

# University of Michigan Chemistry

## NEWSLETTER

### Letter from the Chair

I am pleased to send greetings and to highlight the activities of the Chemistry Department this past year. The Department is continuing to make enormous strides towards accomplishing its goal of becoming one of the top Chemistry Departments in the nation. The most recent US News and World Report ranking of Chemistry Departments listed Michigan as 16<sup>th</sup> in the nation; the analytical cluster was ranked 9<sup>th</sup>, biochemistry 13<sup>th</sup>, organic 13<sup>th</sup>, and inorganic 15<sup>th</sup>. These are the highest rankings for these clusters in many years. We anticipate that our standing in the community will continue to rise, in view of the tremendous success that we have had in recruiting outstanding faculty members and graduate students to the program. You will see accolades to the faculty and students throughout this newsletter. Additionally, the ongoing support of the Chemistry Department by the alumni and alumnae provides a tremendous boost to our efforts to enhance our research and teaching missions.

The Chemistry Department is interested in continuing to strengthen contacts with alumni and alumnae. To this end, we organized an alumni event this past spring to celebrate the 150<sup>th</sup> anniversary of the establishment of a Chemistry laboratory at the University of Michigan. Professor Harold Kroto, awarded the 1996 Nobel Prize in Chemistry for the discovery of

fullerene, was a very engaging keynote speaker for this event. Before his talk, the Department was awarded a 2006 Citation for Chemical Breakthroughs from the Division of the History of Chemistry of the American Chemical Society in recognition of work by Moses Gomberg. Additionally, I have enjoyed meeting departmental alumni and alumnae as well as prospective faculty candidates at the University of Michigan reception that is held at every American Chemical Society National meeting. Please plan on attending this reception at the next ACS meeting.

Over the past year the department has recruited Dr. Anne McNeil, an outstanding assistant professor, and Dr. Charles Brooks, Parke-Davis/Warner-Lambert Professor. Dr. Anne McNeil received her Ph.D. from the Department of Chemistry and Chemical Biology at Cornell University working with Professor David B. Collum where she received both a Teaching Excellence Award and the Tunis Wentik award. She was a postdoctoral fellow in the laboratory of Professor Timothy M. Swager in the Chemistry Department at the Massachusetts Institute of Technology where she was awarded the L'Oreal USA Fellowship for Women in Science. Dr. McNeil's training is at the interface of physical organic and materials chemistry. In her postdoctoral research she developed novel conjugated polymers with arene

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2007

**President's Challenge for Graduate Fellowship Support**

see pg 19

The Regents of the University of Michigan:  
Julia Donovan Darlow, Laurence B. Deitch, Olivia P. Maynard,  
Rebecca McGowan, Andrea Fischer Newman, Andrew C. Richner,  
S. Martin Taylor, Katherine E. White, Mary Sue Coleman, ex  
officio, Mary Sue Coleman, president.

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sandwich structures that have promise as potential fluorescent sensors and in other optoelectronic applications. At the University of Michigan she plans to continue studying organic materials, including a novel gel amplification mechanism with potential applications in sensing, developing new catalysts for efficient polymer synthesis, and a nanoparticle based organic solar cell. Her proposed research has applications that interface with the Michigan Memorial Phoenix Energy Institute which contributed funds to help recruit Dr. McNeil to the University of Michigan. Dr. McNeil is an important addition to the Department's research effort in materials and organic chemistry.

We are very pleased to announce that Professor Charles Brooks has decided to move to the University of Michigan starting January 1, 2008, as the Parke-Davis/Warner-Lambert Professor of Chemistry and Professor of Biophysics. Professor Brooks is one of the world's leaders in computational molecular biophysics and is a pioneer in the area of computational studies of protein folding and dynamics. Professor Brooks received his doctoral degree in Physical Chemistry from Purdue University. From there, he did postdoctoral work with Professor Martin Karplus at Harvard, focusing on theoretical and computational biophysics. Following that, he joined the chemistry

faculty at Carnegie Mellon University in 1985 where he rose through the ranks to become professor in 1994. That same year, he moved his research group to the famous Scripps Research Institute in La Jolla, California. Professor Brooks has made outstanding contributions to the development of a most commonly used simulation program, CHARMM. He has over 290 publications and is also co-author with M. Karplus and B. M. Pettitt of the well-known book *Proteins: A Theoretical Perspective on Dynamics, Structure and Thermodynamics*. Over his distinguished career, he has received numerous awards, including being elected Fellow of the American Association for the Advancement of Science, receipt of the 1997 Computerworld Smithsonian Institute Award, and being appointed Senior Fellow at the San Diego Supercomputer Center, also in 1997. He is the North American Editor for the *Journal of Computational Chemistry*, is a member of numerous editorial boards and serves as Director of the Center for the Development of Multi-Scale Modeling Tools for Structural Biology, an NIH National Research Resource which will be moving with him to the University of Michigan. Recruitment of Professor Brooks to Michigan is a big step forward in our ongoing efforts to build a world-class theoretical chemistry group.

In the past year two faculty members from the Chemistry Department have been promoted from Associate Professor with tenure to Professor with tenure: E. Neil G. Marsh and Roseanne Sension. Professor Marsh has gained both national and international recognition in the area of mechanistic enzymology as well as branching out into a new research area, protein design, which is an important, emerging discipline of Chemical Biology. He is an outstanding and creative researcher, a dedicated mentor and teacher and an important contributor to the excellence of the Chemistry Department. Professor Marsh served as co-Chair of the Bioorganic Gordon Conference and was elected a Fellow of the Royal Society of Chemistry.

Professor Sension is recognized as a world leader in the field of ultrafast spectroscopy. She is internationally known for her brilliant, fundamental studies on chemical reactions. Furthermore, her work on the coherent control of chemical reactions by laser pulses is exceptional

and is having a large scientific impact. Professor Sension is also a dedicated educator who has distinguished herself by her curricular work and her work on a textbook for the computational chemistry lab course. Finally, Professor Sension has contributed enormous service to the Chemistry Department, the University of Michigan and the Chemical Physics community nationally, including serving on the Division of Chemical Physics Executive Committee of the American Physical Society, organizing symposia for the International Laser Science conference and the American Physical Society and serving as an Associate Editor of the Virtual Journal of Ultrafast Science and a Member of the Advisory Board of the Journal of Physical Chemistry.

The Department's educational activities continue to thrive. Overall, the numbers of majors in chemistry and biochemistry is holding strong, as evidenced elsewhere in this newsletter, by degrees awarded. The College has recently approved our request to institute five minors to accompany our concentration programs in chemistry and biochemistry, specifically in the areas of chemistry, biochemistry, chemical physics, chemical measurement science and polymer chemistry. The minors are not open to students already concentrating in chemistry or biochemistry. This responds to a growing interest among undergraduates to pursue cross-disciplinary and interdisciplinary areas. Professor Neil Marsh has developed a new, one-semester biochemistry laboratory course that we hope to integrate fully into the department within the year.

Interest in international experiences is increasing, and science students want to be a part of this. The response to our pilot program for undergraduate research exchange with Peking University (PKU) has been extremely good, and we are seeking funding to increase the size of the group of students that can be supported. Because there are chemistry courses at PKU that are taught completely in English, Professors Penner-Hahn and Coppola have also established a study abroad program for UM students at PKU that will begin next year. They are exploring other exciting options for co-teaching courses between our two institutions.

It is gratifying that our graduates continue to be widely sought by professional and

### Department of Chemistry

#### Newsletter

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graduate schools, and industry, and that the student affiliate chapter of the ACS has been cited for honorable mention. At the graduate level, the Future Faculty program, under the leadership of Brian Coppola, is robust. It has been recently strengthened by another renewal of funding from the Department of Education's GAANN program (Graduate Assistance in Areas of National Needs). In order to take the success of this program in the Chemistry Department and move it to other sciences, as well as developing future K-12 teachers, UM has received a generous donation from Rob Horwitz to help establish a joint Institute between LSA and the School of Education with the acronym "The IDEA Institute". Professor Coppola and his Education colleague, Professor Joe Krajcik, have been named as the first co-directors. Please see articles elsewhere in the newsletter for further information on our students and related activities.

Over the past year we have been saddened by the death of two previous faculty members. Professor Seyhan Ege, Professor Emerita (see article), passed away this fall. Professor Ege received her Ph.D. in Chemistry from the University of Michigan in 1956. She later returned to the University of Michigan, becoming the first tenured woman and the first woman full professor on the faculty of the Chemistry Department. Professor Ege was a distinguished educator, promoting innovative approaches to the teaching of chemistry including implementation of the Chemistry Department's undergraduate curriculum reform and authoring a textbook, "Organic Chemistry: Structure and Reactivity". After retirement, Dr. Ege continued to interact with Departmental faculty and students. In her memory, the Department has established a permanent endowment to support the Seyhan N. Ege Junior Faculty Development Award.

Professor Robert Walter Parry, former Professor of Chemistry, passed away in late 2006 (see article). Professor Parry was a faculty member and leader in the Chemistry Department at the University of Michigan from 1946 – 1969 before moving to the University of Utah. Professor Parry had broad research interests and was a distinguished national leader of inorganic chemistry, serving as President of ACS in 1982. A number of years

ago the Michigan alumni and alumnae of Parry's group created an endowment fund to support the inorganic, organometallic and materials research programs. This endowment continues to grow and the interest income provides summer support for graduate students.

Both the educational and research missions of the Chemistry Department are thriving and the future looks very bright, in spite of budget difficulties at the state level and decreased funding at the federal level. We are very grateful for your contributions and support of our endeavors to educate the next generation of scientists and leaders. The loyal donors to the Department's various gift

funds, scholarships and endowments are enumerated elsewhere in this newsletter. I am especially grateful this year to alumnus, Robert Gregg, for establishing the Robert A. Gregg Professorship (see article). On behalf of the students and faculty who benefit from your support, I thank you sincerely. I hope that you will visit the Department anytime you are in town. I look forward to meeting alumni/alumnae visitors.

Best wishes,

Carol Ann Fierke, Chair  
Jerome and Isabella Karle Professor of Chemistry and Professor of Biological Chemistry

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## Spotlight: Profiles of New Faculty

We highlight faculty members who have joined the Department since the last newsletter. Their appointment speaks well for our future.

### Anne J. McNeil

Assistant Professor of Chemistry  
Ph.D., Cornell University  
Post Doctoral, MIT

Interest in organic materials has grown exponentially in recent decades in both industry and academia. One key advantage organic materials have over their inorganic counterparts is that chemists can utilize the expansive toolbox of organic synthesis to tailor the materials' physical and electronic properties at the molecular level. My research focuses on creating new functional organic materials and exploring the fundamental mechanisms involved in their synthesis, assembly, and operation. Members of my research group design and synthesize new organic/organometallic molecules and polymers for each targeted application. We gain insight into these systems by performing detailed mechanistic and structure-property studies using standard spectroscopic and characterization techniques.



Anne J. McNeil

#### *Functional Supramolecular Assemblies*

Everything from biological macromolecules to small molecules obtained through organic synthesis can assemble into supramolecular species under certain conditions. Our group is interested in designing ways to trigger, control, and monitor the assembly process. We will exploit these supramolecular assemblies for chemical and biological sensing, catalysis, and the synthesis of shape-persistent materials.

#### *Polymer Synthesis and Catalysis*

Polymer synthesis lags behind conventional organic synthesis in both substrate scope and efficiency. In addition, many polymerization mechanisms are poorly understood. Our research goals are to design new living polymerization catalysts with enhanced reaction efficiencies and wider substrate scope, with a focus on environmentally derived polymers, conjugated polymers, and other commercially important polymers. Our approach relies on detailed mechanistic studies to achieve these goals.

## Faculty News

**Hashim Al-Hashimi** has been awarded a 2006 National Science Foundation Career Award.

**Kate Carroll** has recently coauthored an invited review article in a special edition of *Infectious Disorders-Drug Targets* (7, 140-158, 2007) discussing research on tuberculosis remediation entitled "Drug targets in mycobacterial sulfur metabolism".

**Jim Coward** has been elected (one of three) to the Medicinal Chemistry Hall of Fame. The Medicinal Chemistry Division of the ACS selects a group of people based on their contributions to teaching, research, and service in the area of medicinal chemistry. Jim's citation for the award can be seen at <http://www.acsmedchem.org/>. Click on the Hall of Fame link.

**Barry Dunietz** has been awarded a Certificate of Appreciation from the 2007 James T. Neubacher Award Committee for his activities in raising consciousness on campus about disability issues.

**Carol Fierke** has been elected a Fellow of the American Association for the Advancement of Science for distinguished contributions to bio-inorganic chemistry, particularly the mechanisms of zinc metalloenzymes and the ribozyme ribonuclease P, and the development and use of biosensors. She is the Chair of the Division of Biological Chemistry of the American Chemical Society.

**Gary Glick** is the Editor-in-Chief of the journal *Biopolymers* devoted to publishing original research papers and review articles in the general area of macromolecular structure and function, as well as biologically relevant model systems.

**Ted Goodson** has been appointed a Senior Editor of the *Journal of Physical Chemistry A*.

**Raoul Kopelman** presented an Eminent Scholar Talk (a College of Science sponsored colloquium) at the University of Arizona in February. He has recently coauthored two invited review articles: "Brain Cancer Diagnosis and Therapy with Nano-platforms", *Advanced Drug Delivery Reviews*, **58**, 1556 (2006); "Photonic Explorers Based on Multifunctional Nano-platforms for Biosensing and Photodynamic Therapy", *Applied Optics*, **46**(10), 1924 (2007). He serves on the editorial board of the new journal *Nanomedicine*. At the Pittcon 2007 meeting, Raoul organized a symposium on "State-of-the-Art Cellular Targeting and Cellular Drug Discovery". Kopelman reported in August to the National Academy of Sciences on "Speculations on nanotech based diagnostics for agriculture in Sub-Saharan Africa". The presentation is still available online at [http://dels.nas.edu/banr/emerging\\_technologies.shtml](http://dels.nas.edu/banr/emerging_technologies.shtml).

**Anna Mapp** has received the 2007 Novartis Young Investigator Award. This was awarded for her innovative research in mechanistic studies of transcriptional regulation leading to the development of small molecules that control that process.

**A. Ramamoorthy** is a member of the Executive Committee and the External Users Committee for the National High Magnetic Field Laboratory (NHMFL at Tallahassee, FL), funded by NSF. Last winter he was Distinguished Visiting Professor of

Chemistry at Osaka University, Osaka Japan. He recently edited 2 monographs: *NMR Spectroscopy of Biological Solids* (Ed. A. Ramamoorthy; Taylor & Francis, 2006) and *Thermotropic Liquid Crystals Recent Advances* (Ed. A. Ramamoorthy; Springer-Verlag, 2007).

**Melanie Sanford** has been named a 2007 DuPont Young Professor. The DuPont Young Professors Program is designed to provide unrestricted assistance to promising young faculty. She has also been named a 2008 ACS Arthur C. Cope Scholar. The awards are sponsored by the Arthur C. Cope Scholar Fund and administered by the American Chemical Society to recognize and encourage excellence in organic chemistry.

**Roseanne Sension** is a member of the advisory board of the *Journal of Physical Chemistry A,B,C*, and serves on the executive committee of the American Physical Society Division of Laser Science (DLS).

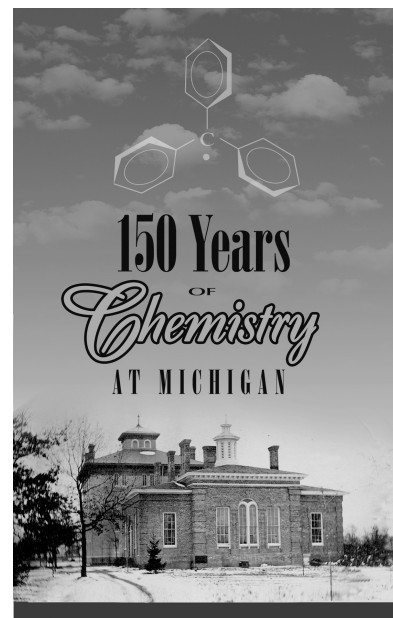
**John Wolfe** has received a GlaxoSmithKline Scholar Award for 2008-2009 recognizing excellence in synthetic chemistry.

**Nils Walter** was chair of a symposium last May on single molecule advances. The meeting report has been published—"Under the Microscope: Single Molecule Symposium at the University of Michigan 2006". *Biopolymers*, **85**, 106-114 (2007). Nils is interested in hearing from alumni who may be interested in learning more about a modern, open access Center of Single Molecule Analysis (CoSiMA) to be run out of Chemistry; see <http://singlemolecule.lsa.umich.edu> He is an associate editor of the journal *Biopolymers*.

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## 150 Years of Chemistry at Michigan

"In respect to buildings the true principle is to build as little as possible... It will be necessary to erect a chemical laboratory for the analytical course... Such a building will cost from two to three thousand dollars." Thus Edward D. Campbell describes the early beginnings of chemistry instruction at Michigan in *History of the Chemical Laboratory of the University of Michigan, 1856-1916* with these remarks from President Henry P. Tappan in a report to the Board of Regents in December, 1855. In May 1856, the Regents approved \$2,500



to erect the building. Thus was authorized construction of the first chemical laboratory at a state university. The Department marked this beginning with an anniversary celebration May 10-12, 2007.

Highlights included a symposium on “Challenges in Contemporary Chemistry and Medicine”, a celebratory Sesquicentennial Lecture by Nobel Laureate Sir Harold Kroto, and workshops on recent research and teaching initiatives led by departmental faculty and Prof. Bassam Shakashiri of the University of Wisconsin.

Carolyn Bertozzi (Univ. Cal., Berkeley) led off the symposium. Her talk was titled “Chemistry in Living Systems”. This was followed by Laura Kiessling (Wisconsin) who discussed “Illuminating Bacterial Cell Wall Biosynthesis Using Chemical Biology”. The afternoon talks were presented by Barbara Imperiali (MIT) on “Chemical Tools for the Study of Complex Biological Systems” and Steven Benner (Foundation for Applied Molecular Evolution) on “Redesigning Nucleic Acids, Synthetic Biology, Systems Biology and the Personalization of Human Health Care”.

After a short break, congratulatory remarks were given by Dean of Literature, Science and the Arts, Terrence McDonald. He recalled some history of the department including the vision of President Tappan who he credited with being instrumental in directing the University of Michigan to its role as a leading research university with initiatives such as the chemistry building. Next, Paul Jones, (Editor, *Bulletin of the History of Chemistry*) presented to the Dean and Department Chair Carol Fierke a *Citation for Chemical Breakthroughs* plaque from the Division of the History of Chemistry, ACS, commemorating the paper by Moses Gomberg, “An Instance of Trivalent Carbon: Triphenylmethyl”, *J. Amer. Chem. Soc.* **22**, 757-771 (1900).

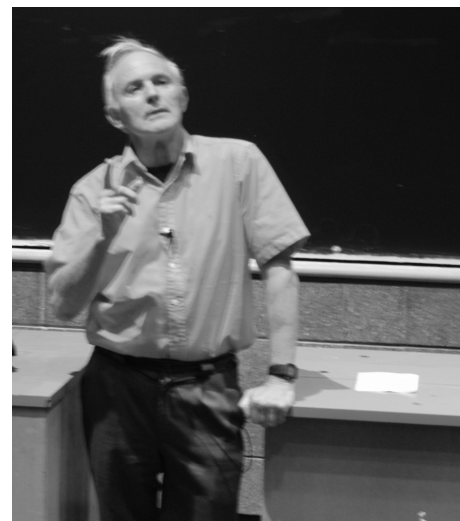
The afternoon’s activities concluded with a compelling presentation by Nobelist Sir Harold Kroto (Florida State U.) on “Science, Society and Sustainability”. This fast paced power point presentation was a broad overview of some of Prof. Kroto’s research, touching on scientific ethics, social and scientific history, and his outreach initiatives that engage the public and especially youngsters in understanding science.

In the evening, a birthday banquet celebration was attended by some 50 students, faculty, staff and alumni. Prof. Emeritus Bob Kuczkowski gave a short presentation on the history of chemistry laboratory construction at Michigan. Paul Jones spoke of the history and genealogy of the chemistry faculty.

The next day a series of workshops were organized and led by Prof. Brian Coppola. They highlighted recent education and research initiatives in the department. At a box lunch gathering, an informal discussion was led by Prof. Bassam Shakashiri (Univ. of Wisconsin) who directed the attendees in examination of one’s teaching philosophy and goals. It engendered a stimulating exchange.

Support for the guest lecturers was provided by a generous grant from Pfizer whose staff also served on the symposium planning committee with Chemistry faculty Neil Marsh, Nils Walter, Brian Coppola and Bob Kuczkowski. Colorful, sesquicentennial banners announcing “150 Years of Chemistry at Michigan” with a picture of the first laboratory graced poles along North University Ave. and State St. throughout the spring and summer (see previous page).

It is interesting to note that the actual appropriations for the first building before it was occupied came to \$4,509.85 exclusive of equipment and furnishings. The number of student tables was 26. The building was enlarged 7 times until the increase in 1901 brought the number of tables to 362, and it was replaced by the 1909 North University building still in use.



Harry Kroto



Barbara Imperiali and Steven Benner



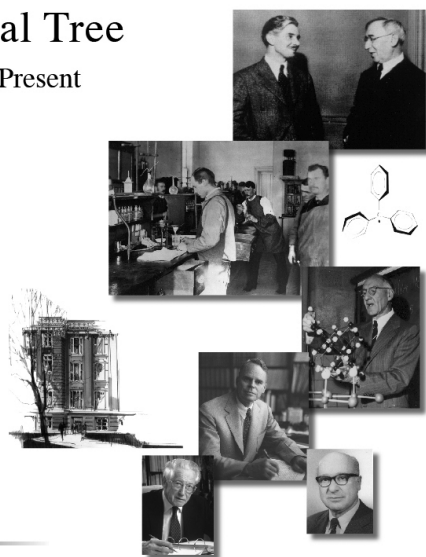
Alumni, Alumnae attendees, left to right: Scott Osborne, Seyhan Ege, Robert Damrauer, Anne Andrews, Richard Loepky, Suzanne Fleming, Kurt Hillig, Beth Hillig, William Hillig, Shu-Sing Chang, Clifford Buffet, Kathy Hillig, Raymond Mattson, Annabel Muentzer.

# Chemistry Genealogical Tree

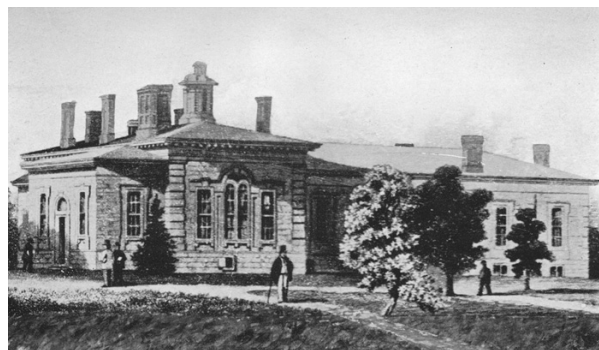
University of Michigan, 1839 – Present

PR Jones, R C Taylor

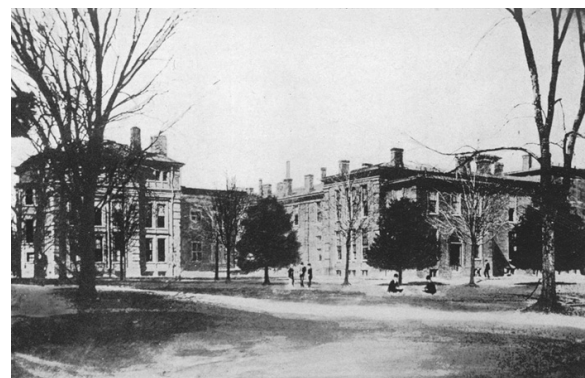
- Berzelius Branch – 2
- French Connection – 3
- Interdisciplinary Roots – 4
- Harvard Branch – 5
- Liebig Branch – 6
- Michigan Branch – 7



*Chemistry Genealogy (Paul Jones and Robert Taylor); Bachmann and Gomberg, laboratory circa 1900, Fajans, 1909 building sketch, Willard, Parry, Elving*



*Laboratory after the 1866 addition, showing west and north sides.*



*The laboratory building as it appeared in 1907 showing west and south sides.*

*Photos courtesy of Bentley Historical Library, Chemistry Department and "History of the Chemical Laboratory ...1856-1916".*



*1909 and 1947 laboratories with old gym at east end; ca. 1975.*



*1909, 1947 and 1989 laboratories; Photo, R. Kuczowski, 2007*



*1989 Dow Laboratory atrium*

## Jack Novodoff Retires

The Department celebrated the contributions and retirement of Laboratory and Facilities Director, Dr. Jack Novodoff on the afternoon of June 27, 2007 in the atrium of the Chemistry building. The event was attended by a large gathering of family, faculty, students and staff from across campus. Prof. Emeritus Paul Rasmussen presented gifts and reminisces on behalf of the department.

Jack received his PhD from City College of New York in 1971. He joined the department in the summer of 1985 after a national search brought him from Stockton State College (now Richard Stockton College of New Jersey). Among his first tasks was to serve as a departmental liaison, with Prof. Rasmussen, to the university plant department and the outside architects in the design of the chemistry laboratory ad-



dition, the Willard H. Dow laboratory. This “bricks and mortar” experience was just the beginning of a long involvement with building design work and contractors. The renovation of the 1909 and 1947 buildings followed after the occupation of the Dow lab in 1989 as well as completion of labs on the fourth floor of the Dow lab in 1992. Numerous laboratory upgrades for new fac-

ulty arrivals, teaching and instrumentation facilities continued throughout the years. Jack became a resource known across the nation as other institutions sought his advice and expertise in lab design and safety issues. Over the years Jack served under 6 chairs with his characteristic good humor and sincere concern for good service to the community. He managed the technical shops and teaching laboratory staff, various budgets and interfaced with the college and maintenance units as appropriate. Jack’s door was always open to everyone. His outside hours have been occupied with generous volunteer work in various community organizations. He can still be seen in the gym and racket ball court. We wish him a happy retirement absent of heating and plumbing problems, checking blueprints, and meeting deadlines as he catches up with a backlog of home projects and travel.

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## Graduate Program News

### Graduate Student Awards 2006 & 2007

#### Departmental Awards

##### **American Chemical Society Outstanding Graduate Student Award for Research and Teaching**

This award is given by the Huron Valley Section of the American Chemical Society. It is intended to recognize achievement in teaching and research by a Graduate Student.

Adam Grzesiak - (Matzger)

##### **Robert & Carolyn Buzzard Graduate Chemistry Student Leadership Award**

The Leadership Award is given to a graduate student who has shown the skills of a leader. The person takes an active role in the Department - assisting with graduate recruitment; working with faculty and staff to provide a better environment for graduate students; also serves as a morale and welfare support person. This award is provided by Bob and Carolyn Buzzard.

Amy Payeur - (Kennedy)

##### **Wirt & Mary Cornwell Outstanding Graduate Student Research Award**

Presented to Graduate students based on research advisor recommendation, publications, posters, meetings presented, uniqueness

and nature of research. These awards are provided from the Wirt and Mary Cornwell Prize.

Kami Hull - (Sanford)

Chinmay Majmudar - (Mapp)

##### **Florence Fenwick Outstanding Graduate Student Instructor Award**

Presented to Graduate students who taught undergraduate courses in Chemistry during the 2006-07 academic year. Winners are chosen by their contribution to innovation in the lab or classroom, teaching evaluations, and faculty recommendations. These awards are provided from the Florence Fenwick Memorial Fund.

Miguel Pereira - (Walter)

##### **Milton Tamres Outstanding Teaching Award**

This award was instituted to honor one of our emeritus faculty, Professor Milton Tamres. The award recognizes outstanding cumulative teaching service.

John Hensler - (Matzger)

## Departmental Fellowships

### George Ashworth Analytical Chemistry Fellowship

The George Ashworth Endowment provides a graduate student fellowship to continue research in analytical chemistry. The award provides for a Summer half-term stipend.

Jingjie Mo - (Hakansson)

### Robert W. Parry Award

The Robert W. Parry Awards are made possible through the endowment from generous donations of alumni, friends, industrial donors and the students of Professor Parry. The fellowship is awarded to a graduate student who has shown excellence in research in inorganic chemistry. This award provides for a Summer half-term stipend award.

Andrea Geyer - (Johnson)

Jinhui Chen - (Ashe)

### Peter A. S. Smith Fellowship

The Peter A. S. Smith Fellowship was endowed in 1995. The fellowship is awarded to a graduate student doing research in synthetic organic or inorganic chemistry. This award provides for a Summer half-term stipend.

Marisa MacNaughtan - (Johnson)

Lopa Desai - (Sanford)

### Margaret and Herman Sokol Graduate Fellowship in Chemistry

Margaret Sokol, who passed away in 2006, along with her late husband, Herman, who graduated from U-M in 1940, established this fellowship for graduate students in chemistry in 1983. This award is given to students who have shown excellence in research and provides for a Spring/Summer stipend. Mrs. Sokol through her estate has also honored the Chemistry Department with a very generous endowment for fellowship support.

Wei Tang - (Kopelman)

Sara Buhrlage - (Mapp)

## Non-Departmental Fellowships

### American Chemical Society Fellowship (ACS)

Nick Cellar - (Kennedy)

Kami Hull - (Sanford)

Joshua Ney - (Wolfe)

### Bristol-Myers Squibb Graduate Fellowship

Lopa Desai - (Sanford)

Dipannita Kalyani - (Sanford)

### Eastman Chemical Company Focus School Fellowship

Julie Adamson - (Hakansson)

### National Science Foundation (NSF) Fellowship

Brannon Gary - (Johnson)

Thomas Sundberg - (Glick)

### Natural Sciences & Research Council of Canada Fellowship

Jennifer Cunliffe - (Kennedy)

### Rackham Merit Fellowships

Tara Conser - (Coward)

Tamiika Hurst - (Fierke)

Michael Orozco (Sension)

Lidaris SanMiguel - (Matzger)

Salena Whitfield - (Sanford)

Francisco Vazquez - (Geva)

### Rackham One-Term Dissertation Fellowship

Xiaoyun Chen - (Chen)

Lopa Desai - (Sanford)

John Hoerter - (Walter)

Randy Lambertus - (Zellers & Sacks)

### Rackham Pre-Doctoral Fellowship

Julie Adamson - (Hakansson)

Tasneem Patwa - (Lubman)

### Rackham Science Awards

Max Bailor (Al-Hashimi)

Anette Casiano (Al-Hashimi)

Nicholas Ball - (Sanford)

Vilmali Lopez-Mejias - (Matzger)

Eric Rodriguez - (Marsh)

### Royal Thai Government Fellowship

Chetwana Rungwanitcha - (Kennedy)

### Sloan Fellowship

Michael Orozco - (Sension)

Lidaris SanMiguel - (Matzger)

Francisco Vazquez - (Geva)

### University of Michigan Substance Abuse and Research Center Fellowship

Kristin Schultz - (Kennedy)



## Training Grants

### Cellular Biotechnology Training Program (CBTP)

Claire Chisolm - (Kennedy)  
Kathryn Dooley - (Morris)  
Kristin Smith - (Fierke)

### Chemistry-Biology Interface Training Program (CBI)

Training Grant provided by National Institutes of General Medical Sciences for research at the interface of chemistry and biology. Includes units of Chemistry, Biological Chemistry in the Medical School and Medicinal Chemistry in the College of Pharmacy.

Sara Buhrlage - (Mapp)  
Matthew Leathen - (Mapp)  
Dustin Patterson - (Marsh)  
Curtis Schneider - (Pecoraro)  
Abigail Wolfe - (Pecoraro)

### Graduate Assistants in the Area of National Need (GAANN)

Enhance teaching and research capacities of chemists to meet the needs of emerging industries vital to our technological competitiveness and to supply our colleges with faculty to meet the 21st Century teaching and research missions.

Andrew Boughton - (Andricioaei & Chen)

Kandarpa Cousineau - (Banaszak Holl)  
Amy Danowitz - (Mapp)  
Gayle Gawlik - (Mapp)  
Alan Kiste - (Coppola)  
Anne Labut - (Karbstein)  
Joy Racowski - (Sanford)  
Kara Stowers - (Sanford)  
Anne Vazquez - (Chen)

### Microfluidics in Biomedical Sciences Training Program (MBSTP)

Anna Clark - (Kennedy)

### Molecular Biophysics Training Program (MBTP)

Catherine Musselman - (Al-Hashimi)  
Jesse Ward - (Penner-Hahn)

### Pharmacological Sciences & Biorelated Chemistry Training Program (PSTP)

Amberlyn Wands - (Mapp)



Ashworth Fellowship: Jingjie Mo, Kristina Hakansson,



Smith, Rackham, Parry Fellowships: Lopa Desai, John Hoerter, Jinhui Chen,



ACS Fellowship: Joshua Ney, John Wolfe



Rackham PreDoc: David Lubman and Tasneem Patwa



Eastman Fellowship: Julie Adamson, Kristina Hakansson



Rackham Science Award: Vimali Lopez-Majias, Nick Ball, Anette Casiano, Max Bailor



*Rackham Merit Fellowship: Salena Whitfield, Michael Orozco, Tara Conser, Frank Vazquez, Lidaris SanMiguel*



*Ice Cream Social following awards ceremony*

## Graduate Degrees - Masters & Ph.D

### Doctorates for August, December, 2006 and May 2007

**Bobeck, Drew** Edwin Vedejs  
Enantiocontrolled Synthesis of Aziridinomitosenes

**Bobeck, Melissa** Gary Glick  
Binding Site Structure and Conformational Dynamics in the Sequence-Specific Recognition of ssDNA by an Autoantibody

**Callender, Andrew F** Michael Morris & Mark Meyerhoff  
Dynamic Raman Spectroscopy of Mineralized Tissue.

**Cellar, Nicholas** Robert Kennedy  
Integration of Analytical Functions onto a Microfluidic Platform to Create a Separations-Based Sensor for In Vivo Neurotransmitter Monitoring

**Cha, Wansik, Wansick** Mark Meyerhoff  
Catalytic Generation of Nitric Oxide from S-Nitrosothiols Using Organoselenium Species and Development of Amperometric S-Nitrosothiol Sensors

**Clarke, Matthew Lawrence** Zhan Chen  
Interactions of Polymers and Proteins at Interfaces Studied by Sum Frequency Generation Vibrational Spectroscopy.

**Cunliffe, Jennifer Muir** Robert Kennedy  
Development of Capillary Electrophoresis Techniques for Detecting Signal Transduction Events: Applications to Drug Screening.

**Dick, Allison** Melanie Sanford & John Wolfe  
Palladium(IV) in Directed C-H Bond Oxidations: Synthetic and Mechanistic Investigations

**Edwards, James L** Robert Kennedy  
Development of Metabolomic Technologies for Identification and Quantitation of Intracellular Metabolites.

**Ferguson, Marcelle** Anna Mapp  
[3,3]-Rearrangements of Phosphonium Ylides and Dipole-Induced Dipole Interactions for Molecular Recognition in DNA

**Fuller, Amelia Anne** Anna Mapp  
Small Molecule Building Blocks for Proteomimetics and Synthesis of Acetylcholinesterase Inhibitors.

**Gantt, Stephanie Louise** Carol Fierke  
Human Histone Deacetylase 8: Metal Dependence and Catalytic Mechanism.

**Gdula, Robyn Lorraine** Marc Johnson  
Design and Synthesis of Highly-Active Group 6 Metal Catalysts for use in Triple-Bond Metathesis.

**Ghosh, Debdeep** Vincent Pecoraro  
Thermodynamic and Kinetic Investigation of Heavy Metal Binding to De Novo Designed Alpha-Helical Peptides.

**Haldar, Suranjana** James Penner-Hahn  
Determination of In Vivo Metal Loading, Distribution, Storage and Environment in Biological Systems: Use of X-ray Synchrotron Light Source

**Hessler, Jessica Anna** Mark Banaszak Holl  
Investigation of the Effects of Nanoparticles and Apoptosis-Inducing Drugs on Cells.

**Johnson, William Clyde** Zhan Chen  
Molecular Level Understanding of Polymer Surfaces and their Interactions with Other Molecules Studied by Sum Frequency Generation Vibrational Spectroscopy and Atomic Force Microscopy.

**Kelly, Rebekah** Carol Fierke & James Penner Hahn  
Structural, Spectroscopic, and Mechanistic Studies of Zinc Alkyl Transfer Enzymes

**Kreunin, Paweena** David Lubman  
Development of Proteomic Profiling Methods for Analysis of Human Cancer Proteomes

**Lai, William W** Paul Rasmussen  
Synthesis, Structural Characterization and Mobility Measurement of Electron Accepting Pyrazine Derivatives.

**Lambertus, Gordon Randall** Edward Zellers  
Development, Evaluation, and Application of Silicon/Glass Microfabricated Gas Chromatography Columns.

**Loch, Cheryl Lynn** Zhan Chen  
Developing a Molecular-Level Understanding of Adhesion Using Sum Frequency Generation Vibrational Spectroscopy.

**Ludwig, Bonnie Jean** Anthony Francis  
A Self-Assembled System of Nanoscopic Switches:Gold-Hydridosilsesquioxane-Gold Devices.

**Navrotskaya, Irina** Eitan Geva  
Quantum Mechanical Rate Processes in the Condensed Phase

**Plass, Katherine Elaine** Adam Matzger  
Structure, Symmetry, and Stability of Two-Dimensional Crystals.

**Qi, Jun** William Roush  
Studies Toward the Total Synthesis of Quartromicin D3.

**Rhodes, Maria M** Nils Walter  
Formation of and Structural Communication through an Interdomain Cavity in the Catalytic Core of the Hairpin Ribozyme.

**Rowe, Michael P** Edward Zellers  
Synthesis and Characterization of Monolayer-Protected Gold Nanoparticles and Their Organoplatinum Composites as Vapor-Sensitive Microsensor Interface Materials.

**Sefcikova, Jana** Nils Walter  
Conformational Dynamics in Folding and Function of the Hepatitis Delta Virus Ribozyme.

## Masters - August, December, 2006 and May 2007

<b>Avery, Christopher</b>	Zhan Chen
<b>Burke, Emily Wenonah</b>	James Coward
<b>Canapp, Jody</b>	John Wolfe
<b>Casiano, Anette</b>	Hashim Al-Hashimi
<b>Clark, Anna</b>	Robert Kennedy
<b>Conser, Tara</b>	James Coward
<b>Deeter, Susan</b>	Edwin Vedejs
<b>Deprez, Nicholas</b>	Melanie Sanford
<b>Dethoff, Elizabeth</b>	Hashim Al-Hashimi
<b>Fix, Cory</b>	Mark Meyerhoff
<b>Fritz, Jonathan</b>	John Wolfe
<b>Fuller, Erin Laura</b>	Anna Mapp
<b>Guo, Meng</b>	Theodore Goodson
<b>Henssler, John Timothy</b>	Adam Matzger
<b>Hersberger, Katherine</b>	David Lubman
<b>Huh, Chan-Woo</b>	William Roush
<b>Kalli, Anastasia</b>	Kristina Hakansson
<b>Koutmos, Markos</b>	Dimitri Coucouvanis

**Shou, Minshan** Robert Kennedy  
In Vivo Monitoring of Neurotransmitter Release by Microdialysis and On-line CE-LIF.

**Steinecker, William Henry** Edward Zellers  
Gold-Thiolate Monolayer-Protected Nanoparticles as Sorptive Interfaces for Microsensor Arrays.

**Wei, Hui** Robert Kennedy  
Exploring Neuropeptides in the Brain Using Capillary Liquid Chromatography- Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry.

**Yip, Grover Ngai-Bun** Erik Zuiderweg  
Improving Experimentation and Interpretation in Solution Nuclear Magnetic Resonance Investigations.

**Yoo, Chul Seung** David Lubman  
Development of On-line Capillary Electrophoresis and Monolithic Capillary HPLC Interfaced with Mass Spectrometry for Analysis of Human Cancer Proteomes.

**Zhang, Hairong** Mark Meyerhoff  
Gold/Conducting Polymer Coating for Solid Phase Immunoassays

**Zhang, Xinnan** Adam Matzger  
Fused-Ring Poly- and Oligothiophenes: Designed Electronic Materials.

**Zhou, Mi** Ronald Woodard  
Evolution of DAHP Synthase: From Archaea to Eubacteria

**Zhou, Zhengrong** Mark Meyerhoff  
Development of Novel Nitric Oxide Releasing Materials and Polymeric Coatings for Blood Contacting Biomedical Applications.

<b>Lai, William W</b>	P. Rasmussen & A. Francis
<b>Less, Gregory B.</b>	Paul Rasmussen
<b>Li, Qiang</b>	Robert Kennedy
<b>Ludwig, Bonnie Jean</b>	Anthony Francis
<b>Ni, Qihui</b>	Robert Kennedy
<b>Peng, Tengteng</b>	Katrin Karbstein
<b>Rarig, Robert-Andre Franklin</b>	Edwin Vedejs
<b>Schneider, Curtis J</b>	Vincent Pecoraro
<b>Shen, Dongxuan</b>	Mark Meyerhoff
<b>Sun, Xiaoyan</b>	Hashim Al-Hashimi
<b>Wagner, Meghan</b>	Marc Johnson
<b>Wands, Amberlyn</b>	Anna Mapp
<b>Whitfield, Salena</b>	Melanie Sanford
<b>Wiedner, Eric Scott</b>	Marc Johnson
<b>Wu, Biyun</b>	Mark Meyerhoff
<b>Yan, Qinyi</b>	Mark Meyerhoff
<b>Yi, Li</b>	Ronald Woodard
<b>Yoo, Chul Seung</b>	Kristina Hakansson
<b>Zalas, Wojciech</b>	Zhan Chen
<b>Zimmerman, Laura</b>	Mark Meyerhoff

## Graduate Student Council News

The Graduate Student Council (GSC) organizes several events for the chemistry department throughout the year to support the student body and reach out to the community. The second annual department wide “penny war” was held to provide an avenue for students to get involved in department fundraising at a level they could afford. In the penny war each student class, the staff, postdocs and the faculty competed against each other to see who could collect the most pennies. Additionally by putting non-penny currency into another team’s jug one could bring their score down. This year the incoming Class of 2003 was the winner. We also held a bowling social at Colonial Lanes and had a fall social with apples, cider and donuts.

In the winter we sponsored a trip to see the Michigan ice hockey team play Michigan State at Joe Lewis Arena. We coupled this event with a canned food drive and donated 180 cans of food to Food Gatherers.

In the spring we held an ice cream social in conjunction with the student awards ceremony, and during the summer organized

a staff appreciation day to honor our great staff for all of their hard work. We also sponsored a student trip to a Tigers game this summer and coupled the baseball game with a canned-food drive; 330 cans of food were donated to the Food Gatherers. A fundraiser was held for the American Red Cross to aid tornado victims in Georgia. The GSC bought several pizzas and asked the department to come eat pizza and donate what they could; \$500 was raised and donated. We continued our big sib/little sib program this year in which senior students are paired up with incoming students to provide support during their transition to Ann Arbor and graduate school, and during new student orientation organized lunches between the big and little sibs. And of course, this fall we held our annual barbecue to start off the semester and welcome the new students into the department.

This year the GSC Officers and Representatives were Andrew Higgs, Claire Chisolm, Chris Avery, Gayle Gawlik, Jody Canapp, Matthew Leathen, Amy Payeur, Tom Lyons, Ryan Baxter, Natalie Walker, Carlos Baiz, Leila Foroughi, Nicolette Guthrie, Tom Horvath, Brannon Gary, Kandarpa Cousineau, Joy Racowski and Meagan Wagner.

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## Undergraduate Program News

### REU (Research Experiences for Undergraduates) Site – Summer 2007

For the 19th summer in a row, the department hosted an NSF-funded REU Site, where 10 students from around the country were selected, from over 200 applicants, for a 10-week program of undergraduate research and related weekly activities.

The 2007 group of students, their home institutions, and their research advisors:

Noelle Endy	Muhlenberg C	Prof. Kennedy
Ryan Pakula	Harvey Mudd	Prof. Johnson
Brittane Parker	U Oklahoma	Prof. Sherman
Patrick Shaffer	Binghamton U	Prof. Al-Hashimi
Anthony Brewer	Mount Union C	Prof. Mapp
Antonio Rivera	UPR Rio Piedras	Prof. Fierke
James Grinias	Eastern Michigan U	Prof. Hakansson
Laura Strittmatter	Yale U	Prof. Sherman
Kelsey Hughes	Alma C	Prof. Woodard
Rebecca Leone	U Montana	Prof. Karbstein

In addition to the NSF funding, we were fortunate to receive funding from the Intel Foundation in order to expand the REU to specifically attract students in Intel’s areas of scientific interest. This funding added two fellowship positions:

Sophia Elie	UM Engineering	Prof. Matzger
Jesse Sinanan	Delaware Tech CC	Prof. Walter

The summer of 2007 was particularly exciting for our pilot summer undergraduate research exchange between our department and that of Peking University (PKU), the premiere research institution in China, located in Beijing.

Since 2001, the department has been carrying out on-site English language interviews with prospective graduate students in China, visiting Beijing and Shanghai every year, and generally adding a third city where other universities are located, such as Nanjing, Hefei, and Xi’an. During the course of these visits, some of the faculty have developed some strong relationships with their Chinese counterparts.

In 2005, Professors Coppola and Penner-Hahn, in particular, began to have productive conversations with some of the faculty at PKU about possible collaborations on undergraduate education. The fruits from these conversations are now being seen. In summer 2007, 3 UM undergraduate chemistry and biochemistry students, as a pilot project, spent 10 weeks in Beijing. During the first 2 weeks, accompanied by both Professors Coppola and Penner-Hahn, the students participated in a “boot camp” orientation program. The orientation program included language instructions, classes and tours on history and culture, and practical instruction on getting around, eating, and generally navigating such a large, urban environment. The UM students were Justin Lomont, Tiffany Chen, and Brian O’Keefe. After the orientation, the students joined their research groups for 8 weeks before returning to the US.

At the same time, 4 students from PKU spent 8-weeks in Ann Arbor. They were Wang Wei (Penner-Hahn), Feng Xiaowen (Pecoraro), Zhou Xiaoxue (Andricioaei), and Shen Yiran (Kennedy). Because the PKU semester did not end until the end of June, all 7 students were together for about a month in Beijing, and then again at the end of the summer in Ann Arbor. One of the things that made this program possible is the Joint Institute between UM and PKU, which is directed by UM Professor James Lee. All of the on-the-ground logistics were handled by the Institute's staff, whom we hired. At the 2-week mark, when the entire group was together, and, coincidentally, LSA Dean Terry McDonald was part of a contingent of visitors to China from UM, we held a reception that featured the program and its students. In some short remarks, Brian O'Keefe made a few poignant points about their experience, including this one:

*Here in China, it is impossible not to learn about the cultural differences as an active participant in this society. We*

*are learning to work and communicate with people in our labs, seeing how science is done in this country. We hope that our experiences in these labs can help us better communicate with a diverse team, and to do better chemistry back at home.- Mr. Brian O'Keefe, 06/16/07, after 2 weeks in the pilot program*

By every measure, the pilot project was a major success. Support for 2007 was provided by supplemental funding from the NSF, the College of LSA, the Camille and Henry Dreyfus Foundation, and the Department of Chemistry. In September, the department submitted as proposal to create an International REU Site at PKU that would bring in other students from the US as well as UM students.

For additional details, including student blogs and pictures, please see the program web site for 2007, at [www.umich.edu/~michchem/UMPKU](http://www.umich.edu/~michchem/UMPKU)

## UM Chemistry and International Education

As with the exchange program with PKU, Professor Coppola has been increasing his activities with international education.

In December 2007, the Vice Dean in the PKU Chemistry Department, Professor Li Zi-Chen, invited Professor Coppola to assemble and lead a 4-person team to go to PKU as external reviewers for the chemistry laboratory program at PKU. Such an external review by foreigners was an unprecedented event in the sciences, particularly for undergraduate education. The team members were UM Professors Coppola and Mark Banaszak Holl, who were accompanied by Professors Angelica Stacy (Berkeley) and Jeanne Pemberton (Arizona).

Early this year, Professor Coppola was named as a Fulbright Senior Specialist. In his first consulting trip under the Fulbright program, he spent two weeks in Indonesia during early July. During the first week, the country was holding its first-ever country-wide meeting of chemistry chairs at Bandung University. Coppola gave both the opening and closing plenaries at this meeting. During the second week, he consulted with 4 different universities in Indonesia that were interested in curriculum reform ideas.

Professor Coppola was also an invited plenary speaker at the 2nd University Fundamental Courses Forum on Chemistry and Chemical Engineering, which was held in Wuhan, China, on November 10-11.

## Student Affiliate Chapter of the American Chemical Society Receives Awards for 2006-2007 Activities

The American Chemical Society – Student Affiliates chapter at the University of Michigan is a student-run subset of the professional chemistry guild ACS. They sponsor various activities, including informal dinners with faculty members and visits from guest lecturers. This past year, the chapter received an Honorable Mention Award along with a Green Chemistry Award from the parent society for their activities. Important events cited in their annual report included Kids Fair, Sciencepalooza, their presentations for National Chemistry Week, and their efforts to raise Green Chemistry Awareness on campus.

President Rebecca Siegel and Vice President Jason Wong will represent the section at the spring national ACS meeting in New Orleans when the chapter will be recognized. Dr. Paul Jones is the faculty advisor to the section. More information about the chapter and its activities can be found at its website; <http://www.umich.edu/~acssa>.



*Left to Right: Paul Jones, Andrew Koltonow, Stephen Martin, Matt Kole, Mallory Johnson, Rebecca Siegel, Jason Wong and Adhi Krisnadi Paisoseputra*

## Undergraduate Awards

August, December, 2006 and May 2007

### **CRC Outstanding Freshman Achievement Award**

James Ignatz-Hoover

### **Alpha Chi Sigma Outstanding 1st Year Student Award**

Christine Morrison (Matzger)

### **Alumni 1st Year Achievement Awards**

Alex Turin, Shiwei Zhou, Jon Mahlow, Charles Schuler IV,  
Patricia Szmaj, Stephen Martin, Matthew Gray

### **Alumni Outstanding Awards**

**2nd Year Student** Jeff Simon (Montgomery)

**3rd Year Student** Rebecca Kow (Palfey)

**Senior Student** Lara Czabaniuk (Koreeda)

### **Honors College Vanko Award**

Chelsea Durgan (Ballou)

### **Florence Fenwick Memorial Scholars**

Malani Gupta (Kwok), Joseph Nakleh (Koreeda),  
Tim Tseng (Johnson), Alan Commet (Yocum)

### **National Starch Scholarships**

Sarah Carman (Ballou), Jihye Ha (Koreeda), Justin Lomont  
(Coppola)

### **Lubrizol Scholarship**

Jennifer Raymond (Karbstein)

### **Helen Schwartz Schaefer Scholarship**

Angie Buttigieg

### **American Chemical Society Analytical Chemistry Award**

Nicholas Preketes (Geva)

### **Huron Valley Section-Outstanding Senior Leadership Award**

Walter Haberaecker (Koreeda)

### **Seyhan N. Ege-WISE Award**

Kathryn MacKool (Koreeda)

### **Merck Index Award to Outstanding Seniors**

Paul Baciu (Ming Lei), Daniel Bertoni (Ballou),  
Joel Skaistis (Kubarych)

### **AIC/Alumni Biochemistry Award**

Osman Yilmaz (Yocum)

### **AIC/Alumni Chemistry Award**

Keary Engle (Matzger)

### **Summer Research Awards**

#### **Dow Chemical Company**

Christine Morrison (Matzger)

#### **Gomberg Scholarship**

Jihye Ha (Koreeda), Katie Lutker (Matzger)

#### **Eli Lilly Research Fellowship**

Jeffrey Simon (Montgomery)

#### **James E. Harris Scholarship**

Alan Commet (Yocum), Carrie Zechmeister (Koreeda)

#### **Florence Fenwick Memorial**

Rebecca Kow (Palfey), Yuki Murata (Lehnert)

#### **Walter R. Yates**

Joel Skaistis (Kubarych), Jennifer Raymond (Karbstein),  
Franco Fabilli (Goodson)

#### **Smeaton**

Nicholas Preketes (Geva)

#### **Pfizer**

Mark Haines (Koreeda)

#### **David W. Stewart Memorial**

Angela Sandelin (Vedejs)

#### **PPG Scholarship**

Joseph Nakleh (Koreeda)

#### **Margaret & Herman Sokol Endowment**

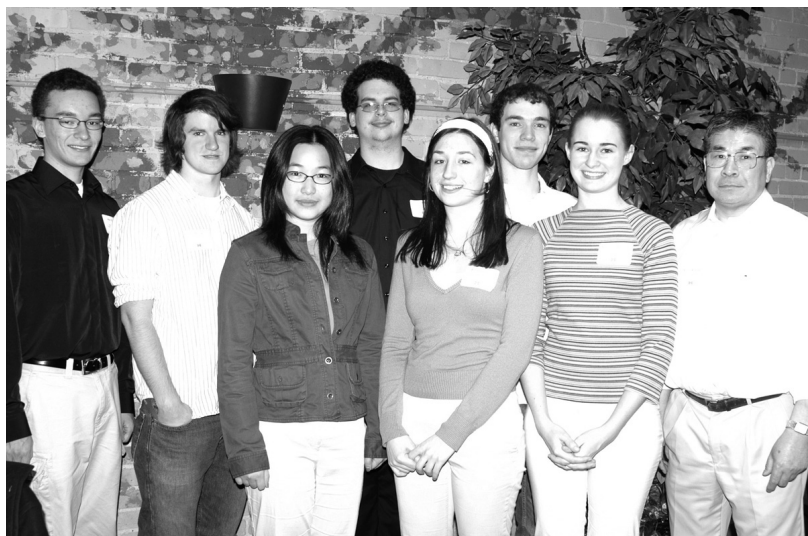
Tim Tseng (Johnson), Paul Cipriani (Sherman)

#### **Alumni Award**

Michael Roberto (Morris), Rahul Ganatra (Meyerhoff)

#### **Intel Summer Fellowship**

Sophia Elie (Matzger)



*First Year Awards: Alex Turin, Jonathan Mahlow, Shiwei Zhou, Steve Martin, Patricia Szmal, Matthew Gray, Christine Morrison (Masato Koreeda)*



*Outstanding 2nd Year: Jeff Simon; Outstanding 3rd Year: Rebecca Kow:*

## Bachelors Degrees

August, December, 2006 and May, 2007

### Chemistry

Barton, Thomas John  
 Coelho, Adele Vanessa  
 Czabaniuk, Lara Christine  
 Davis, Jonathan Aaron  
 Engle, Keary M  
 Haberaecker, Walter William  
 Horning, Peter Benjamin  
 Kobolak, Cynthia Ann  
 Lai, Caroline Laurice  
 Limchoa, Eileen Marie  
 Limchoa, Jenny Lynn  
 Marsh, Christopher Lee  
 Mathews, Anne Therese  
 O'Neill, Kelley Marie  
 Tai, Daniel Chung-Ho  
 VanStaveren, Marie Natalie  
 Yau, Sung-Hei

Chan, Antonia Yunn  
 Chen, Susie Xi  
 Dood Jr, Robert Lee  
 Durgan, Chelsea Justine  
 Ebadi-Tehrani, Mehran  
 Michael  
 Edwards, Holly Jin  
 Falcone, Christina Marie  
 Fay, Kevin Scott  
 Fisher, Jacquelyn Marie  
 Flynn, Matthew James  
 Froning, Caroline Elizabeth  
 Gerber, Jennifer Lynn  
 Gilbert, Elise Michele  
 Glass, Lisa Nagelberg  
 Guinn, Tia Melan  
 Gupta, Malani Marie  
 Harzdorf, Nicole Lynn  
 Hayter, Timothy John  
 Hu, Eric  
 Kheir, Noor Raef  
 Kobolak, Cynthia Ann  
 Kurnit, Katherine Cecilia  
 Langan, Nicholas Robert  
 Lee, Gloria

### Biochemistry

Anderson, Meredith Renee  
 Bertoni, Daniel Robert  
 Brunk, Elizabeth Claire  
 Carlson, Whitney Elizabeth



*Florence Fenwick Memorial Scholars (l to r): Tim Tseng, Alan Commet, Joseph Nakleh, and Melani Gupta.*

Lesch, Justin E  
 Li, Xin  
 Lin, Dennis  
 Love, Tasha Marie  
 MacKool, Kathryn Marie  
 Mackovjak, John J  
 Marchant, Jeffrey David  
 Marsh, Christopher Lee  
 Miller, David Dwight  
 Murai, Koichi  
 Nelson, Lisa Terese  
 Neo, Li-Lin Emilia  
 Neogi, Rahul Kumar  
 Nisbet, Scott Kenneth  
 Nolan, Daniel Patrick

Odeleye, Melanie Eniola  
 Ota, Shodai  
 Pearson Fuhrhop, Kristin  
 Marie  
 Peng, Peter Y  
 Qin, Kai  
 Retland, Nicole Lynn  
 Shah, Hriday M  
 Song, Qi Xiu  
 Tan, Ashley Elaine  
 Taylor, Mark Robert  
 Vihtelic, Celia Marie  
 Yilmaz, Osman Hayri  
 Zeitlin, Allen Rubin  
 Zheng, Alice Xiaowei

## Gifts

Contributions from private and corporate donors received from July 1, 2006 – June 30, 2007

(\* Indicates corporate matching funds.)

### Alumni Discretionary Fund

John F. Bruesch  
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Xerox Corporation USA\*

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Lois S. Swick  
Edwin Vedejs  
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### Willard Memorial Lecture Fund

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George C. and Dorothy M. Towe

### James E. Harris Scholarship Fund in Chemistry

Marian E. Harris

### Kuczowski Faculty Award

Carol A. Fierke

### Milton Tamres Teaching Award

Majorie and Donald J. Carter

### Peter A.S. Smith Fellowship

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Roy D. Pointer, PhD

### Richard D. Sacks Memorial Student Travel Fund

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### Robert & Carolyn Buzzard Grad Chem Student Leadership

Robert and Carolyn Buzzard

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Suzanne Marie Fleming  
Charles W. Heitsch  
Edward K. Mellon  
Karen W. Morse  
Robert T. and Bonnie P. Paine  
W.G. Sayre  
Duward Shriver  
Joan and R. Arden Slotter



## Alumni News

E-Mail your news: chem.alum@umich.edu

Update your contact information: <http://www.umich.edu/~michchem/alumni/>

If errors or misstatements are noted in any of the following items, the Editors of the Newsletter would appreciate such being called to their attention. Mistakes can and do, inadvertently, creep in. Corrections can easily be inserted in the next edition.

**Robert A. Gregg** (PhD 1943, Bachmann) has established the **Robert A. Gregg Professorship** in the Department of Chemistry. This gift endows a full professorship in the department. It is the department's third endowed named professorship. An endowed chair honors and supports one of the department's most distinguished faculty members complementing her/his national reputation in teaching and research.

Dr. Gregg was born in Dundee, Michigan and matriculated as an undergraduate at Adrian College. His Michigan thesis work under Werner Bachmann described the synthesis of analogs of the sex hormone equilenin. Gregg departed Michigan in November, 1942 to work for U.S. Rubber-Uniroyal for almost 42 years. He had a diverse experience ranging from fundamental research on the mechanism of free radical polymerization to development work on new products and processes. His inventions included polyurethane elastic fiber (spandex); a stable flexible vapor barrier for rubber fuel tanks for airplanes; an adhesive system for steel belted tires; and, various foam rubber and plastic products. He designed and built a pilot plant for melt spinning fibers, among dozens of other projects. As he describes his career "One had to like diversity with some adversity thrown in." He even served a stint as personnel manager where he was told to fire several distinguished consultants including two who later received Nobel prizes.

The New Haven Section of the American Chemical Society awarded Gregg in 2003, the Maurice R. Chamberland Award for enhancing societal well being through the application of chemistry for his work in improvement of automobile tires and contributions toward the development of cellular plastics.

On the personal side, he married Jean Westerman in 1951 in the Methodist Church on State Street. Regrettably, Prof. Bachmann died the week before the wedding. Nevertheless his wife Mary attended the ceremony. Over the years, Dr. Gregg has been a frequent attendee of the annual Bachmann Lecture which continues to be one of the nation's prized awards for organic and bioorganic chemists.



*Committee Chairperson David Smudin of the New Haven Section of the ACS presenting the Maurice R. Chamberland Award to Dr. Robert A. Gregg (on the right).*

Dr. Gregg lives in Connecticut where he has been active in conservation issues and local government matters. He has been an officer of the Woodbridge Land Trust for more than thirty years and initiated referenda leading to the Town several times voting a multimillion dollar bond issue to buy open space for holding in that condition forever and he assisted in purchasing the land.

Unauthorized encroachment or use of someone else's property for a period of time gives the encroacher a legal claim on the property by claiming a right of adverse possession. Gregg wrote, shepherded through the legislature, a statute signed by the governor into law, exempting non-profit organization land from such claims in the State of Connecticut,

American chestnut trees, sometimes called the Redwoods of the East, were the dominant tree in eastern forests until wiped out by chestnut blight from Asia in the early 1900's. Using pollen from a blight resistant Chinese chestnut on the flowers of surviving American chestnuts and repeating this process with selection for blight resistance with several successive generations of progeny, a blight resistant tree that is essentially an all American chestnut should be produced. Gregg established an orchard in Woodbridge where this process is being started in Connecticut. He is on the board of the Connecticut chapter of the American Chestnut Foundation.

Gregg writes "For recreation I attend Scottish Country Dance classes and balls and have published a book of Scottish country dances that I devised." The Department salutes this versatile alumnus. It is grateful for his generous gift in celebration and support of the Department's continued excellence and strength. Such professorships are the hallmark of a distinguished history underpinning the program and honoring its faculty and alumni.

**Carolyn E (Owen) Anderson** (BSC 1998; Phd 2003, UC Irvine) spent several years as a Dreyfus Foundation post-doc at Pomona College in Claremont, CA. In 2006, she moved to Calvin College in Grand Rapids, MI where she is an assistant professor of chemistry.

**Karen Emerson Axelrod** (BS 1989; M. Ed 1995, John Carroll Univ.) is a high school chemistry teacher at University School in Cleveland, OH. She writes that she is happily married and mother of a one-year old son.

**John E. Bauman** (PhD 1962, Atkinson) is professor emeritus of chemistry at the University of Missouri, Columbia.

**Suzanne A. Blum** (BS, Honors 2000, Vedejs, Coppola; PhD 2004 UC Berkeley) is assis-

tant professor of chemistry at the University of California, Irvine.

**Peter J. Bonk** (BS 1975; PhD 1985, Wisconsin) is Assistant Director, Research and Development at Rhodes Technologies, an innovative pharmaceuticals developer, in Coventry, RI which specializes in the manufacture of pain medications. Pete has been at Rhodes for the past 5 years.

**James L. Brewbaker** (BS 1958; PhD 1968, Mich. St.) has retired from Dow Chemical and the Michigan Molecular Institute.

**Carolyn and Bob Buzzard** (Muhlenberg College 1961-62) support the Robert & Carolyn Buzzard Graduate Chemistry Student Leadership Award given annually to a

graduate student for leadership and service to the department. They have promoted a partnership between Muhlenberg College and the Department over the past ten years that brings a Muhlenberg undergraduate to Michigan in the summer for a ten week research experience (REU). Each fall they try to visit the department and root for their adopted football team.

**John W. Cahn** (BS 1949; PhD Berkeley, 1952) is senior fellow emeritus from NIST after 30 years. He is semi retired in Seattle with affiliate professor appointments in physics and materials science at the University of Washington.

**Shu-Sing Chang** (PhD 1962, Westrum) is retired as research chemist for the National Institute of Science and Technology. He has been involved in planning the 50<sup>th</sup> anniversary reunion of his chemistry class from the National Taiwan University.

**Frank M. Curran** (BS 1977; PhD 1983, Mich. St.) works at the NASA Glenn Research Center in Cleveland, OH. He received the 2006 James H. Wyld Memorial Award from the American Institute of Aeronautics and Astronautics. This award is given annually for outstanding achievement in the development or application of rocket propulsion systems.

**Theodore S. Dibble** (PhD 1992, Bartell) has been promoted to Professor of Chemistry at SUNY College of Environmental Science and Forestry, Syracuse NY. He studies radical reactions important in atmospheric chemistry and the secondary chemistry in polluted airstreams treated by electron beams.

**Robert Damrauer** (BS, 1963; PhD 1966, MIT) has recently been appointed Interim Associate Vice Chancellor for Research and Graduate Studies at the University of Colorado at Denver and Health Sciences Center in addition to his appointment as Professor of Chemistry.

**Keenan Edward Dungey** (PhD 1998, Curtis) was promoted to associate professor with tenure at the University of Illinois, Springfield. In 2005, he received a University of Illinois University Scholar Award.

**John A. Gladsyz** (BS 1971) has been appointed as Professor, Dow Chair in Chemical Invention at Texas A&M University.

**R. Douglas Hutchens** (BS 1968; PhD 1972, Pittsburgh) is a senior scientist at

United Technology Corp. in Dayton OH. He is program manager of a contract awarded by the Air Force Research Laboratory involving 17 minority academic institutions.

**Catheryn L. Jackson** (BS, 1980; PhD 1988, Conn.) moved from the National Institute of Standards and Technology after 10 years to a senior scientist position at Rohm and Haas, following a five year "sabbatical" to be a stay-at-home mom for two preschoolers.

**Juan Jaen** (PhD 1984, Marino) is Sr. Vice President for Drug Discovery at ChemoCentryx in Mountain View, CA. ChemoCentryx is a private biotech company engaged in the discovery of drugs that block immune cells from being recruited to sites of inflammation.

**Joslyn Kravitz** (PhD 2005, Carlson, Pecoraro) will be an American Association for the Advancement of Science (AAAS) fellow in the Science and Technology Program in the Office of the Director of NIH, Ruth Kirschstein.

**Richard N. Loeppky** (PhD 1963, Smith) is Professor of Chemistry, Emeritus serving over 40 years at the Department of Chemistry at the University of Missouri (Columbia) where he was Hermann G. Schlundt Distinguished Professor. His research area has been in nitrosamine carcinogenesis and involves what is now called chemical biology. He has moved to Seattle where he has a courtesy appointment in Medicinal Chemistry at the University of Washington.

**James A. Marshall** (PhD 1960, Ireland), Thomas Jefferson Professor of Chemistry at the University of Virginia, has received a 2007 Arthur C. Cope Scholar award. The Royal Society of Chemistry has awarded him a Centennial Lectureship and Medal

for 2007 for his contributions to synthetic organic chemistry.

**Shahid Murtuza** (BS 1994, Rasmussen; PhD 1999, Penn State) is a product development chemist at Momentive Performance Materials in Waterford, NY (formerly GE Silicones) and is "looking forward to our future as a new company".

**Peter O. Sandusky** (PhD 1985, Yocum) is a senior research scientist at the USDA/FDA funded National Center for Natural Products Research attached to the University of Mississippi School of Pharmacy in University, MS. He had previously been at Tulane University in New Orleans, where he sat out Katrina in Jefferson Parish west of the city.

**Martha Bennett Stiles** (Peggy Wells) (BS 1954). Peggy's first book, "One Among the Indians"-- about a real boy who was a hostage to Powhatan for two years -- is back in print this year for Jamestown's 400<sup>th</sup> anniversary.

**Renee (Krzeminski) Susko M.D.** (BS-Dearborn 1991) is a family medicine physician at Bridgeview Medical Clinic, Harrison Township, MI. She married Don Susko in November 2006.

**Sanyo Tsai** (BS 2005, Coward) is a medical student at the Louisiana State University School of Medicine in New Orleans, LA where he is secretary of the class of 2009 and president of the Asian Pacific American Medical Student Association.

**Charles S. Weinart** (BS 1995, Ashe; PhD 2000, Northwestern) is assistant professor of chemistry at Oklahoma State University, Stillwater, OK.

**Robb Wilson** (PhD 1998, Kuczkowski) is a lecturer in the chemistry department at the University of Texas (Austin), his baccalaureate alma mater.

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## In Memoriam

We are saddened to announce the deaths of the following faculty, alumni, alumnae and friends of the Department.

**Francis J. Berlandi** (PhD, 1964, HB Mark) died on Aug 13, 2006. He had served as president of Touchstone Environmental Consultants of Winchester, MA. He leaves his wife Cheryl, son Aram and daughter Eva.

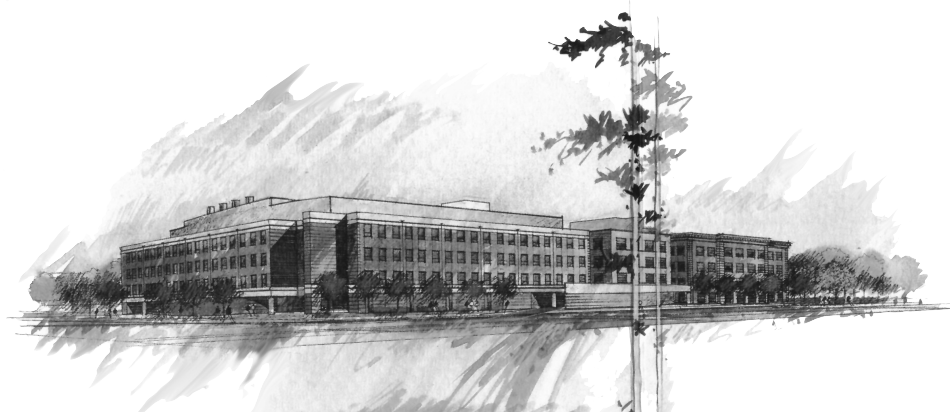
**Janice Hickey Carlson** (MS 1966, Elving) died on April 19, 2006. She worked at Upjohn Co (Kalamazoo, MI) before marrying Norman A. Carlson (PhD 1967, Lawton) and moving to Wilmington where both worked for DuPont. She joined the staff

of Winterthur Museum in 1974 as Museum Chemist. Jan worked in the Winterthur's Scientific Research and Analysis Laboratory for nearly 30 years, retiring in 2003 as Senior Scientist and head of the laboratory. She was a pioneer in the use of non-destructive analytical techniques in characterizing art objects. She served as adjunct faculty in the Winterthur/U. of Delaware Program in Art Conservation, authored or co-authored 30 technical publications, and lectured

widely. Jan is survived by her husband, two sons and other close family members.

**Edward Leon** (MS 1950; PhD 1956, Smith) passed away on Dec. 22, 2006 in Arlington Heights, IL. He spent many years in chemical research for Occidental Petroleum and Borg-Warner Chemicals. He is survived by his wife Mary Ellen Cooper Leon (MA in English, UM, 1952) and three children.

**James W. Hovick** (PhD 1995, Bartell) passed away on Oct. 12, 2007. He was an extremely popular and well-loved Lecturer in chemistry at the University of North Carolina at Charlotte. He was honored by being named in the inaugural class of Carnegie Scholars in 1998. Jim was an avid UM sports fan who enjoyed photography and, especially, spending time with his children, Alex and Sara.



## President's Challenge for Graduate Fellowship Support

President Mary Sue Coleman has created a new gift challenge program to enhance support for graduate students as a concluding phase of the current Michigan Difference Campaign. Every \$2 contributed for graduate support will be matched by \$1 from the President's Challenge Fund. This will apply to gifts to existing named endowments (such as the Parry or Smith funds) and gifts that the donor requests be directed to the Department's graduate student fellowship fund. In order to establish a new named endowment for graduate student support a minimum gift or pledge of \$50K is needed. You may designate your gift either as endowed or expendable; undesignated gifts are considered expendable under University guidelines. If your gift is designated for endowment, distributions from the



Fund shall be made in accordance with the University's then existing endowment distribution policy. If the University's endowment minimum is not met for the Department's graduate fellowship fund, all gifts to the fund will be used on an expendable basis for graduate support.

The Challenge will run from September 1, 2007, and continue until \$40 million is committed in gifts or the Michigan Difference Campaign ends on December 31, 2008, whichever comes first. Donors can extend their gifts over a period of 5 years, and it will all be matched as long as the pledge with first payment is received within the designated time frame of the Challenge. For this challenge, corporate matches for an employee's gift are eligible for a match if the money comes in within the designated time frame of the Challenge (\$40M raised or Dec. 31, 2008). Hence donors are encouraged to make their gifts as soon as possible. Please also note the advice on the deadline for tax deductions for charitable gifts in this tax year on the gift fund card on the last page of this newsletter. For more information contact Bob Kuczkowski (kuczkows@umich.edu) or Tim Wade (twade@umich.edu) in the Chemistry Department.

## Robert W. Parry 1917 – 2006

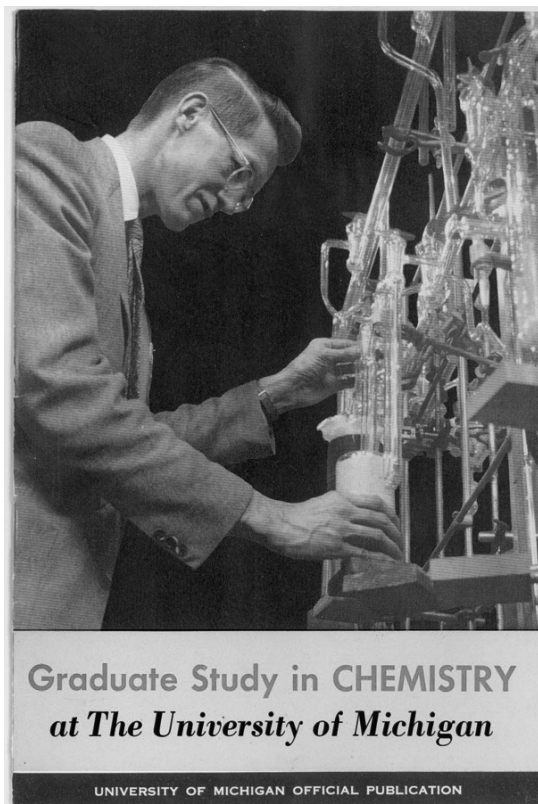
Robert W. Parry, past Professor of Chemistry passed away on Dec. 1, 2006 following a stroke that occurred Nov. 23. Although he departed from the UM faculty in 1969, he maintained a keen affection for the Department, the University and Ann Arbor.

Parry obtained a BS degree from Utah Agriculture College (now Utah State Univ.) in 1940, a MS from Cornell (1942) and PhD in 1946 from Illinois under John C. Bailar. He explored combustion catalysts in support of WWII activities at UI ('42-'45). Parry began his independent career in 1946 at Michigan where he served on the faculty until 1969. The latter portion of his career was spent at the University of Utah where he was a Distinguished Professor ('69-'97) and Distinguished Professor Emeritus ('97-'06).

His research interests were broad and numerous. Although often classified as a "main-group" element chemist, or as a boron or phosphorus or fluorine chemist, Parry had broader, more encompassing research interests including aspects of coordination chemistry, organometallic chemistry and structural chemistry. Even these categories were probably too confining as Parry really was a trans-disciplinary scientist. He harbored special interest in the utilization of isoelectronic principles and periodic trends for the organization of chemical reactions and structures. He also had intense enthusiasm for the impacts of molecular dipole and solvation effects on acid/base reactivity and he especially enjoyed conflicts between structure and theory that arose from his group's research efforts. These studies led to over 150 research publications from the Parry group that included more than sixty graduate and postdoctoral students.

Parry was not only a leader in inorganic chemistry research, but he was also an enthusiastic teacher of undergraduate and graduate students and a passionate contributor to educational reform. He loved General Chemistry!! He instructed many thousand freshmen at UM, he served as the Ad Hoc Director of the General Chemistry Program ('58-'69), and he was the first Chairman of the integrated Honors Program in Science. He was a member of the CHEM STUDY writing team and senior author of one of the CHEM STUDY textbook revisions. He received the ACS Award in Chemical Education ('77) and the Manufacturing Chemist's Award of Excellence in the Teaching of College Chemistry ('72). Most importantly, he provided a wonderful educational experience for new undergraduates at the University.

Parry served the chemical profession and the inorganic chemistry community with great dedication. As examples, he was the founding Editor of *Inorganic Chemistry* and he served



two terms as an Associate Editor of the *Journal of the American Chemical Society*. He served as an ACS Councilor for more than forty years and he was on the Executive Committee of the Inorganic Division and its Chair ('65). He served on the ACS Board of Directors ('73-'83) and was ACS President ('82). He was executive secretary, chair and councilor for the Chemistry Section of AAAS ('80-'95) and Chair and a member of the Board of Trustees of the Gordon Research Conferences ('65-'72). In recognition of his service and numerous accomplishments Parry received awards including the first ACS Award for Distinguished Service in Inorganic Chemistry ('65), the ACS Award in Chemical Education ('77), an Alexander von Humboldt Senior U.S. Scientist Award ('80,'83), the ACS Priestley Medal ('93) and the Harry and Carol Mosher Award ('06).

These are some of the professional highlights of an extraordinary gentleman. They provide an indication of his dedication and leadership for chemistry in the US. He had the highest personal standards and integrity. He was generous and fair to a fault. He was steady in professional peace and in combat, yet always provocative and receptive to new ideas. He possessed a "light-up-the-room" personality and those that knew him will never forget his signature laugh and smile.

Parry was also a dedicated, loving family man. He is survived by his gracious wife of 61 years, Marjorie, two very successful sons, Bryce and Mark, who have inherited many of their father's signature traits, their spouses and five grandchildren: Russell, Marelle, Lauren, Kristie and Robert.

The Robert W. Parry Award Fund has been established by his students to support fellowships for students in the inorganic, organometallic and materials research programs. Contributions may be designated on the gift form on the inside cover page.

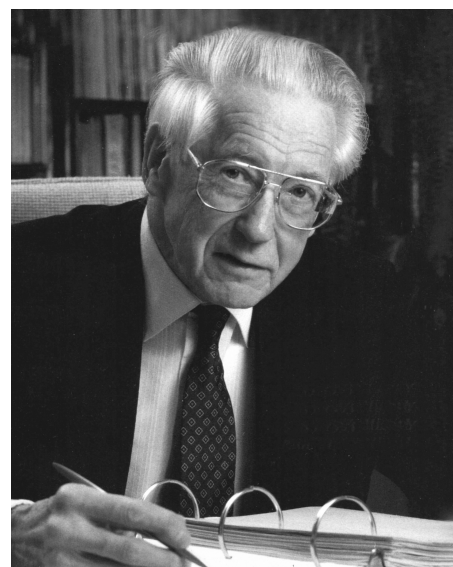


Photo by Terry D. Newfarmer

## Seyhan Nurettin Ege 1931 – 2007

Arthur F. Thurnau Professor and Professor Emerita of Chemistry, Age 76, of Ann Arbor passed away at her home on September 13, 2007. Born in Ankara, Turkey, on January 11, 1931, Seyhan Ege spent her early childhood in New York where her father, Ragip Nurettin Ege, represented the Turkish Republic as Cultural Attache to the United States of America. After returning to Istanbul upon the advent of WW II, Seyhan attended the American College for Girls, graduating with honors. In 1950 she came to the United States and attended Smith College, receiving a Masters Degree in Chemistry in 1952 and subsequently she received her PhD in organic chemistry from the University of Michigan with Peter A. S. Smith in 1956. After teaching briefly at her Alma Mater in Istanbul and subsequently at Mount Holyoke College, Dr. Ege returned to the University of Michigan in 1965, and became the first woman tenured and the first woman full professor on the faculty of the Chemistry Department. Her research interests involved the photochemistry of heterocyclic compounds and reactive intermediates in photochemical reactions. She retired from the faculty in 2001.

Professor Ege was a distinguished educator, promoting innovative approaches to the teaching of chemistry. She authored a textbook, "Organic Chemistry: Structure and Reactivity" which has appeared in five editions, between 1984-2004, and has been translated into Spanish, Italian and Chinese. She was widely acknowledged as contributing to the modernization of the way organic chemistry is taught, particularly for: the use of acid-base chemistry as an early introduction to structure-reactivity relationships, the emphasis on mechanism as a conceptual organizer, and the rigorous use of the primary literature in writing an introductory textbook. She served the Chemistry Department in many capacities, as a dedicated teacher and as its first Associate Chair for Curriculum and Faculty Affairs. Between 1989-91, she led the implementation of the Chemistry Department's undergraduate curriculum reform, which eliminated General Chemistry for large numbers of incoming students and started them off in the Organic course, and reduced the General course to one semester for the rest of the entering students. Nationally, she co-authored the 1994 NSF Report "Innovation and Change in the Chemistry Curriculum" (NSF 94-19), and was the General Chair of the 16th Biennial Conference on Chemical Education (Ann Arbor, 2000).

Professor Ege received the Amoco, Phi Lambda Upsilon, and the Chemical Manufacturers Association Excellence in College Chemistry Teaching Awards and was named Arthur F. Thurnau Professor in 1990. A strong advocate for women, she was one of the founders of WISE, the Women in Science and Engineering



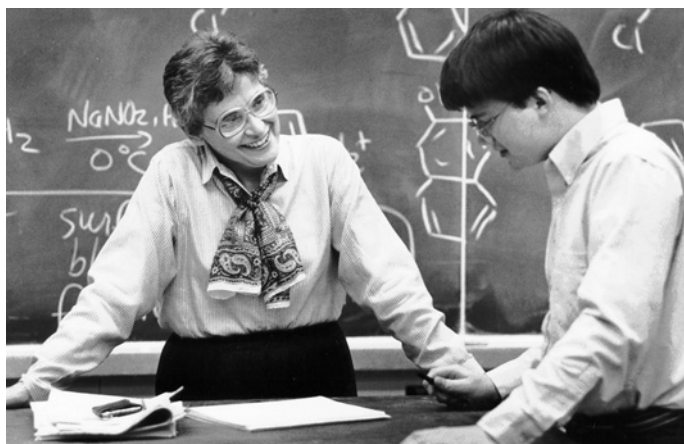
Program at the University of Michigan. Annually, the WISE Program provides an undergraduate award to an outstanding woman or underrepresented minority student in her name. For her scholarship, innovation in teaching and tireless effort on behalf of women students, she was the 2003 recipient of the Sarah Goddard Power Award from the Academic Women's Caucus of the University of Michigan. During her long career, she has been a committed and inspiring mentor to students and younger colleagues. Those whose lives she touched were enriched by her energy, enthusiasm, wide and varied interests.

A long time member of the Anthroposophic community of Ann Arbor, Professor Ege was very active in the development of the Rudolf Steiner House and the Rudolf Steiner Schools. Following her 2001 retirement from teaching at the university, she devoted her pedagogic talents to teaching chemistry at the



Rudolf Steiner High School. Professor Ege is survived by her sister and brother-in-law, Gunes Ege M.D. and Turgut A. Akter of Toronto, her many relatives in Turkey, her colleagues and students, and a wide circle of devoted friends.

In her honor, the University of Michigan Department of Chemistry has established a fund to create the Seyhan N. Ege Junior Faculty Development Award, which will be used to recognize junior faculty members for their teaching accomplishments. Contributions may be designated on the gift form on the inside cover page.



## Faculty

- Hashim M. Al-Hashimi**, Assistant Professor of Chemistry; Assistant Research Scientist, Biophysics Research Division. *Chemical Biology*.
- Ioan Andricioaei**, Assistant Professor, Chemistry; Research Assistant Professor, Bioinformatics. *Chemical Biology*
- Arthur J. Ashe III**, Professor of Chemistry; Professor, Macromolecular Science and Engineering. *Organometallic Chemistry*.
- Mark M. Banaszak Holl**, Professor of Chemistry; Professor, Macromolecular Science & Engineering. *Synthetic and Mechanistic Solution, Surface, and Solid State Chemistry*.
- John R. Barker**, Professor of Atmospheric, Oceanic and Space Sciences; Professor, Chemistry. *Chemical Kinetics, Atmospheric Chemistry*.
- Heather A. Carlson**, Associate Professor of Medicinal Chemistry; Professor, Chemistry. *Computational Chemistry, Drug Design, Theoretical Biophysics*
- Kate S. Carroll**, Assistant Professor of Chemistry; Research Assistant Professor, Life Sciences Institute. *Chemical Biology, Bioinorganic and Biochemistry*.
- Mary Anne Carroll**, Professor of Atmospheric, Oceanic and Space Sciences; Professor, Chemistry. *Atmospheric Chemistry*.
- Zhan Chen**, Associate Professor of Chemistry; Professor, Macromolecular Science & Engineering. *Biomaterial and Polymer Surface, Biocompatibility*.
- Mary Sue Coleman**, UM President and Professor of Chemistry
- Brian P. Coppola**, Arthur F. Thurnau Professor of Chemistry; Associate Chair for Undergraduate Chemistry. *Organic Chemistry, Science Learning and Instructional Methods*.
- Dimitri Coucouvanis**, Lawrence S. Bartell Collegiate Professor of Chemistry. *Synthesis, Structures and Reactivities of Metal Clusters and Supramolecules*.
- James K. Coward**, Professor of Medicinal Chemistry; Professor, Chemistry. *Bioorganic Chemistry and Medicinal Chemistry*.
- Barry Dunietz**, Assistant Professor. *Theoretical and Computational Chemistry*
- Carol A. Fierke, Chair**, Jerome and Isabella Karle Collegiate Professor of Chemistry; Professor, Biological Chemistry. *Chemical Biology, Bioinorganic Chemistry*.
- Anthony H. Francis**, Arthur F. Thurnau Professor of Chemistry; Associate Dean, LS&A. *Magnetic Resonance, Vibrational and Electronic Spectroscopy of Materials*.
- Eitan Geva**, Associate Professor. *Theoretical and Computational Chemistry*.
- John L. Gland**, Professor of Chemistry. *Solid State and Surface Chemistry, Physical Chemistry*.
- Gary D. Glick**, Werner E. Bachmann Collegiate Professor of Chemistry; Professor, Biological Chemistry. *Chemical Biology, Bioorganic Chemistry, Molecular Recognition*.
- Theodore Goodson, III**, Professor of Chemistry; Professor, Macromolecular Science & Engineering. *Physical Chemistry*
- Amy Gottfried**, Lecturer III.
- Kristina Hakansson**, Dow Corning Assistant Professor. *Analytical Chemistry*.
- Marc J. A. Johnson**, Assistant Professor. *Inorganic Synthesis*
- Katrin Karbstein**, Assistant Professor. *Chemical Biology, Biochemistry*
- Robert T. Kennedy**, Hobart H. Willard Collegiate Professor of Chemistry; Professor, Pharmacology. *Analytical Chemistry*.
- Nancy K. Kerner**, Lecturer IV. *Chemical Education, Learning and Instructional Methods*.
- Raoul Kopelman**, Richard Smalley University Professor of Chemistry; Professor, Biomedical Engineering; Professor, Physics. *Analytical/Physical/Biophysical Chemistry*.
- Masato Koreeda**, Professor of Chemistry; Professor, Medicinal Chemistry. *Synthesis of Natural Products, Small Molecule-DNA Interaction, Chemical Carcinogenesis, Glycobiology*.
- Kevin Kubarych**, Assistant Professor. *Physical and Biophysical Chemistry*
- Kenichi Kuroda**, Assistant Professor of Chemistry, School of Dentistry, Biologic & Materials Sciences, Macromolecular Science & Engr., Biomedical Engr. *Physical Chemistry*
- Nicolai Lehnert**, Dow Corning Assistant Professor. *Bioinorganic Chemistry, Physical Inorganic Chemistry*
- David M. Lubman**, Professor of Surgery; Professor, Chemistry. *Biological Mass Spectrometry, Spectroscopy and Instrumentation*.
- Anna K. Mapp**, Associate Professor of Chemistry; Professor, Medicinal Chemistry. *Organic Chemistry, Chemical Biology, New Synthetic Methods*.
- E. Neil G. Marsh**, Professor of Chemistry; Associate Professor, Chemical Biology. *Enzymes, Structure, Mechanism and Specificity; Protein Engineering and Molecular Recognition*.
- Rowena G. Matthews**, G. Robert Greenberg University Professor of Biological Chemistry; Senior Research Scientist, Life Sciences Institute; Professor, Chemistry. *Biological Chemistry*.
- Adam J. Matzger**, Associate Professor of Chemistry; Associate Professor, Macromolecular Science & Engineering. *Organic, Polymers/Organic Materials*.
- Anne J. McNeil**, Assistant Professor of Chemistry. *Polymer and Organic/Materials Chemistry*.
- Mark E. Meyerhoff**, Philip J. Elving Collegiate Professor. *Bioanalytical Chemistry, Electrochemical and Optical Sensors*.
- John Montgomery**, Professor. *Organic and Organometallic Chemistry*
- Michael D. Morris**, Professor. *Analytical Laser Spectroscopy and Imaging; Electrophoretic Separations*.
- Kathleen V. Nolte**, Lecturer IV. *Organic Biochemistry*.
- Vincent L. Pecoraro**, John T. Groves Collegiate Professor of Chemistry; Research Scientist, Biophysics Research Division. *Synthetic Inorganic and Bioinorganic Chemistry*.
- James E. Penner-Hahn**, Professor of Chemistry; Research Scientist, Biophysics Research Division; Associate Dean, LSA. *Biophysical Chemistry and Inorganic Spectroscopy*.
- A. Ramamoorthy**, Associate Professor of Chemistry; Associate Research Scientist, Biophysics Research Division. *Structural Studies of Biological Molecules*.
- Melanie Sanford**, Associate Professor, *Organometallic Chemistry*.
- Roseanne J. Sension**, Professor of Chemistry; Associate Professor, Physics. *Physical Chemistry, Ultrafast Laser Spectroscopy*.
- Robert R. Sharp**, Professor. *Multidimensional and Multiquantum NMR of Paramagnetic Systems*.
- David H. Sherman**, John G. Searle Professor of Medicinal Chemistry; Professor, Microbiology and Immunology; Professor, Chemistry; Research Professor, Life Sciences Institute. *Medicinal Chemistry*
- Jadwiga Sipowska**, Lecturer IV. *General Chemistry*
- Edwin Vedejs**, Moses Gomberg Collegiate Professor of Chemistry. *Organic Chemistry*.
- Nils G. Walter**, Associate Professor of Chemistry; Associate Research Scientist, Biophysics Research Division. *Chemical Biology*.
- John P. Wolfe**, Assistant Professor. *Organometallic Chemistry*.
- Ronald W. Woodard**, Professor and Chair of Medicinal Chemistry; Professor, Chemistry. *Medicinal Chemistry*.
- Charles F. Yocum**, Alfred S. Sussman University Professor of Molecular, Cellular and Developmental Biology; Professor, Chemistry. *Biological Chemistry of Photo Synthesis. Metallobiochemistry, Protein Biochemistry, Electron Transfer*
- Edward T. Zellers**, Professor of Environmental and Industrial Health; Professor, Chemistry *Environmental-Analytical Chemistry*.
- Erik R. P. Zuiderweg**, Research Scientist, Biophysics Research Division; Professor, Biological Chemistry; Professor, Chemistry. *NMR Studies of Biomacromolecular Conformation and Dynamics in Solution*.

**Professors Emeriti:** Lawrence S. Bartell, S.M. Blinder, M. David Curtis, Thomas M. Dunn, B.J. Evans, Adon A. Gordus, Henry C. Griffin, Robert L. Kuczowski, Richard G. Lawton, Lawrence L. Lohr, Daniel T. Longone, Joseph P. Marino, Christer E. Nordman, Paul G. Rasmussen, Peter A.S. Smith, Leroy B. Townsend, Edgar F. Westrum, Jr., John R. Wiseman

# Alumni-Alumnae Reply Form

Please complete and return this form for our alumni files; include news of your current activities or suggestions for the next *Newsletter*:

Name \_\_\_\_\_ Name of Spouse \_\_\_\_\_

University \_\_\_\_\_ Degree \_\_\_\_\_ Year \_\_\_\_\_ Advisor \_\_\_\_\_

University \_\_\_\_\_ Degree \_\_\_\_\_ Year \_\_\_\_\_ Advisor \_\_\_\_\_

Residence Address \_\_\_\_\_ Home Phone \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Firm/Institution \_\_\_\_\_ Position \_\_\_\_\_

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### INFORMATION ABOUT YOURSELF:

(Unless you request otherwise, we will feel free to mention any of this in future *Newsletters*)

I do NOT wish to have this information in the *Newsletter*.

Corrections to address and updates can be sent to: University of Michigan, Chemistry Alumni Office, Department of Chemistry  
930 N. University Ave., Ann Arbor, MI 48109-1055; E-mail: chem.alum@umich.edu

Web Address: <http://www.umich.edu/~michchem>

## University of Michigan DEPARTMENT OF **C**hemistry Alumni Gift Fund



Enclosed is my check (*payable to the University of Michigan*) in the amount of \$\_\_\_\_\_. \*\*

I would like my gift directed toward \_\_\_\_\_.

My employer (or my spouse's) will match my gift(s). The form is enclosed.

I would like my gift directed to the Seyhan N. Ege Faculty Fund.

I would like my gift directed to the Robert W. Parry Award Fund.

I would like my gift directed to the Chemistry Graduate Fellowship Fund.

I do NOT wish to have my gift acknowledged in the *Newsletter*.

\*\* Charge my gift to:  Visa  Master Charge

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\*\* For 2007 charitable deductions and credits, the IRS has ruled that credit card gifts are deductible only in the year the bank processes the transaction. To be processed for tax year 2007, credit card gifts by mail must reach the University by December 15th; OR you may call (888) 518-7888 (toll free) or (734) 647-6179 (local), 9 A.M.- 4 P.M. EST, between December 15th and 31st, 2007. PLEASE HAVE THIS FORM AT HAND FOR YOUR CALL. Your gift by check must be postmarked by December 31, 2007. Thank you!

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Ann Arbor MI 48109-1055

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#### Nondiscrimination Policy Statement

The University of Michigan, as an equal opportunity/affirmative action employer, complies with all applicable federal and state laws regarding nondiscrimination and affirmative action, including Title IX of the Education Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973. The University of Michigan is committed to a policy of nondiscrimination and equal opportunity for all persons regardless of race, sex, color, religion, creed, national origin or ancestry, age, marital status, sexual orientation, disability, or Vietnam-era veteran status in employment, education programs and activities, and admission. Inquiries or complaints may be addressed to the University's Director of Affirmative Action and Title IX/Section 504 Coordinator, 6041 Fleming Administration Building, Ann Arbor, Michigan 48109-1340, (734) 763-0235, TDD (734) 647-1388, FAX (734) 763-2891.