens Wolff

(PD '89-'91, Nelsen) Died July 10, 2001. Jens was a postdoc with Steve Nelsen from 1989-91, and returned as a visiting professor in spring of 1997. He loved music and chocolate in addition to chemistry. Jens was 40 when he died.



*We have also been informed of the following deaths:*

**Clayton L. Baldwin** (MA '40) died July 3, 2001 at the age of 88.

**John David Behun** died Nov 20, 2000 at the age of 76.

**Gladys Haskins Bronson** died Oct 8, 2001 at the age of 101.

**John W. Brooks** died June 21, 2001 at the age of 87.

**L. Wayne Brown** died Oct 18, 2000 at the age of 92.

**Bertie Lee Browning** died Oct 24, 1999 at the age of 97.

**Wallace Allen Cole** (PhD Williams) died Nov 9, 1999 at the age of 96.

**Lloyd Miller Cooke** (BS '37) died Oct 3, 2001 at the age of 84.

**Vera E. Cooke** (BS '52) died March 9, 2001 at the age of 70.

**John Emerson Eldridge** (PhD '48, Ferry) died March 18, 1999 at the age of 79.

**Lucien Gagneron** (MS '45, Schuette) died July 26, 2001 at the age of 82.

**Thelma Mabel Garvin** died Feb 15, 1999 at the age of 91.

**James L. Giulianelli** (PhD '69, Willard) died July 15, 1995 at the age of 54.

**Glenn Frederick Hager** (PhD '43, Adkins) died Aug 6, 1999 at the age of 79.

**Raymond R. Hindersinn** (PhD '54, Johnson) died Aug 30, 2001 at the age of 83.

**John Howatson** (PhD '51, Larsen) died Aug 30, 2001 at the age of 81.

**Richard Evans Juday** died Feb 16, 2002 at the age of 83.

**Albert Delaney Kaiser Jr.** (PhD '55) died July 13, 1999 at the age of 71.

**Scott Kittsley** died June 17, 2001 at the age of 80.

**Burton Bower Knapp** (PhD '37, Walton) died Feb 20, 2002 at the age of 92.

**Homer Talcott Knight** (PhD '52) died Jan 31, 2001 at the age of 77.

**Josephine B. Kuettel** died Oct 19, 2000 at the age of 91.

**Roland Jacob Kuhn** (MS '42) died June 13, 2001 at the age of 89.

**Louis J. LaBoule** (BS '42) died March 17, 2001 at the age of 81.

**Elmer Conrad Larsen** (PhD '39, Walton) died April 16, 1999 at the age of 86.

**Ben J. Lewis** (BS '31) died June 25, 2001 at the age of 90.

**Helene Matsen** (BS '25) died April 18, 2000 at the age of 97.

**Edgar Debolt McCollum** (PhD '21) died July 24, 2000 at the age of 106.

**Norbert Gerald McCormick** (BS '48) died Dec 17, 1999 at the age of 81.

**Ferdinand C. Meyer** (PhD '49, Adkins) died July 17, 2001 at the age of 82.

**Leonard Ellsworth Moody** (PhD Williams) died July 8, 1999 at the age of 80.

**Ambrose Reuben Nichols** (PhD '39, Walton) died Feb 4, 2000 at the age of 85.

**Howard A. Schneider** (PhD '38) died Oct 28, 2000 at the age of 87.

**William C. Sherman** (PhD '36) died March 13, 2000 at the age of 89.

**David Gordon Smith** died July 1, 1994 at the age of 75.

**John Franklin Steiner** (PhD '33, Kahlenberg) died June 1, 2000 at the age of 91.

**Emiline Cynthia Steldt** (BS '34) died Oct 25, 2001.

**Andrea W. Stencil** (1973) died Jan 26, 2001 at the age of 60.

**Daniel E. Stogryn** (PhD '59, Hirschfelder) died Aug 30, 2001 at the age of 69.

**John S. Thompson** (BS '50) died Sept 12, 1992 at the age of 65.

**Roland Aaker Trytten** (PhD '41, Sorum) died July 17, 1999 at the age of 85.

**William Frank Unzicker** died July 21, 1999 at the age of 73.

**Jacob "Jake" Urben**, retired custodian in the Chemistry Department, died May 21, 2001.

**Preston L. Veltman** (PhD '38, Daniels) died March 21, 2000 at the age of 87.

**Charles C. Watson** (PhD '38, Williams) died July 29, 2000 at the age of 88.

**James A. Weiss** died March 26, 2001 at the age of 57.

**Rosalie Savat Wolf** died June 26, 2001 at the age of 74.


**David James Zande** (BS '98) died May 29, 1999 at the age of 23. David did his senior thesis with John Wright.



 ("CURRENT CHEMISTRY NEWS" Continued from page 3)

**Howard Zimmerman** was a Plenary Lecturer last summer at the International Conference on Photochemistry in Moscow where he described the beginnings of mechanistic organic photochemistry as developed by his Wisconsin group and then described very recent advances. Much of his time this last year has been spent on research and writing. His Delta-Density theory now is able to predict photochemical and ground state reactivity (**Igor Alabugin**). After years of work on his Di-pi-Methane Rearrangement, he now has a Tri-pi-Methane counterpart (**Vladimir Cirkva**). The group has developed the first general theoretical approach to predicting solid-state photochemical reactivity and the group's work is summarized in an *Accts. Chem. Res. Review* (**Evgueni Nesterov**). A dramatic finding that solid-state reactions often proceed in stages was reported (Nesterov).



 ("OVERVIEW" Continued from page 19)

information about some of your classmates. **Dave Suminski** is responsible for keeping our mailing list current so that we can bring you news of the Department. With over 4800 names on the mailing list, I know we will have more than a few errors, but we hope we can remain only one step behind you. As usual, I have included a form asking for your current status, and changes in addresses.

We have also made a real effort to update the Web information for alumni. I know this doesn't happen as regularly as it should, but **Liz Brickl** was in contact with some of you last semester working out problems with your listing. Liz has moved on now, but we hope to keep the momentum that Liz established in this area. Look for UW Chemistry people on the web at <http://www.chem.wisc.edu/areas/alumni/index.html>.



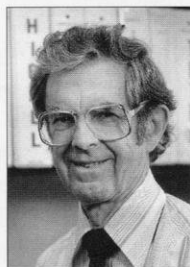


MEMORIAL RESOLUTION OF THE FACULTY  
of the  
UNIVERSITY OF WISCONSIN-MADISON  
on the death of

**PROFESSOR EMERITUS EDWIN MERRITT LARSEN**



*UW-Madison Faculty Document 1642 Madison 6 May 2002*



**Edwin Larsen,**  
emeritus professor of  
chemistry since 1986,  
died on May 28, 2001  
in Madison. He was  
born on July 12, 1915  
in Milwaukee, Wis-  
consin and graduated  
from North Division

High School. He attended the University of Wisconsin and received his bachelor of science degree in 1937. Upon receiving his Ph.D. degree in chemistry from Ohio State University in 1942 he joined the faculty at the University of Wisconsin as an instructor. From 1943 to 1946 he was granted a leave of absence from Wisconsin to work on the Manhattan Project with the Monsanto Chemical Company in Dayton, Ohio where he served as leader of a group doing classified work on polonium.

In 1946 he returned to Wisconsin as an assistant professor to teach and conduct research in inorganic chemistry. He was promoted to associate professor in 1950 and to full professor in 1958. His research centered on the chemistry of hafnium and zirconium and 31 of his students received the Ph.D. degree under his supervision. In later years, he was part of the Wisconsin Fusion Technology Institute and his research focused on the study of lithium and its compounds for use in nuclear fusion power plants. His collaboration with the nuclear engineering faculty on campus led to understandings of the properties of materials suitable for nuclear fusion reactors. His research was supported by the Office of Naval Research, the National Science Foundation, the Department of Energy, the West German Government, and private companies including Esso and Stauffer.

For forty years Ed taught introductory level courses, advanced undergraduate courses, and graduate courses including selected topics in inorganic chemistry. He introduced Chemistry 108 for non-science majors and developed numerous laboratory experiments suitable for all courses he taught. He had a great interest in lecture demonstrations and was instrumental in maintaining the department's reputation for excellence in teaching and research.

Ed served as associate chair of the Department of Chemistry from 1977 until his retirement in 1986. His departmental service included chairing the inorganic chemistry division, the safety committee, the building committee, and the undergraduate curriculum committee. He was a long-time member of the finance committee (1962-1986.) On campus he served on many committees including the safety committee, the commission of faculty compensation and economic benefits, the committee on premedical program, the committee on student academic affairs, and the organizing committee of the molecular biology curriculum.

Ed was very active in professional organizations including the American Chemical Society (chair of the Wisconsin section, councilor for 24 years), Alpha Chi Sigma Chemistry Fraternity (president of the Alpha Corporation, which owns and maintains the Alpha Chi Sigma House, for almost 30 years), Society of Sigma Xi (chair of the Wisconsin section), Gordon Research Conference (chair of the inorganic section), the Advisory Council on College Chemistry, and the ACS divisions of inorganic chemistry, physical chemistry, and chemical education. He was a member of the American Nuclear Society, Phi Lambda

Upsilon, the Wisconsin Academy of Arts, Letters and Science, and was elected fellow of the American Association for the Advancement of Science. Ed was a Fulbright lecturer in Austria and a visiting professor at the University of Florida. He lectured extensively in the United States and abroad on his research and his education interests.

Respected by students and colleagues Ed was a model of integrity in all his dealings with everyone. He mentored many young faculty and facilitated their professional development. He was keen on promoting contacts with alumni and former students. He was the long time associate editor of the *Badger Chemist*.

In 1946, Ed married Kathryn Behm of Dayton, Ohio. They raised three children, Robert, Lynn, and Richard. He is survived by his widow Katie and three children and their families. Two of his children are UW alumni and a grandchild is currently a junior in the College of Letters and Science. Ed was a founding member of the Friends of Hoyt Park—one of the oldest parks in the City of Madison. He enjoyed gardening and attending to his extensive apple orchards at a property he owned near Marquette, Wisconsin.

His devotion to Wisconsin is typified by his generous contributions to the Department of Chemistry and by establishing the Edwin M and Kathryn M. Larsen Scholarship Fund at the UW Foundation.

**MEMORIAL COMMITTEE**

Phillip R. Certain  
Arthur B. Ellis  
Gerald Kulcinski  
Bassam Z. Shakhashiri (Chair)  
Robert West  
John C. Wright



Email and World-Wide Web Page for  
University of Wisconsin-Madison Department of Chemistry Alumni

We continue to try to update our email list and the Chemistry World-Wide Web page at <http://www.chem.wisc.edu/areas/alumni/index.html>. Our "Alumni" section includes information on our BS, MS, PhD and postdoc alumni and what they are doing. If you'd like to be listed in our alumni section or to update your information, please complete this form and return it to the address below. Thanks!

Your Name: \_\_\_\_\_

Degree and Year of graduation: \_\_\_\_\_

Research Advisor: \_\_\_\_\_

Current Employer (position and company/school/lab): \_\_\_\_\_

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Madison, WI 53706-1396 (or e-mail [SUMINSKI@CHEM.WISC.EDU](mailto:SUMINSKI@CHEM.WISC.EDU))









### **Hirschfelder, Elizabeth Stafford**

(The following obituary appeared in *The Capital Times* on Tuesday, Oct. 1, 2002.)

Elizabeth Stafford Hirschfelder died at home Sunday, Sept. 29, 2002, in Madison, WI. She was born April 25, 1902, in Providence, RI. She attended the Women's College of Brown University, now Pembroke College, receiving B.A. and M.A. degrees in mathematics in 1923 and 1924. She taught mathematics at Texas Tech University in Lubbock Texas, beginning in 1925. She moved to Madison the next year to accept a fellowship with Professor Mark Ingraham, and she received her Ph.D. in mathematics from the University of Wisconsin in 1930. She taught mathematics at the University of Wisconsin for almost 20 years. With her first husband, Ivan Sokolnikoff, she coauthored an important textbook for engineering, "Higher Mathematics for Engineers and Physicists," first published in 1934. In 1953 she married Joseph O. Hirschfelder, professor of chemistry. She played a critical role in proofing and editing the famous textbook co-authored by her husband, Joe Hirschfelder, and his colleagues, Professors R. Byron Bird and Charles F. Curtiss, "Molecular Theory of Gases and Liquids." After Joe Hirschfelder established the Theoretical Chemistry Institute at UW-Madison, she and Joe helped launch many scientists while also nurturing their families. Beginning in the mid 1970s Joe and Betty divided their time between UW-Madison and the University of California at Santa Barbara. As in Madison they made many friends in Santa Barbara and contributed greatly to the exchange of scientific ideas. After Joe Hirschfelder died in 1990 Betty kept in close contact with many of his former students and colleagues. On one of her birthdays a friend, Laura Markus, wrote of Betty's "intellect and character, her courage, her adaptability in experiencing the different periods in her life ... (as well as) her innate cheerfulness, her companionable ways, friendly laugh, and her abiding and kindly interest in other people." In April of this year close friends and family gathered in Madison to celebrate her 100th birthday. Among those present were Joe Hirschfelder's nephews, Professor George Akerlof (Janet Yellen) of Berkeley, Calif., and Professor Carl Akerlof (Carol) of Ann Arbor, Mich., as well as Professors Curtiss and Bird, mentioned above, and other friends both long-standing and new. Betty Hirschfelder is survived by two nieces, Pamela Godillot of Collegeville, Pa., and Dianna Cheseldine of Chicago, Ill. At Betty's request, there will be no service. Those wishing to honor her may send donations to the Elizabeth S. Hirschfelder Fund for Graduate Women in Math, Chemistry, and Physics, care of the University of Wisconsin Foundation, PO Box 8860, Madison, WI 53708.

**John Ferry Gravely III** – When the *Badger Chemist* was prepared for mailing, Emeritus Professor John Ferry was gravely ill and not expected to live through the weekend of October 18-20. We will send more information with the holiday mailing.





