



Badger chemist : the newsletter of the University of Wisconsin-Madison Chemistry Department. No. 45 2001

University of Wisconsin--Madison. ; Dept. of Chemistry
Madison, Wisconsin: Dept. of Chemistry, University of Wisconsin,
2001

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Badger Chemist

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Issue for
2001
No.
45

THE NEWSLETTER OF
THE UNIVERSITY OF WISCONSIN-MADISON

CHEMISTRY DEPARTMENT

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Matthew Sanders
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Linda Endlich
Art Director

Elizabeth Nicklaus
Designer

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OCT 11 2001

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UNIVERSITY OF
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DESCRIPTION	FUND NAME
Supports research and teaching activities in the Department	Department of Chemistry Fund Summer 2001
Supports the construction of the New Chemistry Building	Chemistry Building Fund
Provides funds to publish the Badger Chemist	Badger Chemist Fund

Dear Badger Chemists:

Each year I seem to be a little later getting the *Chemist* out of my office. I hope that when the building is finished I can return to a schedule that gets it out by June. It will be only a few short months before I'm asking faculty and staff for input for the next edition.

We have now lived in our new building for over a year, and it feels like home. It is everything we had hoped for, and the architectural team has won awards for design and construction. The new Seminar Hall will be available for Fall classes and seminars. We have used it for a few events already and it is a very nice room. For the past year or so contractors have been remodeling the Mathews building. By the time you read this we should have finished the next phase of moves into the remodeled building, allowing us to begin work in the Daniels building. Remodeling in Daniels is estimated to take about 16 months or so.

This year we welcome theoretical chemist Qiang Cui to our faculty. He will be profiled in the next issue of the *Badger Chemist*; in this issue look for pictures and descriptions of new organic faculty member Daesung Lee, as well as new staff members in Electronics, Glassblowing, and Computer Support.

Dave Suminski continues to try to update our mailing list so that we can bring you news of the Department. With over 4700 names on the mailing list, I suspect we will have more than a few errors, but we continue to try to remain only one step behind you. Please continue to keep us informed, and we will do our best to remain current. I have included a form asking for your current status, and changes in addresses.

Regretfully, I must bring up more and more each year the question of money. We are under increasingly tight budget constraints, and have not had a significant increase in the non-salary portion of our budget for some years. All of us are being asked to give more to the causes of our choice, and I would ask that you consider the Chemistry Department when you are deciding on your yearly donations. Your response to requests for building funds was very gratifying, but the continued pressure of startup packages for new professors, as well as cost overruns, have worsened an already tight financial picture. I have again included a list of funds. One of them, the John Ferry Lectureship in Macromolecular Science, fund 12222793, is close to its endowment goal of \$60,000, so a contribution here would be most welcome. 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.

Sincerely,

Matt Sanders
 Executive Director and BC #45 Editor

UW FOUNDATION ACCOUNTS FOR THE DEPARTMENT OF CHEMISTRY

FUND NAME	FUND NUMBER	DESCRIPTION
Department of Chemistry Fund	1222137	Supports research and teaching activities in the Department
Chemistry Building Fund	12221293	Supports the construction of the New Chemistry Building Addition
Badger Chemist Fund	1222534	Provides funds to publish the Badger Chemist
Analytical Chemistry Fund	1222679	Supports research activities in the Analytical Sciences Division, including conferences and grad recruiting
Farrington Daniels Memorial Fund	1222324	Funds special projects relating to the benefits of science to society
Fund for Graduate Women in Math & Chemistry	12540909	Assists Women Graduate Students in Math and/or Chemistry
Inorganic Chemistry Seminar Fund	12221344	Supports the Inorganic Division Seminar Programs
Institute for Chemical Education Fund	1222929	Supports activities in Chemical Education
J. O. Hirschfelder Prize Fund	12220984	Awards an annual Prize to an internationally prominent scientist to recognize outstanding work in Theoretical Chemistry
J. O. Hirschfelder Visitors Fund	12220912	Supports visits to the Theoretical Chemistry Institute by outstanding scholars
McElvain Seminar Fund	12220241	Supports the ongoing seminar series organized and run by graduate students in the Department of Chemistry
Organic Synthesis Fund	1222548	Supports research activities in Organic Chemistry including symposia and visiting lecturers
Project SERAPHIM	12220404	Supports activities in Chemical Education
Shakhashiri Science Education Fund	12221133	Supports activities in Science Education under the direction of Prof. Bassam Shakhashiri
Lectureships/Professorships		
J. D. Ferry Lectureship in Macromolecular Science	12222793	Provides funds to support a Lecturer in Macromolecular Sciences
H. L. and M. L. Goering Visiting Professorship Fund	12222391	Provides funds to support a Visiting Professor in Organic Chemistry
Ralph Hirschmann Lectureship	1222295	Funds a Visiting Professor in Organic, Bioorganic or Physical Organic Chemistry
V. W. Meloche Lectureship	1222825	Funds a special seminar series in Analytical Chemistry
John E. Willard Lectureship	1222829	Funds a special seminar in Physical Chemistry

FYI: 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 UW, you can specify that your gift go to Chemistry and further specify any of the above named funds.

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

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

We will continue to try to update the Chemistry World-Wide Web page, <http://www.chem.wisc.edu>. Our "Alumni" section includes information on our BS, MS, and PhD 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): _____

If you and/or your company have a web page that you would like us to link to, please include the complete www address (URL) below:

If there is any additional information (personal or professional) about you or your activities that you'd like us to include on the web page, please include below or on a separate sheet. We are also happy to include photographs if you supply them.

If your Badger Chemist mailing label is not correct or your address has changed (or will change), please include your new address here or e-mail it to suminski@chem.wisc.edu

Please return this form to:

Matt Sanders, Department of Chemistry, University of Wisconsin, 1101 University Avenue,
Madison, WI 53706-1396 (or e-mail MSANDERS@CHEM.WISC.EDU)

FROM THE CHAIR

Summer 2001

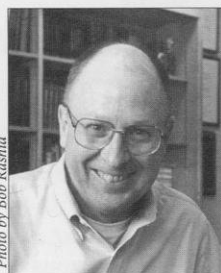


Photo by Bob Rashid

I am completing my three year term as Chair and look forward to turning the leadership of the department over to our Professor John Wright in July. My term as chair has been very eventful and I've found the position interesting, challenging, and exciting.

The first day I was chair – July 1, 1998 – was a very good day. I was enjoying the Reaction Mechanisms Conference in Monterey, California, had a refreshing swim in the Pacific, and learned that the bids on our New Building and Renovation had come in low enough to allow us to build a beautiful 120 seat Seminar Hall in addition.

Fleming Crim and Bob McMahon had nurtured the New Building project through the design phase and led the celebration at the groundbreaking ceremony in September 1998. Less than two years later, we moved into the New Building and celebrated its dedication with

Governor Tommy Thompson and Chancellor David Ward in October 2000. These new synthetic chemistry laboratories are spacious, open, and bright and won our Flad Architects a design award. Student offices outside the labs, conference rooms, and break rooms make the building very livable. Renovations to the center Mathews Building are nearing completion and we are slated to move into the labs in August 2001. The renovation of the nine floor Daniels Building will begin in September.

Strategic Hiring Initiatives, a part of the "Madison Initiative", were begun during my first year as chair and enabled us to hire seven new faculty over the past three years. We received two new positions from our Chemistry Initiative, one from the Genomics Initiative, and one from the Chemical Biology Initiative. The Madison Initiative also provided 9% and 8% faculty raises over the past two years to help the department with faculty retention.

Jim Weisshaar as Associate Chair led our aggressive hiring efforts that brought in Professor David Schwartz (joint with Genetics), and Assistant Professors Shannon Stahl, Silvia Cavagnero, Thomas Brunold, Peter Belshaw (joint with Biochemistry), Daesung Lee, and Qiang Cui. Professor Cui (Ph.D. at Emory, Postdoc at Harvard) will join our faculty in Fall 2001 to work in computational chemistry applied to problems at the chemistry-biology interface. Next year, the Department will again be searching for new faculty and is making special efforts to locate outstanding women and minority candidates at early stages in their careers. Your help in bringing such candidates to our attention will be appreciated.

On the teaching front, the Chemistry Department received the first Chancellor's Award for Departmental Teaching in spring of 2000. The entire department, faculty, staff, and students, take justifiable pride in this honor. The Pharmacia-Upjohn Teaching Awards went to Jim Skinner and Cathy Middlecamp in 2000. The undergraduate curriculum committee headed by Ned Sibert developed a new sequence of introductory chemistry courses designed to invigorate our curriculum. New undergraduate chemistry labs are sorely needed and many options are under consideration. The university construction budget calls for planning funds in the 2003-2005 biennium and construction as early as 2005-2007.

Department finances are becoming strained. The non-salary portion of our budget has remained stagnant over the past ten years while our needs have greatly increased. We are relying on federal grants, alumni and industrial donations, and our nest egg in the UW Foundation to cover current expenses. Our UW Foundation accounts are being called upon to provide \$1,500,000 towards the new building and renovation project and the department has contributed half of the start-up costs for new faculty which have grown to the range of \$500,000 for Assistant Professors. Charges to faculty grants for shop and instrumentation services were initiated in 2000 and we are looking for ways to cut costs. It is becoming clear that maintenance of departmental excellence will increasingly rely on federal support and support from alumni and industrial donors.

UW Chemists continue to garner distinguished awards. Fleming Crim was elected to membership in the National Academy of Science. Three Chemistry faculty were recently awarded named professorships in university wide competitions: Professor Fleming Crim received a *Hilldale Professorship*, Professor Bassam Shkhashiri was selected to receive the first *William T. Eyrue Distinguished Chair for the Wisconsin Idea*; and Professor John Wright was named *Andreas Christopher Albrecht Professor of Chemistry*. Laura Kiessling received a *Romnes Award* from the graduate school. Young faculty awards went to Silvia Cavagnero (Shaw Scientist Award), Peter Belshaw (Burroughs-Wellcome Award), Daesung Lee (Dreyfus Award), Shannon Stahl (NSF CAREER Award, Union Carbide Innovation Recognition Award), and Thomas Brunold (Kocher Award).

We are looking forward to another exciting year in our new and renovated facilities and with 45 new graduate students.

Chuck Casey
Chair

email address: casey@chem.wisc.edu

CURRENT CHEMISTRY NEWS

Departures

Joyce Bohling, secretary in the Organic Division, retired in July. She had been with the Department since 1984.

Sharon Horstmann, secretary for Physical Chemistry, retired in July and plans to spend more time on the golf course. She came to Chemistry in 1990.

Kristin Johnson left the Chemistry Demonstrations facility at the end of the year.

Sue Levin left the Department in October after 15 years as a secretary and accountant.

John Marshall, our fifth floor stock clerk who had been with the Department since 1988, retired in May. He expects to travel a lot, in addition to continuing his funnel-cake business at Wisconsin fairs.

Charlie Patterson retired from his glassblowing position to moved to sunnier, drier climes. He had been with the Department since 1988.

Doug Powell left his job as Director of X-Ray Crystallography to take a position at the University of Kansas.

Professor Charlie Sih, Pharmacy professor with a Joint Executive appointment in Chemistry, retired in January 2001.

John Vanwick, one of the machinists from our Machine Shop, retired in April 2000.

Retirements at the end of June 2001 have been announced by Organic Lab Director Paul Schatz, Computer Center Director Brad Spencer, and Professor James Taylor. See next year's *Badger Chemist* for more details.

Arrivals

Andy Beal accepted a position as Electronics Engineer and Electronics Shop supervisor. His prior work experience includes managing the Electronics Shop for the Mechanical Engineering Department at UW-Madison, and working as a consultant for

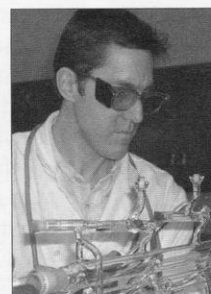


ANDY BEAL

various companies. He has a bachelor's degree in Applied Math, Engineering and Physics from UW-Madison. In his spare time, Andy likes to play golf, work on his house and sail his catamaran.

One of Andy's first tasks was to hire a new technician for the shop. **Bill Ault** joined **Bill Goebel** and **Jerry Lancaster** in December 2000.

Tracy Drier joined the Department in September, replacing Charlie Patterson in the Glass Shop. Tracy began his career as a paper engineer, but glassblowing was always his first love. "When I turned 30, I decided to make the switch and moved to South Jersey to attend the only school in North America to offer a program in scientific glassblowing. My eventual goal was to work in a university setting. The following year I took a position with Aldrich Chemical in Milwaukee. There, I worked in production glassblowing for in-house use, and for catalog and custom orders. Over the next 5 years, I produced every item in the Aldrich catalog, as well as performing repairs and designing new prototypes. I came to UW in September 2000 and my 6-months here have confirmed that it was the right choice. I particularly enjoy working directly with the end-users to design and refine apparatus to meet their needs."



TRACY DRIER

BILL GOEBEL, JERRY LANCASTER, BILL AULT



Ilia Guzei replaced Doug Powell as Director of X-Ray Crystallography. Ilia had been Director of X-Ray Crystallography at Iowa State University.



ILIA GUZEI

Daesung Lee joined the Organic Division as an Assistant Professor in Summer of 2000. Daesung received his B.Sc. and M.Sc. from Seoul National University in Korea, and received his Ph.D. from Stanford in 1998. His research interests include the total synthesis of biologically active natural products; development of new reactions and methodologies for the synthesis of natural and unnatural compounds; and combinatorial chemistry.



DAESUNG LEE

Recently, we discovered new synthetic transformations that can be readily applicable to the synthesis of natural products and combinatorial libraries. These reactions include the synthesis of 1,2- or 1,4-diols from 1,3-dienes and functionalized biphenyls from α,β -unsaturated enones. We are developing a boron atom-assisted Cope rearrangement to construct a vinyl boronate bearing 1,5-diene functionality, a useful building block in many synthetic transformations. We are also interested in developing a bi-directional synthesis approach for polyketide synthesis especially polypropionate with defined absolute and relative stereochemistry.

We are currently developing new synthetic strategies for the total synthesis of those recently isolated natural compounds which include a potent immunosuppressant FR901483, an NF-KB inhibitor cycloepoxydone, and an antibiotic guanacastepene.

A variety of MCC reactions are heavily used in combinatorial chemistry due to their capacity of generating complex and diverse

array of molecules from simple building blocks. Our interest in this area is to discover new MCC reactions as well as to expand the scope of known MCC reactions for example, development of catalytic asymmetric Ugi reaction. Another potential application of Ugi reaction is to generate cyclic peptide-like macrocycles under the principles of macrocyclic stereocontrol. This strategy involves an initial formation of the conformationally well-defined cyclic imines followed by stereoselective addition of isonitrile from the outside of the macrocycle. This approach is well suited for the construction of libraries of cyclic peptide-like molecules. We are also interested in generating focused chemical libraries containing sphingolipid-related structures aiming for finding unnatural small molecule modulators for the sphingosine biosynthesis pathway.

Melissa Lucero joined the Department as Information Consultant and Computer Specialist in December. Melissa was previously a Postdoc with the Gellman group.

Faculty and Staff News

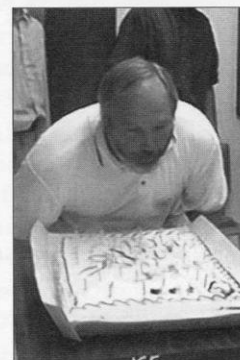
Silvia Cavagnero had two sophomore student who won Hilldale awards: Clement Chow, for a project on the role of molecular chaperones in cotranslational protein folding; and Jennifer Hrycyna, for a project on the influence of molecular crowding on protein folding rates. Her group's poster, "TOWARDS PROBING MORE BIOLOGICALLY RELEVANT PROTEIN ENERGY LANDSCAPES: THE CHAIN LENGTH DEPENDENCE OF SPERM WHALE APOMYOGLOBIN FOLDING", presented at the 6th Johns Hopkins Folding Conference in March 2001 won first prize as the best poster presented at the conference.

Mark Ediger wrote a major review article this year about dynamics in supercooled liquids for *Annual Reviews of Physical Chemistry*. He was appointed to the Scientific Advisory Board of the Max Planck Institute for Polymer Research in Mainz and elected Vice-Chair of the Polymer Physics Gordon Conference. Mark presented lectures at national meetings as well as Penn State, Georgia Tech, and the University of South Carolina. He has also taken over as Chair of

the New Building committee, and as such he has had to learn a whole new language.

Art Ellis was one of 3 winners of the Benjamin Smith Reynolds Award from the College of Engineering (see Awards). He gave lecture series at the Chinese University of Hong Kong and the University of Victoria.

Gery Essenmacher celebrated his birthday in 2000 with some Chemistry friends, a cake (with the requisite number of candles), and a fire extinguisher, in case the heat from the large conflagration ignited near-by items.



GERY ESSENMACHER

Sam Gellman presented lectures at the following meetings: 8th International Kyoto Conference on Organic Chemistry, Kyoto, Japan, July 2000; 7th Naples Workshop on Bioactive Peptides, Anacapri, Italy, September 2000; 26th European Peptide Symposium, Montpellier, France, September 2000. In addition, he was the Bristol-Myers Squibb Distinguished Lecturer at Colorado State University in November 2000.

Robert Hamers' research focusing on the chemical reactions of organic molecules on silicon surfaces was highlighted in the April 16th issue of *Chemical and Engineering News*. The feature article included photographs of Professor Hamers and some of his students, as well as scanning tunneling microscope images obtained at Wisconsin. The basic focus of the article is that while the microelectronics industry has long revolved around inorganic materials such as silicon and gallium arsenide, it is widely believed that the future of microelectronics revolves around organic materials. So, there is an explosion of interest attempting to understand how to make molecular-level electronic devices from organic molecules, in many cases using biology as a guide. Bob's Guggenheim Fellowship was awarded specifically for research in "molecular electronics".



This marks **Laura Kiessling's** fourth year with a joint appointment in Chemistry and Biochemistry. As always, the only constants in the Kiessling lab are progress and change. In



Photo by Jeff Miller

LAURA KIESSLING

addition to our research, we have made significant party progress — celebrating Laura's 40th Birthday last September. Laura is now the Director of the Keck Center for Chemical Genomics. Laura, along with **Peter Belshaw**, received

a \$1.5 million grant from the W. M. Feck Foundation to establish the center which will be housed on the fifth floor of the Mathews wing of the Chemistry building.

Adding to her long list of achievements, Dr. Kiessling received the *UW-Madison H. I. Romnes Faculty Fellowship*.

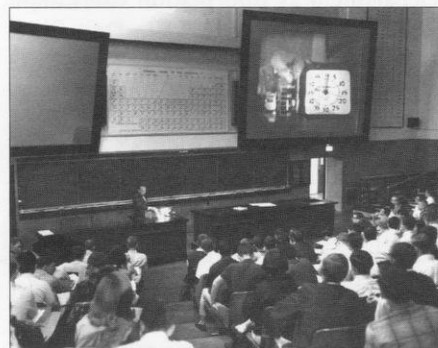
As testimony that people do actually leave the lab, two chemists graduated with Ph.D.s this past year. In May, **Laura Strong** gave her defense and has joined the team as Vice President at Quintessence Biosciences, Madison, Wisconsin. An article featuring Laura and Quintessence appeared in the Winter 2000 edition of *On Wisconsin*. Then in September, **Michael Schuster** (a MD-PhD student) defended and is now completing M.D. work for his degree. Three post-docs also left the lab this year. **Elisabetta Fasella** accepted a visiting professorship at Beloit College, **Chris Sherrill** is now working at EraGen Biosciences (Madison, Wisconsin), and **Jinwang Xu** left for Boston in January to work at Vertex Pharmaceuticals

John Moore began 2000 by receiving the good news that he had been awarded a named professorship from WARF funds. The award was for his excellence in research in chemical education. The appointment is for a five-year period (July 2000 through July 2005). He also chairs the general chemistry division, is director of the Institute for Chemical Education, and is Editor of the *Journal of Chemical Education*.

He has chosen the W. T. Lippincott Professorship of Chemistry as the name, in honor of W. T. (Tom) Lippincott, former editor of the Journal (1967–1979) and

former director of the Institute for Chemical Education (1984–1986). Lippincott has been characterized as one of the most influential chemistry educators of the 20th century. He taught at Michigan State University, the University of Florida, the Ohio State University, the University of Arizona, and as visiting professor at UW–Madison before retiring in 1987.

Moore also attended the ACS Spring Meeting in San Francisco, the ACS Fall Meeting in Washington, DC, and at the Pacificchem Meeting in Honolulu in December. He organized an award symposium for Jerry Bell in honor of his having received the ACS George C. Pimentel Award in Chemical Education, participated in High School Day activities at each meeting, gave several presentations, and participated in the Journal's booth at each meeting. He again attended the annual ACS Editor's Conference in January.



W. T. Lippincott, an innovator of using technology in classrooms and labs, in an Ohio State classroom in about 1970.

During the summer he participated in the 16th Biennial Conference in Chemical Education, held at the University of Michigan. He organized several symposia, made presentations, was co-host of an ice cream social, and participated in the Journal's booth. Then he attended two meetings in October: the UW System Chemistry Faculties Meeting (held this year at UW–La Crosse) and the MACTLAC Meeting (Midwest Association of Chemistry Teachers in Liberal Arts Colleges), representing both the department and the Journal.

Ieva and Hans Reich will be traveling to the International Carbanion Conference in Marburg, Germany this summer (where they spent a semester in 1979), and they attended the 8th International Conference on the

Chemistry of Selenium and Tellurium in Sao Pedro, Brazil last summer. Although there is only a little organoselenium/tellurium chemistry going on in the Reich group these days, it was an interesting trip down memory lane to meet old friends and competitors. See the web site at <http://chem.wisc.edu/areas/reich> for current information about the group.

Dan Rich presented the keynote lecture at the XVIth International Symposium on Medicinal Chemistry in Bologna Italy in September. He also gave plenary lectures at the Technical University at Munich, the 26th European Peptide Symposium held in Montpellier France, and the 12th Annual R. W. Johnson Pharmaceutical Research Institute Chemistry Lecture. He also gave lectures at Pharmacia-Upjohn in St. Louis, and Eli Lilly Research Laboratories in Indianapolis.

David Schwartz's research labs were visited by then-Governor Tommy Thompson to highlight the leading role that biotechnology is playing in the University and the State. The Governor's 1999-2000 budget proposed a \$317 million investment in cutting-edge biotech research centers.

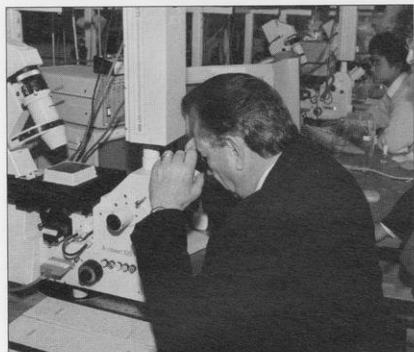
Bassam Shakhshiri and his demonstration-filled approach to chemistry lectures were featured in the Fall 2000 *On Wisconsin* magazine.

Jim Skinner had a busy year of talks, including in Germany and Hawaii. He taught his grad course in statistical mechanics (864) in the spring, and 103 again in the fall.

In June **Lloyd Smith** gave an invited talk at the Sixth International meeting on DNA Based Computers at Leiden, The Netherlands. In September he gave the keynote address at "Nucleic Acid Detection and Screening Technologies" conference at San Diego. In December he gave an invited talk at the Third International Symposium on Atomic Scale Processing and Novel Properties in Nanoscopic Materials at Osaka University, Japan. Third Wave Technologies, the company founded by Lloyd in 1993, had its IPO on February 9, 2001 and is now publicly traded on NASDAQ (TWTI is the ticker symbol).

In January 2001 the Organosilicon Research Center which **Bob West** organized completed its first two years of operation at Wisconsin. The mission of the Center is to





Governor Thompson at Schwartz's research labs

provide basic research looking toward applications in the organosilicon industry, ten to fifteen years in the future. Notable discoveries to date include 1. Polysiloxane polymers which bind lithium ions and show the highest lithium ion conductivity yet recovered for polymeric electrolytes. These polymers are soon to be tried in lithium ion batteries; and 2. Stable divalent silicon compounds which are active catalysts for the polymerization of olefins. Both of these findings are the subject of patent applications by the Wisconsin Alumni Research Foundation.

Scientific conferences and lectures took Bob this year to Lebanon, Israel, Germany, France and Russia. Of these conferences, the most unusual was the Razuvaev conference of the Russian Academy of Sciences. This took place on a cruise ship, traveling down the Volga River from Nizhny Novgorod to Samara and back again.

In August, Bob flew his Cessna 182 to Revelstoke, British Columbia, to take part in a mountaineering trip to a remote area in the Selkirk Mountains. Here he participated in the ascent of Nordic Mountain, and a serious attempt to within a few hundred feet of the summit of Mt. Iconoclast.

In **John Wright's** research group, 2000 saw the experimental implementation of his new femtosecond laser system. For laser aficionados, it is a commercial Spectra Physics system that uses a 100 fsec. Ti:sapphire excitation laser, a regenerative amplifier which stretches the pulse to 1 psec, and a dual OPA system that can generate two tunable pulses over the entire infrared. The system has been incorporated into a four wave mixing experiment that achieves doubly vibrationally enhanced (DOVE) four wave mixing. The implementation has been done entirely by **Kent Meyer**, now a third year

graduate student in the Wright group. Kent has completely automated the system so it can run without supervision and achieve two-dimensional vibrational spectra. This technology is truly remarkable and is allowing the Wright group to continue their development of this new approach to spectroscopy.

There has been a great deal of interest in this new methodology. The Wright group has presented their work at a special symposium on 2D Vibrational Spectroscopy at the national American Physical Society Conference, the plenary session of the International Conference on Diffuse Reflectance, the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) meeting, as well as at a number of schools. The highlight though was the Pacificchem 2000 Conference in Hawaii where there were special symposia on new vibrational spectroscopy methods and innovative teaching methods. John of course attended all the scientific talks but he also got to engage in surfing, snorkeling, body surfing, and scuba diving. Surfing and scuba diving were first time adventures that he never thought he would ever experience.

On a personal side, John's entire family joined him after Pacificchem 2000 to spend 10 days in Maui. They report that it is truly paradise here on earth. They rented a condo which was directly on the beach so one could fall asleep to the pounding surf. A very rare experience for a Wisconsin native. John further reports that his daughter, Dawna, and son-in-law, Drew, are living in Brooklyn, WI and that Dawna is finishing her certification for elementary education and will shortly join the teaching profession. David is a senior graduate student in physics at Wesleyan University working on quantum chaotic Rydberg systems in physics. He is also working on moving up in his national ranking in ballroom dancing, a passion that he engages in with the Yale Ballroom Dance Team.

Arun Yethiraj received the *Alexander von Humboldt* fellowship and spent a part of his sabbatical year at the Universitat Mainz and another part of his sabbatical at the Indian Institute of Science in Bangalore.

Howard Zimmerman gave lectures this last summer at several German universities, namely Essen, where Frank Klaerner, a former UW Visiting Professor, was his host;

at Aachen, where Carsten Bolm, also a former Visiting Prof., was his host; at Braunschweig, where Henning Hopf, a Wisconsin Ph.D., hosted him; and then in Berlin, where Ulrich Koert, a Wisconsin Visiting Prof., hosted him.

At the IUPAC Photochemistry Symposium in Dresden there were twelve of Zimmerman's former students: **Prof. Diego Armesto** of Madrid (PD '75-'77), **Prof. Andrei Kutateladze** of the University of Denver (PD '92-'95), **Kurt Hoffacker** (Luminex Company; PhD'96), **Marie-Laure Viriot** (CNRS, Nancy, France; PD '71-'72), **Prof. John Scheffer** (UBC, Vancouver; PhD'66), **Prof. Albert Pratt** (Dublin; PD '67-'69), **Prof. Bill Horspool** (Dundee; PD '74-'75), **Prof. Dietrich Doepp** (Univ. Duisburg; PD '65-'67), **Prof. Heinz Duerr** (Univ. Saarbruecken; PD '61-'62), and **Prof. Harry Morrison** (Purdue; PD '62-'63).

Howard worked hard to organize a large meeting at PACIFICHEM2000. This is the "Symposium on Organic Photochemistry". It has 33 speakers internationally, from the U.S., Canada, Japan, England, France and Germany. Two of Z's co-chairmen are former Zgroup students - John ("Jerry") R. Scheffer at UBC (Vancouver) and Steven Fleming (PhD '84) of Brigham Young.

At PACIFICHEM2000, Zimmerman gave two lectures. One was in the Symposium organized by Prof. Fumio Toda of Japan on "Solid-State Photochemistry" and the other is in the Symposium on Organic Photochemistry.

Also, at Pacificchem (December 2000, Honolulu) eight Wisconsin alumni gave lectures at the "Symposium on Organic Photochemistry"; these were: **Steve Fleming**, **Laren Tolbert** (GeorgiaTech; PhD'84), **Andrei Kutateladze**, **Dietrich Doepp**, **Pat Mariano** (Univ. New Mexico; PhD'95), **John ("Jerry") Scheffer**, **Diego Armesto**, and **Harry Morrison**.

In addition, **Rich Givens** (Univ. Kansas; PhD '66) and **Jim Pincock** (Dalhousie Univ.; PD'71-'72) had organized a Symposium on Photoremovable Groups. Both gave lectures as well. Jerry Scheffer gave a lecture in the Solid-State Symposium in addition to one on "Organic Photochemistry".

Also, Zimmerman has been invited to give a plenary lecture at the International Conference on Photochemistry to be held in Moscow July 31 - August 3 of 2001.



OTHER NOTABLE NEWS



Djerassi Receives 2000 Othmer Gold Medal

Dr. Carl Djerassi (PhD '46, Wilds) was selected as the recipient of the Fourth Annual Othmer Gold Medal in March of 2000. This award from the Chemical Heritage Foundation "acknowledges multifaceted individuals who have made enduring contributions to our chemical and scientific heritage through exceptional activity in the areas of innovation, entrepreneurship, research, education, public understanding, legislation, or philanthropy."

National Medal of Science presented to Ralph Hirschmann

Ralph Hirschmann (MS '47, PhD '50, Johnson) is the Rao Makineni Professor of Bio-Organic Chemistry at the University of Pennsylvania in Philadelphia, PA. The citation reads: "For his seminal contributions to organic and to medicinal chemistry including the synthesis in solution of an enzyme (ribonuclease), his stimulation of peptide research in the Pharmaceutical Industry and for his leadership role in fostering interdisciplinary research in academia and in industry, which led to the discovery of several widely prescribed medications for human and animal health."

Hirschfelder Prize in Theoretical Chemistry

The Hirschfelder Prize winner for 2000-01, **Roald Hoffmann**, shared the 1981 Nobel Prize in Chemistry. Professor Hoffman, currently at Cornell University, gave two very interesting scientific talks on bonding, plus a reading from his new play, *Oxygen*, written with **Carl Djerassi**. The Hirschfelder Prize, awarded annually by the Theoretical Chemistry Institute, is the largest in the field of theoretical chemistry.

MacDiarmid wins Nobel Prize

Alan Graham MacDiarmid (MS '52, PhD '53, Hall) shared the 2000 Nobel Prize in Chemistry with Alan J. Heeger (UC-Santa-Barbara) and Hideki Shirakawa (Univ. Tsukuba, Japan). MacDiarmid, currently a professor at the University of Pennsylvania, and his co-winners were lauded for "the discovery and development of conductive polymers."

Meloche Lecture

The 2000 Meloche Lecture in Analytical Sciences was delivered in November by **Professor Ken Standing** from the University of Manitoba.

"Once Upon A Christmas Cheery"

Bassam Shkhashiri's 31st annual Christmas presentation again played to packed houses at 4 shows over the weekend of Dec. 2-3, 2000. The 2001 show will be Dec. 1 and 2, 2001.

Reaction Mechanisms Conference on Campus

The 28th Reaction Mechanisms Conference was held June 24-29, 2000 on the campus of the University of Wisconsin in Madison, Wisconsin. This distinguished conference has held a position of long-standing significance in mechanistic chemistry since its founding 56 years ago. The scientific program encompassed a wide range of topics in contemporary mechanistic chemistry: electron transfer, computational methods, biochemical mechanisms, organometallic catalysis, DNA/RNA chemistry, carbene chemistry, nitrenium ions. A special session on gas phase ion chemistry was held in memory of the late Prof. Robert Squires (Purdue).

Conference attendees enjoyed the opportunity for active participation via discussion periods, poster sessions, and informal conversations. A large number of current UW students and postdocs participated by presenting posters describing their work. In addition to current UW students and faculty, many alumni and friends traveled to Madison to participate in the Conference: **Chris Abelt, Igor Alabugin, Jerry Berson, Ed Clennan, Dave Crumrine, Ernie Davidson, Sally and Frank Mallory, Gary Miracle, Eric Patterson, Peter Petillo, Paul Scudder, Bob Sheridan, Dan Singleton, and Lynn Sousa.**

Special elements of the conference program included the Conference Banquet, which featured an after-dinner presentation by Professor Jerome Berson (Yale), entitled "Conjectures and Refutations in Mechanistic Chemistry: The Illogic of Scientific Discovery." The Chemistry Department hosted a reception for conference attendees, and offered tours of the new building addition. Fabulous summer weather, delightful lakeside dinners at the Memorial Terrace, and first-rate conference facilities in Grainger Hall coupled with a top-notch scientific program to create an indelible impression on our guests.

Prof. Barry Carpenter (Cornell) served as scientific organizer, and **Prof. Robert McMahon** (Wisconsin) served as local organizer. Bob McMahon and **Chuck Casey** are members of the Governing Board for the Reaction Mechanisms Conference. Several alumni and friends were instrumental in obtaining financial support through Dow AgroSciences, DuPont, DuPont Pharmaceuticals, Rohm and Haas, and Strem Chemical.



Departmental Computer Center

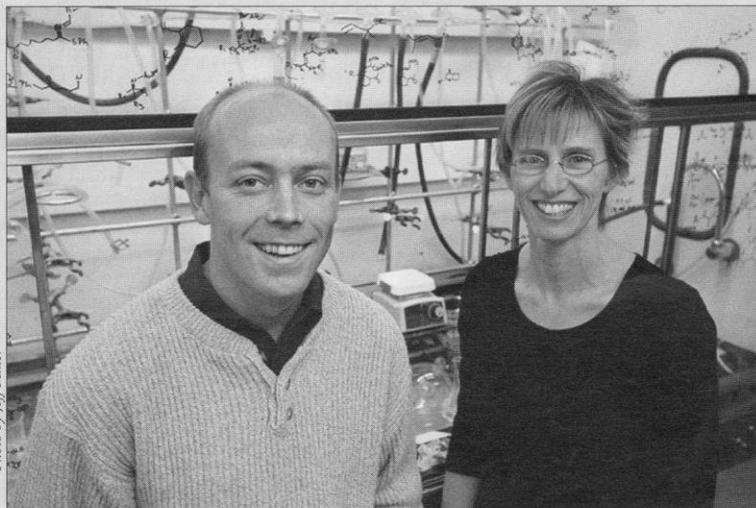
The Computer Center was expanded recently by the addition of 35 dual-processor 800 MHz Pentium systems. The 800 MHz processors were a gift from Intel. The Graduate School provided funds which were used to purchase the additional components needed to make full computers. 25 of these systems are configured as a computational cluster and 10 are configured as graphics systems. Initially the major applications run on these will be Gaussian 98 and Macromodel. The department has also been notified that the NSF has approved a grant request for additional computational power. The project that has been funded addresses needs in education and research and will be a synergistic effort to meet the needs of both areas.

The department is migrating to a computer environment in which many of the most crucial (and time-consuming) computer tasks will be done by Linux systems in a Beowulf cluster. Ten interactive Linux systems are used to submit jobs to the cluster, monitor progress of the jobs, and analyze the results. The current 70-processor cluster (10 dual-processor interactive systems, 25 dual-processor compute-only systems) will be significantly enhanced by an NFS-funded expansion project. The current systems use part of a gift of 140 Pentium III processors from Intel Corporation.

In the transition to the Beowulf cluster the department will build on its application base which has been developed over the years on a variety of platforms (Digital VMS, IBM AIX, and most recently SGI Irix operating systems). The Beowulf cluster takes advantage of the department's improved networking architecture, which came with the new building project. The new chemistry building is fully outfitted with category five network wiring and relies exclusively on high-performance network switches for connection to offices and laboratories. As part of the building remodeling project the older buildings will be upgraded to the same level of cabling and hardware.

The department has a tradition and history of renewing its computational facilities in a way that makes most effective use of current computing technology. The Beowulf cluster is the latest transformation of the departmental computing environment. In addition to implementation of the cluster we are working to merge the high-capacity departmental facilities and the individual laboratory facilities into a coherent computing environment. The simple goal of this effort is to provide the most effective computing environment to support chemical research at the lowest cost. This effort is most visible in the close cooperation and collaboration between the computer center and small computer support staff.

"Very soon we shall be able to set up 'quantum mechanical factories' to obtain solutions to practical experimental problems." -- J. O. Hirschfelder [Rev Mod Phys. 35, 79 (1963)]



PETER BELSHAW AND LAURA KIESSLING

Keck Center

In December the Department learned that its proposal to the W. M. Keck Foundation to fund a new \$1.5 million Keck Center for Chemical Genomics had been funded. The proposal was put together by **Laura Kiessling** and **Peter Belshaw**, and Laura will be the director of the center. The major research facility will be housed on the fifth floor of the Mathews Chemistry building, and a screening facility will be housed in the biotechnology center. It is expected that researchers from a variety of disciplines across campus will benefit from the center.

Jan Froding Promoted to Academic Department Manager

Jan Froding was promoted to Academic Department Manager in May 2000. This promotion came as a result of an effort by the University to recognize the additional responsibilities and challenges involved in managing particularly large and complex departments such as Chemistry. Jan has been with the Department for over 30 years.

Blood Donor Achievement

The Fall/Winter 2000 edition of "The Safe Side", from the Wisconsin Department of Administration, Bureau of State Risk Management, and the Wisconsin State Employees Union, highlighted State Employee Blood Donors. Retired organic secretary **Joyce Bohling** topped the list with a whopping 35 gallons of blood donated!!

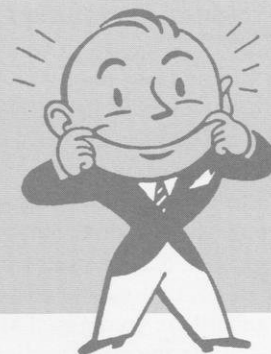
ACS Marks 125 Years with Articles by Wisconsin People

The March 26, 2001 edition of *Chemical & Engineering News*, the weekly magazine of the ACS, contains a series of articles by young chemists, called "New Voices in Chemistry". A number of these were written by chemists with ties to Wisconsin: **Peter Dorhout** (PhD '89, Ellis) wrote "Evolution of the Academic Chemist"; **Carsten Bolm** (MS '84, and Visiting Prof) wrote "Cooperation, European Style"; **James Tour** (PD '87) wrote "Chemistry: Ya Gotta Sell It!"; **Professor Laura Kiessling** wrote "The Periodic Table of Biology"; and **Professor Shannon Stahl** wrote "Great Expectations From Small Molecules".



OUR AWARDS

UW Chemists continue to garner distinguished awards.



Laura Kiessling and **John Wright** won awards from the UW Graduate School in 2000. Laura was named a Romnes Fellow, and John was awarded a WARF professorship. Both awards provide significant research support for a five year period.

Peter Belshaw, Thomas Brunold and **Shannon Stahl** won Research Corporation Awards in 2000. Peter Belshaw's award is for "A General Approach to Modulate Protein Function with Small Molecules". Thomas Brunold's award is for "Spectroscopic and Computational Insights into the Biosynthesis of Adenosylcobalamin." Shannon Stahl's award is for "The Study and Development of Chemical Oxidase Catalysts."

Thomas Brunold won the Theodor Kocher Award in Summer 2000. This is a pan-University award at the University of Bern that is given to one alumnus who exhibits outstanding potential in an academic career. It is not limited to any special discipline and the awardee is chosen by a panel of seven faculty from throughout the University. In addition to the honor, a substantial cash award of 50,000 Swiss Francs is provided.

Congratulations to **Art Ellis** who has won the Benjamin Smith Reynolds Award given by the University of Wisconsin School of Engineering to recognize outstanding teaching of engineering students. Art's innovative integration of materials chemistry into the general chemistry curriculum has captured the interest of everyone in his courses including the engineers. His dedication to teaching inspires and motivates all those around him.

2000 was the first year that the College of Letters and Science awarded three Career Service Awards—to a faculty member, an academic staff member, and to a classified staff member. Recipients were to have retired

during the past fiscal year with at least 15 years of service in the College. But the primary criterion for individuals receiving the award is that they exhibited service and dedication to the programs of the College going far beyond the boundaries of normal expectations.

Patti Puccio was chosen to receive this new award for the talents: accuracy, speed, organizational ability, pleasant personality, intelligence, integrity, and sense of responsibility. In addition to bringing these attributes to the job for 36 years, she was cited for her willingness to go the extra mile and for a warm and caring attitude that goes above and beyond her professional duties.

Patti is shown below in the new headquarters of John Moore's chemical education group. Retirement was too dull for Patti—she is back part time helping to make good things happen in chemical education.



Bob Hamers and **Jill Banfield** were named Fellows of the John Simon Guggenheim Memorial Foundation. Guggenheim Fellows are appointed on the basis of distinguished achievement in the past and exceptional promise for future accomplishment. Awards are for a specific

topic for twelve months and include a monetary component. Professor Banfield's topic is "Microbe-mineral interactions of environmental importance" and Professor Hamers' is "Studies in molecular electronics".

Laura Kiessling won the Horace S. Isbell Award from the Division of Carbohydrate Chemistry of the American Chemical Society. She was honored at an Awards Symposium and Awards Banquet at the American Chemical Society Meeting in Washington DC in August.

Daesung Lee won a Camille and Henry Dreyfus New Faculty Award for 2000. This prestigious award went to 15 of 77 applicants from the top research universities. These awards are designed to help new faculty develop into top researchers and educators. Daesung will use the award to support "New synthetic strategies and their application toward the synthesis of biologically active natural and unnatural compounds." He recently moved into his new labs on the 8th floor of the new Chemistry Building Addition.

Cathy Middlecamp and **Jim Skinner** received the 2000 Pharmacia Awards for Outstanding Teaching. Dr. Clay Jacobsen from Pharmacia presented the awards at the symposium in September. Cathy spoke on "Chemistry that Connects", and the title of Jim's talk was "Everything I Know About Teaching I Learned in Kindergarten."

Tom Record won the 2001 Founders Award of the Biophysical Society. The award is given for outstanding achievement in Biophysics and was presented at the February 2001 Meeting in Boston.

In recognition of his accomplishments and contributions to teaching, **Rodney Schreiner** was inducted as a Fellow of the University of Wisconsin-Madison Teaching Academy on April 16, 2000. For the last



twenty years, Rod has lectured in the General Chemistry Division, and he has developed course materials in a variety of media, including print, video, audio, and computer software, that have been used by many in general chemistry. He has also coauthored several publications that have been used around the world and have been translated into other languages. He has been active in outreach to teachers, students, and the general public. For teachers, he has taught in workshops offered by the Institute for Chemical Education, in Chautauqua Short Courses, and in programs of the National Science Teachers Association. For the public, he has given presentations at local, regional, and national professional society meetings, he developed several interactive chemical demonstrations that are on display at the Chicago Museum of Science and Industry, and he recently presented 30 shows at the EPCOT Center in Florida. Congratulations to Rod for this recognition of his work.

Shannon Stahl won a National Science Foundation CAREER Award for Faculty Early Career Development. The NSF Award will provide research funding for five years to study "Dioxygen and Palladium in Catalysis: Mechanisms and Applications."

Jim Weisshaar was elected to Fellowship in the American Physical Society. Jim was cited "For ground breaking applications of photoionization and photoelectron spectroscopy to molecules and radicals and for incisive spectroscopic and dynamics studies of complex chemical reactions."

The Department won the first ever Chancellor's Award for Teaching Excellence in 2000. The award-winning description of teaching and educational innovation was prepared by John Wright and selected from among proposals submitted by large departments on campus.

Student Awards

Student scholarships 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 which is one of the strengths of this institution. Teaching awards come from a variety of campus and Departmental sources,

and recognize the other 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.

Stacy Keding (Rich; Medicinal Chemistry) won a \$20,000 Fellowship awarded annually by the Medicinal Chemistry Division of the American Chemical Society. Stacy is working on the design and synthesis of inhibitors of bleomycin hydrolase and methionine aminopeptidase.

Emilie Porter (BS '98, Millikin University, working with Gellman) won the 2000 Collegiate Inventor's Prize sponsored by the National Inventors Hall of Fame in Akron, OH, which was founded by the US Patent and Trademark Office. Five inventions were chosen out of about 150 entries. Emilie invented an unnatural beta-amino acid based peptide resistant strains of bacteria. She was honored at an induction ceremony for the National Inventors Hall of Fame in Akron, Ohio on September 8-9, 2000 and was presented with a check for \$20,000.

Several 2000-2001 graduate fellowships were awarded in the department: the Procter and Gamble Fellowship to **Dan Besemann** (BA '96, St. John's College, working with Wright); the Sam Charles Slifkin Award to **Paul Bonvallet** (BA '96, Kenyon College, working with McMahan); the Martha G. Weeks Scholarship to **Meredith Poremski** (PhD '01, Weisshaar); the Pharmacia-Upjohn Fellowship to **Robert Owen** (BA '97, St. Olaf College, working with Kiessling) **Paul LePlae** (BS '96, U. Michigan, working with Gellman) is in his third year of support by the Kodak Fellowship.

The Charles N. Reilly Award was presented in 2000 to **Todd Strother** (BS '97, Missouri Western State College, working with Smith). **Nicholas Condon** (BA '96, University of Colorado, working with Wright) received the Roger Carlson Award.

The 2000 Chemistry Teaching Assistant Awards were given to **Margaret Biddle** (BS '99, U. Chicago, working with Reich), **Kevin Gentile**, **Chris Lawrence** (BS '98, UCLA, working with Skinner), and **Andrew Tseng** (BS '95, MIT, working with Burstyn). These awards are given each year to teaching

assistants and faculty assistants selected by students and faculty as outstanding teachers. The awards were presented at the Pharmacia Teaching Award Symposium in September.

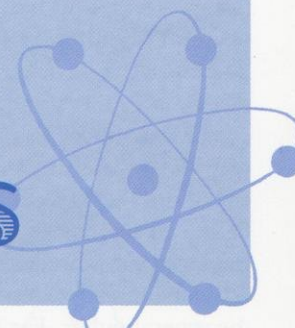
Sarah Coulter (PhD '01, Hamers) received a Graduate Fellowship from the American Vacuum Society, consisting of a cash prize and travel expenses to the AVS National Meeting.

Undergraduate scholarships presented in 2000-2001 went to: the Margaret McLean Bender Scholarship to **Marla Chesnik** (working with Record); Richard Fischer Scholarships to **Steven Darnell** (working with Kiessling) and **Matt Sleetor** (working with Zimmerman); Walter and Young-Ja Toy Scholarships to **Woojin Lee** (working with Yu), **Matthew Vick** (working with Landis), and **Raissa Trend** (working with Casey); Helfaer Scholarships to **Paweena Kreunin** (working with Smith), **Jordan Quinn** (working with Zimmerman), and **Brian Yablon** (working with Yu); the Edward Panek Memorial Scholarship to **Fred Boehm** (working with Kiessling); the Wayland Noland Undergraduate Research Fellowship to **John Gillis** (working with Farrar); the Mabel D. Reiner Scholarship to **Stephanie Elmer** (working with Zimmerman); anonymous scholarships to **Adam Fiedler** (working with Reich), **Mark Hyland** (working with Zimmerman), **Joseph Martinelli** (working with Burke), and **Eric Todd** (working with McMahan); National Starch Scholarships to **Tanya Knickerbocker**, **Jane Rempel** and **Paul Wesson**; and the Kimberley-Clark Scholarship to **Narupol Intasanta**. We thank the generous donors who have made these scholarships possible for our students.

Undergraduate receiving Hilldale Research Awards in May, 2000, were **Adam Fiedler** (working with Reich), **Shaun Lippow** (working with Ediger), **Joseph Martinelli** (working with Burke), **Dan Miller** (working with Stahl), **Jonathan Owen** (working with Landis), **Roslyn Theisen** (working with Burstyn), and **Brian Yablon** (working with Yu). The awards, \$3,000 to each student and \$1,000 to the faculty supervisor, are made possible by grants from the Hilldale Foundation and the Wisconsin State Legislature.



CHEMISTRY EDUCATION ACTIVITIES



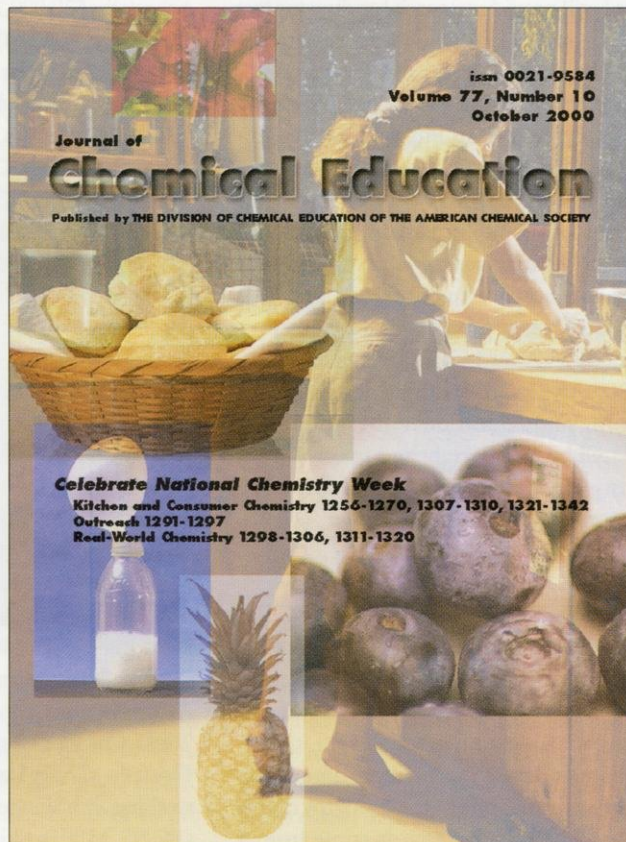
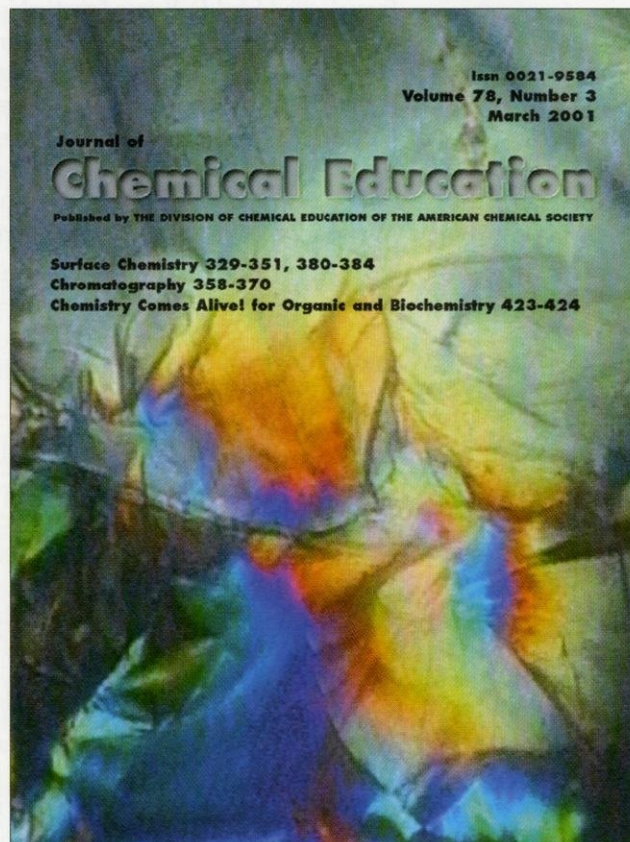
Journal of Chemical Education

The Journal of Chemical Education continued to thrive during 2000. Approximately 1700 pages were printed during the year. All also appeared on JCE Online (<http://JChemEd.chem.wisc.edu>) together with a large number of supplementary materials and online-only feature columns. Production of each issue has been further streamlined and the time from acceptance of a manuscript until its publication drastically reduced.

During the year the Journal began collaboration with the ACS Office of Community Activities for the National Chemistry Week celebration. This was carried out with

special articles, activities, and review articles in JCE around the NCW theme of Kitchen Chemistry. The October 2000 issue had National Chemistry Week as its theme. This issue and materials from it got special wider distribution by both the ACS and JCE at meetings and as mailings to ACS Local Sections.

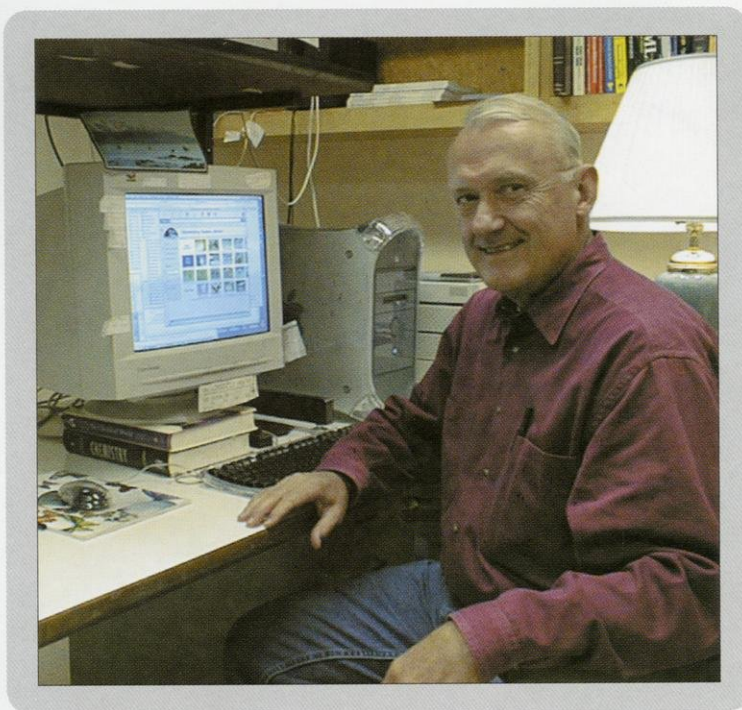
Because of the success and popularity of the initial collaboration, 2001 will find JCE and ACS collaborating again, this time on the theme of Chemistry and Art.



JCE Software continues to enlarge and publish its collection of video of chemical reactions and demonstrations. The 5th CD-ROM in the Chemistry Comes Alive! series was recently released, and made the Journal cover when it did! The cover shows a plastic film being stretched under polarized light, illustrating the volume's theme of organic and biochemistry.

Video production continues with Jerry Jacobsen at the camera and in the editing studio. Because of the renovations to the first floor of the Chemistry building, summer 2000 found Jerry temporarily relocated to a leaky general chemistry lab, with his equipment shrouded in plastic drop cloths with construction dust permeating everything. Now, the dust has finally settled. Jerry now has a room to set up and shoot video and also a separate office in which to edit and assemble materials into CD-ROMs.

Other improvements that are a result of building renovations are the areas used for storing, assembling, packing, and shipping of the ICE and JCE Software materials (see photo of the kit room); a lab; and new space



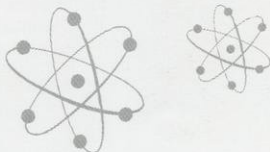
(above) Jerry Jacobsen working on another CD-ROM of video in his new quarters — safe and dry.



(left) Photos by Felice Frankel of an oscillating chemical reaction greet visitors to the new headquarters of the chemical education.

for headquarters of the chemical education group. The headquarters space has a dramatic sequence of five frames showing the oscillating chemical reaction known as the B-Z Reaction, named for the scientists B. P. Belousov and A. M. Zhabotinskii. The reactants are malonic acid and bromate ion in acid solution. The colored bands are due to an indicator dye that indicates the oxidation potential of the solution, and the overall process leading to the oscillating bands requires at

least four coupled chemical reactions. These stunning photos were taken by Felice Frankel of the Edgerton Center at MIT. Frankel has also published many stunning photographs of chemistry in the book, *On the Surface of Things*, which she co-authored with George Whitesides.

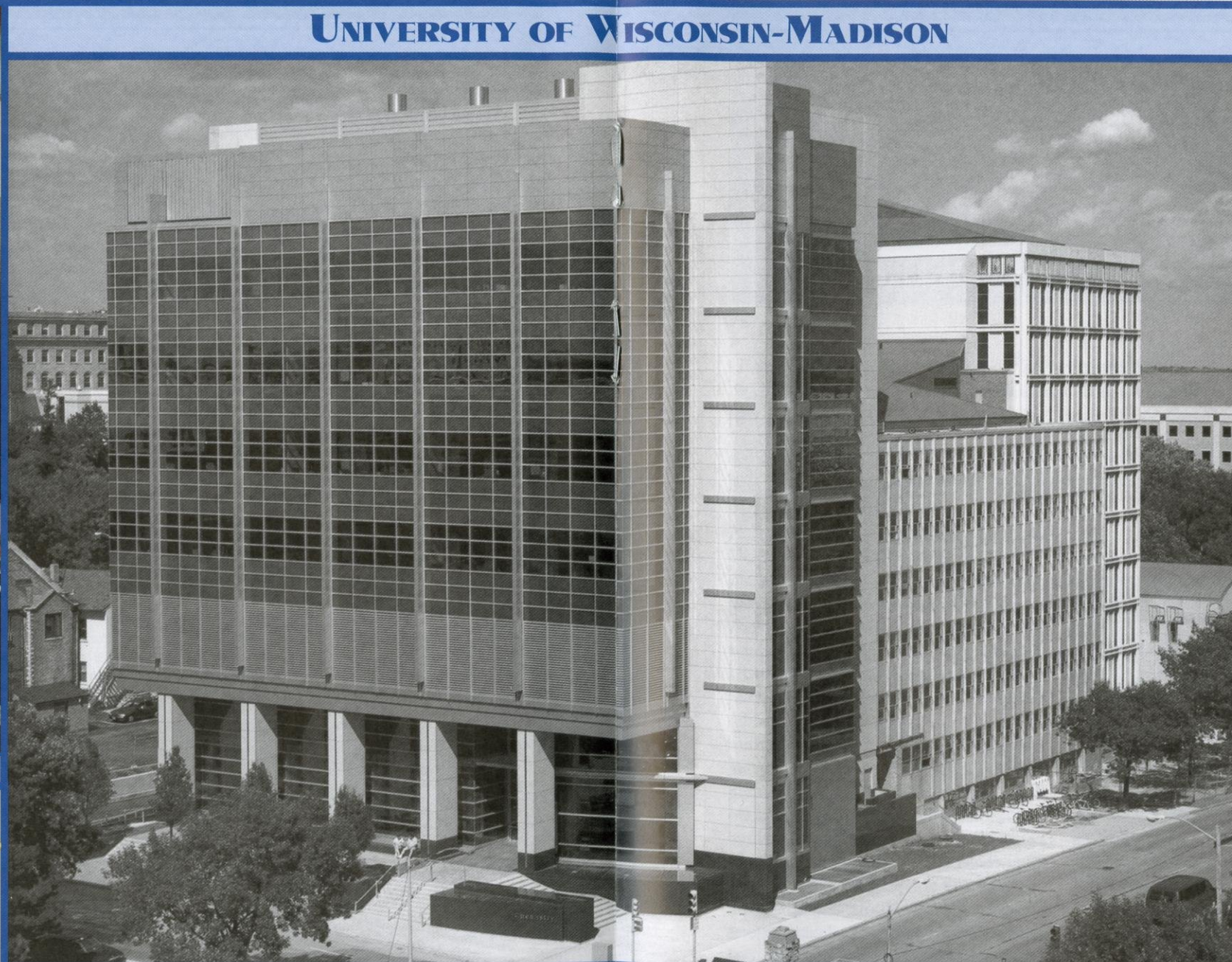


(below) Monica Lesperance packs a solid state model kit in the new space for kit storage and assembly, adjacent to the shipping room.





The lobby of the new building.



NEW CHEMISTRY BUILDING

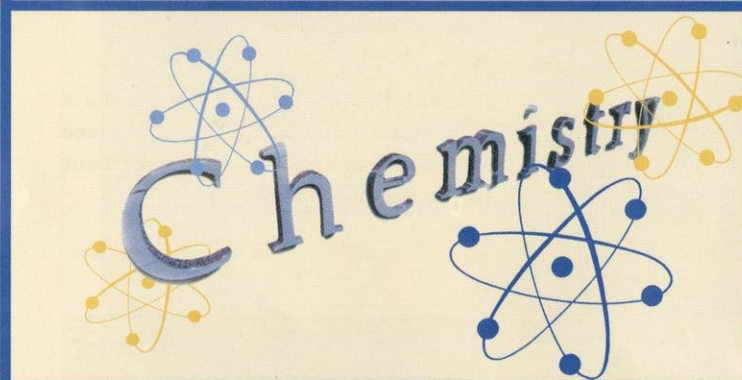


(L-R) Terry Devitt, Dean Virginia Hinshaw, Hank Luffer, Chuck Casey, Chancellor David Ward



Photo by Steve Hall at Friedrich Blessing

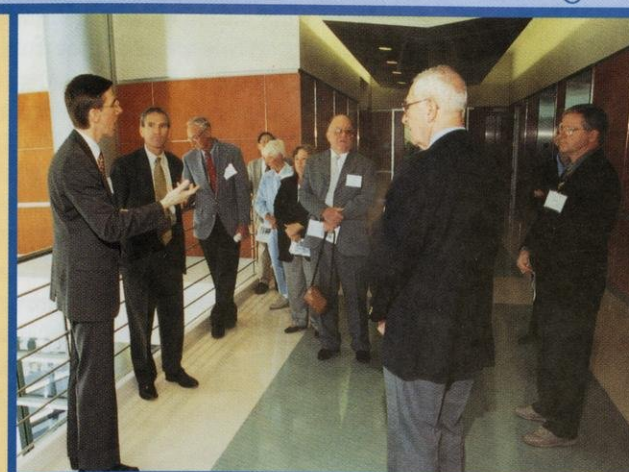
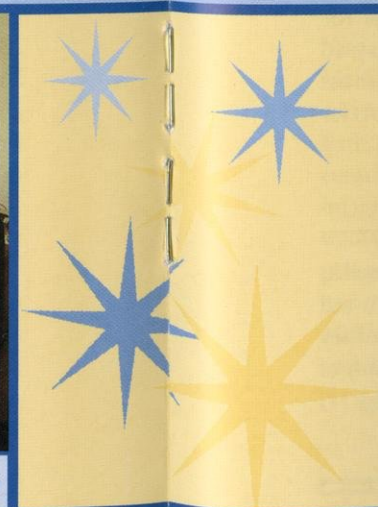
A student office in the new building



(L-R) Bob McMahon, Stephen Morton, Robert Stroud, Charles Taylor, Irv Shain, Paul Bender



(L-R) Dean Virginia Hinshaw, Chuck Casey, Gov. Tommy Thompson



Bob McMahon leads a tour of the new building



Photos by Jeff Miller (unless otherwise noted)

(L-R) Betty Hirschfelder, Sallie Fisher



THE OVERVIEW

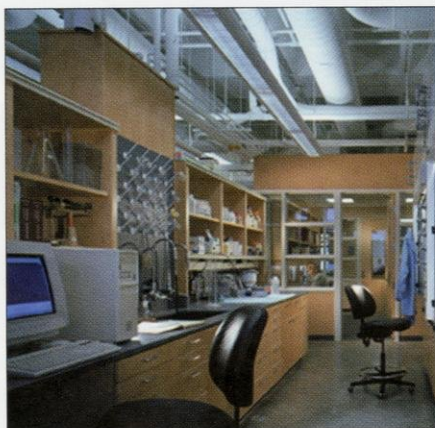
The main issues facing the Department this year are similar to those we highlighted last year. We moved into a new building in June, and immediately began the process of remodeling the older buildings. Synthetic organic chemist Daesung Lee joined the faculty in July; we have hired a theoretician, Qiang Cui, to start in 2001. We face continued cuts and pressures on the budget, which was cut by 1% in 2000 and will be cut another 1% in 2001. It is increasingly difficult to maintain "the margin of excellence" that we believe is necessary to remain one of the country's elite research institutions.

Building Addition and Renovation

We moved into our new building in July. The new administrative offices on the ground floor are light and open, and provide a very pleasant environment for our hard-working staff. The X-Ray and Mass Spec facilities on the second floor give us room to house the existing equipment and to grow into an exciting future. The synthetic labs on floors 5 through 8 were enthusiastically received by the researchers who moved into them in July. Lab benches, offices, conference rooms and break rooms for eighty researchers in nine research groups are available on the upper floors.

The seminar hall in the southeast corner of the block has experienced more than its share of delays and difficulties, but it is finally completed. The first seminar will be held in the facility in September.

Our remodeling of the older (Mathews) building of the chemistry complex hit a snag when we discovered that the air mixing boxes were not functioning properly. After lengthy debate, the state decided to replace them all, delaying the remodeling project by about 3-4 months and adding several hundred thousand dollars to the cost. We expect to be moving ahead again by the time you are reading this. We will occupy the Mathews building in August and begin renovations to the Daniels building. The remodeling of Daniels is expected to continue until the end of 2002.



Faculty Additions and Recruiting

Faculty recruiting has occupied a large amount of departmental energy this year. We expect retirements to continue at a steady pace over the next 10 years, and we will therefore be recruiting one or two new faculty members each year during this time. Our current method of recruiting – looking in a broad search for the best candidates in any area, while still emphasizing the identified needs – has worked well for the Department, and we expect to continue in this manner. Our recognized key needs for expansion include Materials Chemistry and Environmental Chemistry. As always, we welcome the help of our alumni in identifying outstanding young chemists, particularly women and minorities.

Budget Challenges

The Department instituted a new system of charges for services during the 2000 year. This was done reluctantly, and with much discussion as to the implementation. But it is widely seen as a step that is essential to the continued health of the Department, and continued excellence of the services the Department provides to its world-class faculty. Because of continued and increasing financial commitments to the new building and faculty start-up packages, we can no longer afford to provide services for free to research groups; faculty grants have been charged for services like NMR, X-Ray, computing support, and machine shop time. Unfortunately, as we are making efforts to improve the Department's financial situation, we are also beset by budget cuts from the College. Our budget was cut by 1% in 2000-2001, and will be cut another 1% in 2001-2002. This largely negates any gains we would have seen from the charge for services. While we continue to try to economize, we recognize that we must increasingly seek other means of support for the Department's activities.

Teaching Facilities

The Department continues to do well in teaching. The first ever Chancellor's Award for Teaching Excellence went to Chemistry in 2000. At the same time, however, many of

(continued on page 17)



THIS 'N' THAT

Steve Aasen (PhD '76, Zimmerman) reports that he is now in the Dental Products, 3M Health Care Division of 3M.

Michael R. Anderson (MS '72, Haskin; BS '70) obtained a Ph.D. in Environmental Science and Engineering from the Oregon Graduate Institute in Beaverton, OR. I am a Natural Resource Specialist 5 in DEQ Headquarters where I work on the development of guidance and rules related to the remediation of hazardous substances. I also provide assistance to staff in our regional offices on specific projects when contaminant transport computer modeling and risk assessment issues arise. My wife Kathy and I have been together for almost 30 years and are proud to say that both of our sons returned to the State of Wisconsin for their college education: Eric earned degrees in Music Performance (French Horn) and Music Education at UW-Madison and is now teaching in Stoughton, WI; and Matthew is in his senior year majoring in creative writing and drama at Beloit College. We try to get back at least once a year and I look forward to seeing the new building. I was very sorry to read of Tally's passing since I spent many enjoyable hours watching him put on great chemistry demonstrations. I was glad to see that Bassam is still putting on his famous Christmas lectures.

Terence Barnhart (PhD '93, Treichel) has taken a management consulting job with McKinsey and Company in their "Chemicals and Advanced Materials Practice" in Florham Park, NJ. McKinsey is the premier strategy consulting firm in the world. I am, as you might imagine, pretty excited about it. You might want to point this opportunity out to some of your graduating students who are bright, talkative and personable. Such students are sought by McKinsey all over, from MBA to PhD to JD and MD. The pay is out of sight, and the

opportunities are tremendous. They will have to be personable, since there is significant travel, work with very, very senior management (typically the CEO), and the like.

Victor Bloomfield (PhD '62, Alberty) has been on the University of Minnesota faculty since 1970, after postdoc-ing at UCSD and a faculty stint at U Illinois Urbana-Champaign. He now splits his time between research/teaching and administration.

Susan Boettger (BS '75, Zimmerman) writes that she also has moved into new labs a year ago at Bristol-Meyers Squibb where she has been for some time. She supervises three PhD's and an MS chemist. Her research is finding new routes to therapeutic drugs.

Joerg Bruening (PD '94-'96, Kiessling) is a Senior Scientist at Phodia ChiRex in Malvern, Pennsylvania.

Rich Bunce (PhD '81, Zimmerman) writes from Oklahoma State that these days his research is largely synthetic and that he has four research students of which two are grad students and two are undergrads. He's presenting his latest research results in two publications and at the San Diego ACS Meeting.

Vladimir Cirkva (PD '98-'00, Zimmerman) just received the Alfred Bader Award given to the "Best young organic chemist in the Czech Republic".

Byron Cotter (PhD '74, Zimmerman) is now Head of Knowledge Management at Unilever's research site in Edgewater, NJ. Byron has responsibility for software applications, data management, and information science. His focus is on processes for doing research.

Marcus Cicerone (PhD '94, Ediger) will be starting a position at the National Institute of Standards and Technology in Gaithersburg, MD.

Amy Dean (PhD '98, Kiessling) is a Research Affiliate at the Wadsworth Center, New York State Department of Health, Albany.

Amy Elder (PhD '00, Rich) is a senior chemist at Millennium Pharmaceuticals in Cambridge, MA.

Karl Everitt (PhD '00, Skinner) just finished his PhD. He will be staying at Wisconsin as a postdoc in Jim's group to finish some papers. In June, he'll be working as an applications developer at Epic Systems. They make health industry software, such as electronic medical records tools, and are based on the west side of Madison, just off Whitney at Tokay

Xiaodong Fan (PhD '98, Rich) is now working as a Drug Discovery Scientist with The R. W. Johnson Pharmaceutical Research Institute, in Raritan NJ, following postdoctoral research at NIH.

Elisabetta Fasella (PD '97-'00, Kiessling) has accepted a faculty position at the UW-Eau Claire starting in Fall 2001.

Ken Fivizzani (PhD '81, Treichel) was recently promoted to Technical Director, Global Research Safety and Training, at Nalco Chemical Company in Naperville, IL. He continues to serve as the Chemical Hygiene Officer for Nalco and for Nalco/Exxon Energy Chemicals in Sugar Land, TX. Ken is the 2000 Chair of the ACS Division of Chemical Health and Safety and sits on the Board of Editors of Chemical Health and Safety. He is also Chair of the Industrial Research Institute (IRI) Environmental Health and Safety Directors' Network. Ken's wife, Mary (BS Pharmacy, '83), is a pharmacist at the Good Samaritan Professional Building in Naperville.

Steve Fleming (PhD '84, Zimmerman) was promoted to Full Professor in this last year at Brigham Young University.



Tim Frigo (PhD '88, Nelsen) is Chair of the Northeastern Section of the American Chemical Society for 2001. Tim's picture appeared on the cover of their magazine, *The Nucleus* (Vol. LXXIX, No. 5 January 2001).

Mark Fritz (PhD '93, Crim) has left the Procter & Gamble Company to accept a position as Assistant Professor at the University of Cincinnati College of Applied Science. His new email address is mark.fritz@uc.edu.

Herb Fynewever (PhD '98, Yethiraj) finished his postdoc in Sydney and has joined the faculty at Cal Poly-Pomona.

Peter Gannett (PhD '82, Nelsen) was promoted to full professor in the Department of Pharmacy at the University of West Virginia, Morgantown, WV. This winter he is on sabbatical at the Florida State University (Dept. of Chemistry) and the National High Field Magnet laboratory, also in Tallahassee, FL.

Eitan Geva (PD '95-'98, Skinner) has started an assistant professorship at the University of Michigan.

Angelo G. Giumanini (PD '65-'67, Zimmerman) is full professor at the University of Udine in North-Eastern Italy, Department of Chemistry, serving the teaching needs of Agriculture students. Although in splendid isolation in a recently established institution (but rated excellent in the Italian overall academic panorama) with heavy teaching duties, he keeps doing very active research in organic chemistry. Fields of action of his tiny but hectic group are aromatic nitrations in aprotic solvents, N-methyleneimines syntheses, structure and properties and new derivatisation reactions.

Ted Goldman (PD '73-'75, Zimmeman) reports that he is enjoying managing Training and Education for Technology at Rohm and Haas.

Eva Gordon (PhD '98, Kiessling) is a scientist at Nanosphere, Inc. in Evanston, Illinois and will be getting married in the fall of 2001.

Chuck Heap (PhD '97, Burke) is a research chemist at Albany Molecular Research.

Tim Hirzel (PhD '84, Zimmerman) has been at Monsanto since finishing his Ph.D. He reports that Monsanto has now spun off his division which is now the Solutia company, still at the same location in St. Louis but with a new name.

Jonathan Hodges (PhD '00; McMahan) accepted a postdoctoral position with

Prof. Ron Raines in the Biochemistry Department at UW-Madison.

Kenneth Hoffman (MS '96) sent the following information. After graduating from UW with a M.Sc., I did PhD work at the Norwegian University of Science and Technology in Trondheim, Norway under Per H.J. Carlsen in the Department of Organic Chemistry. In November 1999, I defended my thesis, "Broken pi-conjugated thiophene systems: Synthesis and Polymerization" and thereby received my PhD degree. In January 2000, I was hired as a Research Chemist at Borregaard Synthesis, a custom/fine chemicals company. My wife and I have just bought a house and look forward to settling down in the area an hour southeast of Oslo. On the sports side of things, I continue to high jump, with a 6th place in the Norwegian National Championships being this year's accomplishment.

John Holladay (PhD '94, Reich) left Dow/Union Carbide in January to start a new position in the Bio-Based Products and Catalysis group at Batelle Laboratories in Richland, Washington.

Hiizu Iwamura (PD '67-'69, Zimmerman) was one of the main committee in charge of organizing Pacificchem2000. He writes that in addition to his organizational duties, he did attend photochemical lectures. Additionally, he met a number of old "Zgroup members" there. His wife, **Michiko Iwamura** (PD, Nelsen), along with Rich Givens, had organized the Symposium on Photoprotecting Groups. Hiizu was professor of chemistry at Tokyo for many years, then at Kyushu University, and now at The University of the Air in Chiba, Japan.

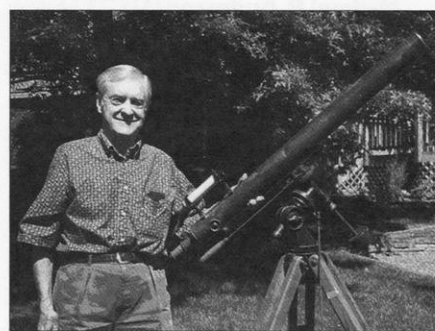
Edgar N. Jaynes (PhD '73, Whitlock) is now working for Banner Pharmacaps Inc, High Point, NC as Director, Global Competitive Intelligence. My career has moved from organic synthesis to ribosomes to food chemistry to cosmetic chemistry to pharmaceuticals, but all of my opportunities came from knowing how to do research. That I learned at Wisconsin. My class was also the class that gave the last student/faculty dinner skit of the decade.

Ken Kamm (PhD '74, Zimmerman) has been at DuPont since getting his Ph.D. He notes that he has now moved within DuPont to Chemical Solutions Enterprise, still in Wilmington.

Russ King (PhD '84, Zimmerman) wrote recently indicating that research was going interestingly. Also, Russ tracked down three Zgroup members who had moved but not sent their new addresses.

Bob Klun (PhD '73, Zimmerman) reports that after being at Dow Chemical for many years, and at J C Johnson Co. briefly, he is joining the Aearo Company in Indianapolis.

Truman Kohman (PhD Hall) mentioned that his chief current interest is astronomy. He sent a recent photo of himself with his first telescope. He got this in 1930, a year after getting hooked on astronomy at age thirteen.



TRUMAN KOHMAN

Paul Lamers (Ph.D. '88, Zimmerman) has been promoted to Manager of Resin Synthesis of PPG Industries and is going to spend three years in Germany at the PPG Company in Stuttgart, Germany.

Tim Lodge (PhD '80, Schrag) has been appointed Editor-in-Chief for the journal *Macromolecules* effective Jan 1.

Kathleen Meeker (PhD '99, Ellis) is now on the staff at Chemical Abstracts.

Neil Moe (PhD '97, Ediger) is employed near Minneapolis with Osmonics, Inc., doing computer simulations.

Mike O'Brien (PhD '93, Zimmerman) writes that he has been at the Stepan company for about 6 years now. He has been synthesizing a number of interesting products and finds it also interesting to see how his products do in a real world application. Three of his products have been commercialized. Mike mentions that his wife, Donna, is taking classes to become an accountant.

Denise M. Perreault (PD '97-'99, Kiessling) is at Dow Agrosociences in Indianapolis, Indiana.



Nicola Pohl (PhD '97, Kiessling) is an Assistant Professor at Iowa State University, Ames.

Al Pratt (PD '67-'69, Zimmerman) has written that after serving as interim university president, he now has taken the position of vice-president. He also mentioned a brief trip to the U.S. where he met **John Dodd** (PhD '69, Zimmerman) and his wife Dee-Dee; John is still at DuPont in Wilmington.

John Ramsay (PhD '55, Meloche) retired from Los Alamos National Laboratory in 1993 after a career in high explosives phenomenology and safety. His current interests are in New Mexico history, and he is a Research Associate with the Museum of New Mexico in History. John sent a check to help support the Meloche Lectures and other Chemistry Department activities. The support of alumni is critical to the continuation of events such as the Meloche Lecture, which this year featured Prof. Ken Standing from the University of Manitoba.

Debra Saez (PhD '84, Reich) was featured in an article in *C&EN* (Nov. 13, 2000) on entrepreneurs in chemistry. Debbie is owner of , technically, Inc. (Woburn Mass., <http://www.technically.com>) which specializes in custom synthesis, process development, and pilot-scale manufacturing. She recently completed a large order of selenocysteine, no doubt using some of the organoselenium chemistry she learned at Wisconsin during her Ph.D. thesis work on the chemistry of selenones.

Aaron Sanders (PhD '01, Reich) finished his thesis exam and will be starting at Union Carbide in Charleston in May.

William Sanders (BS '92, PhD '98, Kiessling) is happily married and is a scientist at Abbott Labs in Abbott Park, Illinois.

W. Warren Schmidt (PhD Goering) sent an update along with a donation to the Department, for which we are grateful. He and his wife Diane remain well and fully employed. Warren ran and completed his first marathon earlier this year.

Jens Steinmann (PhD '99, Kiessling) is a Technical Manager at Bakelite AG in Duisburg Germany.

Mark F. Teasley (PhD '87, Nelsen) is a Research Associate, DuPont Central Research and Development. I was promoted this year and finished up my part in a five year project on Versipol(tm) late-metal olefin

polymerization catalysts. This was a great project performed with an outstanding group of colleagues and in collaboration with Maurice Brookhart (UNC). It's a good thing I took Chuck Casey's course in organometallic chemistry. Those that follow the patent literature in this area have probably groaned reading some of DuPont's patents (500 pages, 500 examples, 500 claims...). My patents supporting this area are a bit more modest in size, but were still some of the most exciting work I've done at DuPont. Now it's off to a totally new area of research, but one in which it appears that DuPont will play a significant role technologically and commercially. Mark has twins, a boy and girl in 1st grade this year.

B. S. Thyagarajan (PD '58-'59, Zimmerman) has recently become Emeritus Professor at the University of Texas - San Antonio. His colleagues have arranged a Symposium on Heterocyclic Chemistry in his honor, and speakers are coming from the U.S., Japan and Europe.

Jiambo Wang (PD '94, Zimmerman), now Professor at Beijing, China, writes that his Chemistry building was reconstructed this year. He mentions having met **Professor Xu Jinhua** (PD '79-'81, Zimmerman) recently in China.

Mansukh C. Wani (PD '62, Zimmerman), Principal Scientist at Research Triangle Institute received The Kettering Prize in recognition of the original discovery of Taxol and its use as an anti-cancer agent.

Ross Weatherman (PhD '96, Kiessling) has accepted an Assistant Professor position at Purdue University, West Lafayette, Indiana beginning in fall 2001.

Christopher West (PhD '00, Rich) joined Berlex Labs in Richmond, CA, as a senior research chemist.

Warren D Woessner (Ph.D. '71) wrote that he came back into contact with the Badger Chemist through **Dr. Ed Jaynes**. He had been out of touch for a few years. Dr. Woessner left chemistry after 6 yrs of new drug research at Miles Laboratories in Madison, WI and received his JD from Wisconsin in 1981. He now is a patent attorney and founding partner of Schwegman, Lundberg, Woessner & Kluth, 121 S. 8th St. (1600), Minneapolis, MN 55402. As you can imagine, he specializes in chemical patent law, particularly

pharmaceuticals, diagnostics, biologicals and ag biotech. He issued the patent on Bt corn for DEKALB. For more info on the firm: www.slwk.com.

John Zhang (PhD '93, Ellis), on the Georgia Tech faculty, received the ACS/Exxon Solid-State Faculty Fellowship.

William Zhu (PhD '96, Ediger) is employed by Johnson Polymer-Johnson Wax Professional (Sturtevant, WI) in their polymer analysis department.

Michael Zuraw (Ph.D. '88, Zimmerman) has accepted a position with Duracell (a Gillette Company) in Bethel, Connecticut.



OVERVIEW (continued from page 14)

our instructional labs have not been substantially changed since they were built more than 30 years ago. The campus, college and department are currently examining several possibilities for providing improved teaching laboratories to the more than 6000 undergrads we teach each year. Options being discussed include Chemistry's inclusion in a biosciences teaching facility at one of several locations on campus. Although the implementation of any change will be years down the road, the prospect of finally improving our ability to teach modern chemistry techniques in a more modern lab environment is exciting.

The undergraduate teaching labs have been successful at receiving support for the purchase of new equipment. In the past year **Paul Schatz** received support from NSF and the campus Instructional Laboratory Modernization (ILM) program for the purchase of a new NMR for use in the organic labs. We have recently learned that the Department will receive over \$250,000 from the ILM program during the next year to help purchase equipment for a new undergraduate inorganic course which will be offered for the first time in Spring 2002, and to replace elderly equipment in the analytical labs.





NEW BADGER CHEMISTS

PHD

May 2000

MICHAEL PRESTON HAAF (WEST)

"The Chemistry of Stable, N-Heterocyclic Silylenes"

ARTIS KLAPARS (VEDEJS)

"Enantiocontrolled Synthesis of an Aziridinomitosene"

BING LU (TAYLOR)

"Surface Chemistry Study of GaAs Wafers During Chemically Amplified Resist Patterning and Resist Studies With Fluorescence"

DAVID ARTHUR MANN (KIESSLING)

"Identifying Inhibitors of Protein - Carbohydrate Interactions: From Novel Glycomimetics to Polymeric Multivalent Neoglycoligands"

DAVID ANDREW MOLINE (WEST)

"Synthesis and Conductivity of Lithium-Doped Polysiloxanes Containing Ethylene Oxide Units"

BRADLEY RICHARD RINGEISEN (NATHANSON)

"Collisions and Reactions of HCl and HBr With Liquid Glycerol"

MARK ANDREW SCALF (SMITH)

"DNA and Protein Analysis Using Matrix-Assisted Laser Desorption/Ionization and Electrospray Ionization Mass Spectrometry"

THOMAS ANDREW SCHMEDAKE (WEST)

"The Synthesis of Novel Coordinatively Unsaturated Organosilicon Compounds"

SARAH ANN WILLIAMS (WEISSHAAR)

"Internal Methyl Rotation in Methylvinoxy Radicals: Experimental and Theoretical Studies"

JATUPORN WITTAYAKUN (DAHL)

"Synthesis and Characterization of Homometallic/Heterometallic Palladium, Carbonyl Phosphine Clusters Generated Via Reactions of a High-Nuclearity Palladium-Nickel Cluster Precursor with Trialkylphosphines"

August 2000

ERIC STEPHEN BALL (MCMAHON)

"Matrix Isolation Spectroscopy and Density Functional Computations of Reactive Organometallic Intermediates"

JARROD JOSEPH BUFFY (WEST)

"Recent Developments Towards Synthesis of Room Temperatures Stable Silenes & Solid-State NMR of Low-Coordinate Silicon Compounds"

AMY MCKAY ELDER (RICH)

"The Synthesis of Cyclic Natural Products as Potential Peptide Mimetics and Proteinase Inhibitors"

STEVEN HOWARD FELDGUS (LANDIS)

"Exploring the Mechanism of Catalytic Asymmetric Hydrogenation with Hybrid QM/MM Techniques"

JONATHAN ALLEN HODGES (MCMAHON)

"Spectroscopy and Photochemistry of Carbenes"

ALBENA IVANISEVIC (ELLIS)

"Biosensors Based on Semiconductor Luminescence and Metalloporphyrin Transducer Complexes"

TRUC MINH NGUYEN (VEDEJS)

"The Generation of Chiral Boremium Cations: Evaluation of the Metallations of Lewis Acid - Complexed Heterocycles"

KEVIN JAMES QUINN (BURKE)

"Synthetic Studies on the C20-C36 Segment of Halichondrin B"

LAURA ELENA STRONG (KIESSLING)

"Design, Synthesis and Study of Multivalent Ligands"

DWIGHT ANDREW TRIEBER II (NELSEN)

"Structural Effects on Electron Transfer in Sigma-Bond Linked Bishydrazine and Bishydrazyl Radical Cations"





December 2000
HEATHER SUZANNE CARR (BURSTYN)

"Activation and Inhibition of Soluble Guanylyl Cyclase"

KARL FREDERICK EVERETT (SKINNER)

"Spectroscopy and Molecular Dynamics in Nonpolar Fluids"

MIKHAIL KHOUDIAKOV (ELLIS)

"I. Mercury-Mediated Synthesis of Intermetallic and Oxide Materials"

"II. Synthesis and Characterization of Precursors for Chemical Beam Epitaxy of Lithium Niobate"

MICHAEL ANTHON KOZEE (DAHL)

"Synthesis and Characterization of High-Nuclearity Group 10/11 Heterometallic Clusters"

JASON AARON MORGAN (NATHANSON)

"Probing the Effects of Surfactant Monolayers on Gas-Liquid Collisions: Scattering Studies of Argon and Xenon Atoms Striking Dilute Bismuth: Gallium Alloys"

GREGORY MICHAEL POLZIN (BURSTYN)

"Hydrolysis of Amides and Proteins by 1,4,7-Triazacyclononane Copper(II) Chloride"

PAMELA SUE SEMRAD-DOOLITTLE (WOODS)

"A Study of Alternate Methods for Diagnosis of Radio Frequency and Magnetized Plasma Parameters Using Langmuir Probes"

CHRISTOPHER WILLIAM WEST (RICH)

"Novel Enzyme Inhibitors Via Confrontational Constraint and Computer Aided Design"

May 2000
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August 2000
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(KIESSLING)

SEAN DANIEL KALAGHER (BELSHAW)**RITA VLADIMIROVNA NICHIPORUK**

(DAHL)

MARK DANIEL REIMANN (MOORE)**EVELINA IVANOVA TSONCHEVA**

(SKINNER)

JUN WANG (SCHWARTZ)

December 2000
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August 2000
CARA NICHOLE FISCHER**JEONG TAEK HWANG****CAMERON MITCHELL KRASOVICH****BRENDAN JEROME LIDDLE****JAMES HAROLD MAYNARD****JONATHAN SCHARLE OWEN****WILLIAM ROBERT PAULS**

December 2000
MELISSA MARIE CHESMORE**BRIAN JOHN ESSELMAN****RONALD LEE KOWLE II****EDWARD JOSEPH MURRAY****LAURA JEAN NIESEN****HOLLY LYNN OLDS****BARBARA ALGARIN ORTIZ****ROSLYN MARIE THEISEN****ROBERT JAMES WIDHOLM**

* WITH HONORS





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The Department relies on the generosity of our friends, alumni and faculty to provide the margin of excellence in our programs. There are general funds and funds for specific activities, scholarships, and so on. The first list acknowledges donors to all Departmental funds except the Building Fund in 1999, as recorded by the University of Wisconsin Foundation. We thank each of you for making the improvement of our program possible. In addition, because of the imminent occupation of the new building, this year we are acknowledging all donors since 1995 on the Foundation records for contributions to the Chemistry Building Fund.

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IN MEMORIAM

1999-2000

ROBBIN C. ANDERSON

(PhD '49, Daniels) Died Jan 26, 2000.

PROF. WARREN BIGGERSTAFF

(PhD '48, Wilds) Died Sept 12, 2000.

ROBERT BELL BLODGETT

(PhD '40, Daniels) Died in 1995. He had retired in 1982 after a career at DuPont, Anaconda Co., Okonite Co., and Ericsson Inc.,

WARREN W. EVANS

(BS, PhD '52, Ferry) Died August 21, 2000 in New Jersey. He was 78. Warren received a Bachelor's degree from UW-Madison, and was a U.S. Army veteran who was a prisoner of war in Germany during WWII. He had been employed by DuPont Photo Products for over 40 years before his retirement.

JERRY GAGLIARDI

(BS '52) Died Feb. 18, 2000.

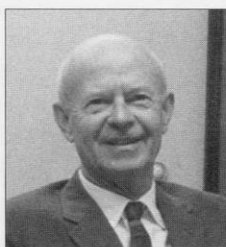
GEORGE P. GREGORY

(PhD '49, Adkins) Died Jan 14, 2000 at the age of 77. He received his undergraduate training at Indiana University, then served in the US Navy during WWII. He did his PhD research with Homer Adkins, but finished under McElvain after Adkins died in 1949. He retired from Hercules Inc. in 1983 as Director of Technical Services.

JAMES P. HOFFMAN

(BS '67) Died Nov. 18, 1999, of an infarction.

PROF. LESLIE HOLT



(PhD '30, Kahlenberg) Died Jan. 11, 2001. He was an instructor and then professor at UW-Madison from 1930 until his retirement in 1972, teaching general chemistry to engineering students, and advanced inorganic chemistry to graduate students. He served as Associate Chairman of the Chemistry Department for 15 years.

PHILIP KOLBE

(BS '96) Died January 19, 1999.

PROF. EDWIN M. LARSEN



(BS '37) Died May 28, 2001 at the age of 85. Ed was born in Milwaukee, got his BS from the UW in 1937, then received his Ph.D. from Ohio State University in 1942. He joined the UW-Madison Chemistry department in 1942, but took a leave and worked on the Manhattan project until 1946.

He did research in Hafnium, Zirconium and Lithium chemistry for 40 years in the Chemistry Department. Thirty-one students obtained Ph.D.s under his direction. He taught Chemistry 108 (Chemistry for non-science majors) to thousands of UW students. Ed served as Associate Chairman of the department from 1977 until his retirement in 1986.

PROF. DAN LEUSSING

Died Dec. 6, 2000, at the age of 76. Prof. Leussing was on the analytical faculty here at Wisconsin from 1955 until 1960. After a few years at the National Bureau of Standards, he was a faculty member at Ohio State from 1962 until his retirement in 1994.

DR. MERLIN H. PETERSON

(BS, MS '49) Died Dec. 4, 1999 in Kenosha, at the age of 80. Dr. Peterson worked at Abbot Labs for 30 years, until his retirement in 1978. He was an expert in fermentation, and the recipient of a Research Award from Abbott in 1856.

JAMES M. SPRAGUE

(PhD '34, Adkins) Died Jan. 30, 2000. Dr. Sprague was a former vice president of medicinal chemistry at Merck Sharp & Dohme Research Laboratories. A lecture series in Organic Chemistry in the Chemistry Department is named after him. (For more information, see Chemical & Engineering News, Vol. 78, No. 34, August 21, 2000, p. 63.)

KARL H. WEBER

(PhD '41, McElvain) Died Sept 19, 2000, at the age of 83.





MEMORIAL RESOLUTION
 OF THE FACULTY OF THE UNIVERSITY OF WISCONSIN-MADISON
 ON THE DEATH OF
EMERITUS PROFESSOR AARON J. IHDE



(Faculty Document 1544, 5 February 2001)

Aaron Ihde, Emeritus Professor of Chemistry, History of Science, and Integrated Liberal Studies since 1980, died on February 23, 2000 in Sarasota, Florida. He was born on December 31, 1909 and raised on a dairy farm near Neenah, WI. His immigrant parents had little formal education, but they treasured books and learning. Aaron was only the fourth graduate of his one-room country "K through 8" school to go on to high school. His parents realized his lack of interest in farming and supported their son to attend the University of Wisconsin in Madison. He graduated in 1931 from the university's "Chemistry Course" and accepted a job as the staff chemist at the Blue Valley Creamery Company in Chicago (later acquired by Beatrice Foods).

In early 1938 he returned to Madison where he majored in food chemistry (under Professor Henry Schuette) and minored in biochemistry (under Professor Harry Steenbock), earning his doctorate in 1941. After one year of teaching at Butler University, he returned to Madison for a one-year instructorship in the Chemistry Department. After two renewals of this appointment, in 1945 he was hired on the tenure track. In the summer of 1946, he revived a dormant course in the history of chemistry, and two years later he placed the history of science at the center of the new Integrated Liberal Studies program. In 1951-52 he was a Carnegie Intern at Harvard University where he was associated with James B. Conant and Thomas Kuhn in the teaching of the historical Case Studies general education courses. In 1957, the University of Wisconsin History of Science Department welcomed Aaron officially to its ranks.

Aaron's research and publications transformed the field of the history of chemistry. The intellectual fruits of six decades at Wisconsin as a student, as a faculty member, and as emeritus professor occupy seven bound volumes in the stacks of the Memorial

Library and consist of 342 items including a posthumous paper published in the Bulletin of the History of Chemistry. He made the University of Wisconsin the premier center for the study of the history of chemistry especially after he was joined on the faculty by his first Ph.D. student Robert Siegfried. Over the years, Aaron supervised 21 Ph.D.s in history of science, as well as a number of master's students and post-doctoral fellows. His best known books are, *The Development of Modern Chemistry* published in 1964 by Harper and Row and still available as a Dover paperback, and his volumes of *Selected Readings in the History of Chemistry*, culled from the *Journal of Chemical Education* and co-edited with the *Journal's* editor William Kieffer. *The Development of Modern Chemistry*, the standard textbook in the field, included the history of chemical technology, biochemistry, agricultural chemistry, chemical physics, and much more, extending coverage to the first half of the twentieth century. Aaron wrote broadly and widely about Paracelsus and Boyle, on classic nineteenth century European scientists such as Avogadro, Faraday, Bunsen, and Baeyer, on the development of chemistry in the United States, and on the history of the pure food law.

Aaron was an advocate of progressive causes especially the social responsibilities of scientists and the purity and safety of drugs. From 1955 to 1968 he was a member of the Wisconsin Food Standards Advisory Committee and served as its chair for two years. In 1958 he was offered the position of scientific director of Consumer's Union, but declined the position that would have doubled his salary because he loved his work as a scholar and teacher.

Aaron was admired and respected by students and colleagues. All his dealings with students were models of organization, dignity, and respect for scholarly inquiry. He was generous in making all his books and resources available to any visitor to his office. He promoted and enjoyed contacts with alumni and former students. He was the long

time editor of the *Badger Chemist*. His interest in the history of the University of Wisconsin Department of Chemistry resulted in the publication in 1990 of his last book *Chemistry, As Viewed from Bascom Hill: A History of the Chemistry Department at the University of Wisconsin in Madison*.

Aaron was recognized by the American Chemical Society with the Dexter Award in 1968 and by the University of Wisconsin with the Chancellor's Award for Distinguished Teaching in 1978. He served as president of the Wisconsin Academy of Science, Arts, and Letters, chair of the ACS Wisconsin Section, and chair of the ACS History of Chemistry Division. He was elected Fellow of the American Association for the Advancement of Science.

In 1933, Aaron married Olive Tipler, a former high school classmate and a teacher of Latin and History. Their marriage lasted until her death in 1988. Aaron's dedication to Olive was exemplary. They raised two children, Gretchen and John, and lived in a home built in the middle of the University Arboretum. He was especially proud when John was named the 1999 recipient of the ACS James B. Conant Award for High School Teaching of Chemistry. He remained active in retirement and devoted himself to reading, writing, family visits, and volunteer work in the Arboretum, removing invasive honeysuckle and buckthorn thickets from the Lost City Forest section of the Arboretum; over the years he single handedly restored a large wildflower meadow. He spent his final eighteen months with Gretchen and her family in Sarasota where he began to show symptoms of Alzheimer's disease. He is survived by his two children and their families.

Memorial Committee

Bassam Z. Shakhshiri (chair)
 Charles Casey
 Victor Hilts
 David Lindberg
 Robert Siegfried







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