Letter from the Chair

It is a great pleasure for me to send my greetings and to take this opportunity to highlight the activities of the Department this past year—my first year as Chair of the Department. Faculty and graduate student recruiting continued to be major priorities, and I am pleased to report that the Department once again had tremendous success on both fronts.

My colleagues and I are very proud that we hired three of the most outstanding candidates in the nation this year. In February, Dr. Kristina (Kicki) Hakansson accepted our offer to join the Department as Assistant Professor of Analytical Chemistry. Kicki received her Ph. D. from Uppsala University in the laboratory of Professor Per Hakansson and has been a postdoctoral associate with Prof. Alan Marshall of the Ion Cyclotron Resonance Program at the National High Magnet Field Laboratory at Florida St. University. Her research program at Michigan will focus on the development of electron capture dissociation techniques in Fourier transform ion cyclotron resonance spectroscopy. She will apply these powerful new mass spectrometry methods to important biological problems including protein structure determination. As part of her startup package, the College, Department and Life Sciences Institute have provided funds to purchase a FT-ICR Mass Spectrometer, which will be the first such instrument on the Michigan campus. Kicki will begin her career at Michigan on September 1.

In March, we received the exciting news that Dr. Melanie Sanford would join our faculty on July 1. Melanie completed her Ph. D. at the California Institute of Technology under the mentorship of Professor Robert Grubbs, and she subsequently performed postdoctoral research in the laboratory of Professor Jay Groves at Princeton. Melanie’s research will focus on problems in organometallic chemistry, catalysis and asymmetric synthesis at the interface between organic and inorganic chemistry. Shortly after arriving in Ann Arbor this summer, Melanie was named the recipient of the highly prestigious Camille and Henry Dreyfus New Faculty Award—only ten such awards are made nationally each year. Melanie is now the third of our new hires in three years to receive this award (Marc Johnson and John Wolfe received Camille and Henry Dreyfus New Faculty Awards in 2001 and 2002, respectively).

Our third hire this year is Dr. Ioan Andricioaei, who received M.S. and Ph.D. degrees in Chemistry and Biophysics from Boston University under the direction of Professor John Straub. Ioan completed his postdoctoral training at Harvard University with Professor Martin Karplus this past summer. Ioan’s research interests are at the intersection of physical chemistry, theoretical chemistry, and biophysics, and he will be a superb addition to our growing theoretical chemistry effort in the Department. Ioan was hired jointly with the Bioinformatics Program in the Medical School, and his research space will be housed in the Life Sciences Institute buildings once those facilities are completed later in the year.

Other developments on the faculty front include Professor Anna Mapp’s decision to consolidate her appointment to a 100% FTE position in Chemistry effective
September 1. We are delighted that Anna chose to increase her effort in Chemistry! In January of this past year, Professor Will Pearson took a leave of absence to pursue business opportunities with Berry and Associates. We wish Will tremendous success in these new ventures. Professor Billy Joe Evans announced his retirement effective July 1. On behalf of the entire Department, let me take this opportunity to thank BJ for his efforts on so many fronts during the period that he was a member of our faculty, and to wish him health, happiness and success in this next phase of his career. Additional faculty news is provided elsewhere in the Newsletter.

The Department continues to have tremendous success in recruiting outstanding graduate students. The first year class that entered the Department this month numbers 43 students—we intentionally sought a smaller class this year, after a record 65 students entered the program last year. We now have 280 graduate students in the program—a remarkable increase from the ca. 180 graduate students 5-6 years ago. The quality of our graduate students is reflected in the large number of fellowships that our students have received (listed elsewhere in this Newsletter), as well as by the large number of companies who visit the department each fall on recruiting visits.

I am very pleased that the Department continues to receive recognition for its leadership in curriculum and educational reform, as well as in establishing a climate and Departmental culture that encourages and supports diversity. Note-worthy accomplishments on these fronts this past year include the awarding of an ADVANCE grant to the Department—the only such award at Michigan—to support our efforts to increase and expand opportunities for career development and retention of women scientists. No doubt our efforts in the ADVANCE program contributed to the fact that the entering first year class of graduate students this year is 67% women! Also noteworthy is that the Department was selected to participate in the Carnegie Initiative on the Doctorate—we are one of only seven chemistry departments in the nation to receive this distinction. The goals and objectives of the Carnegie Initiative are summarized by Brian Coppola elsewhere in this Newsletter. Finally, the Department continues its efforts to broaden and strengthen our “Chemical Sciences at the Interface of Education” (CSIE) program, which is designed to train students at the undergraduate, graduate, and postdoctoral levels who aspire to careers as future faculty members. Members of the CSIE program have made enormous contributions in the development of an innovative first year “studio chemistry” course, which was piloted this past fall. Brian Coppola comments on these programs in a subsequent section of this newsletter.

The Department has made 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 21st in the nation, and our analytical and organic groups as 11th and 12th, respectively. 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 students to the program.

I am most grateful for your continued support of the Department. I look forward to reporting on additional activities and accomplishments in future newsletters!

Sincerely,
William R. Roush, Chair

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**Spotlight Profiles Graduate Students and Undergraduates**

**Graduate Students**

**Megan McGuigan**

Megan McGuigan is a graduate student in the laboratory of Professor Richard Sacks. Her work focuses on the development of selectivity enhancement methods for high-speed GC separations. The optimization of GC separations using selectivity enhancement techniques involves many variables, which often are varied on a trial and error basis. A spreadsheet model has been developed as part of her project that uses a series of standard equations to calculate the solute band position as a function of time at 1 cm intervals over the course of the separation. Using this model, accurate predictions of retention times have been made with errors <2%. This model is used to optimize methods using pressure tuning, pressure pulse modulation, stop flow operation, high-speed temperature programming, thermal tuning and comprehensive two-dimensional gas chromatography. She has coauthored several papers in analytical chemistry journals and presented her research at national and international conferences on analytical chemistry and chromatography.

Megan received one of the Rackham School of Graduate Studies Outstanding Graduate Student Instructor Awards for the 2002-03 academic year. She was a CSIE
Megan McGuigan

Megan McGuigan is a GAANN Training Grant Fellow for the 2000-01 academic year, and received an American Chemical Society Women’s Chemists Committee Travel Grant in 2001. In her free time, Megan enjoys reading, running, and skiing.

Megan Frost

Megan Frost is a graduate student in the laboratory of Professor Mark Meyerhoff. Megan’s thesis focuses on improving the in vivo biocompatibility and analytical performance of intravascular chemical sensors by using nitric oxide (NO) releasing polymers to coat and/or construct such devices. Megan has developed a new approach for synthesizing novel nitrosothiols derivatized fumed silica, and has further studied the factors that influence the kinetics of NO release from the resulting particles. Megan has also examined the in vivo biocompatibility of several other polymeric NO release materials (developed by other researchers based on diazeniumdiolate chemistry) by working closely with surgeons in the University of Michigan’s Medical School to carry out the required animal studies. In addition, Megan’s work has led to a major discovery that relates to the reduction of nitrosothiols to release NO by ascorbic acid.

Megan received the American Chemical Society Outstanding Graduate Student Award for Research and Teaching and the ACS Analytical Chemistry Summer Graduate Fellowship for 2002-03. She was a CSIE GAANN Training Grant Fellow, which is a Department of Education funded program to help better train the next generation of chemistry faculty. Megan has spoken at several conferences about her work. Megan’s future plans are to pursue an academic career that will allow her to teach both undergraduate and graduate students.

Undergraduate Students

Sarah Uhler

Sarah’s academic honors include the AIC Chemistry Award (Chemistry), the Jerome and Isabelle Karle Mathematics and Natural Science Award, and the Barry M. Goldwater National Scholarship. She was an Angell Scholar for four years at the University of Michigan.

Sarah taught structured study group in her junior and senior years. She gained additional teaching experience at the high school level by co-designing and implementing a two-week chemistry course for high school students enrolled in the Michigan Math and Science Scholars Program over the past two summers. Finally, she worked as a Biology instructor for the Pipeline Program through the School of Dentistry.

Sarah completed her Chemistry thesis in the lab of Dr. Nils Walter (Chemistry) studying the degradation of short RNA using fluorescence techniques to identify RNA sequence and structure elements that determine RNA lifetime. For her Biochemistry thesis, Sarah studied the role of Bcl proteins in the apoptotic signaling cascade of neuroblastoma cells in the laboratory of Dr. Eva Feldman (Neurology). She spent one summer at Washington University investigating the specificity of the malarial protease Plasmepsin II in the laboratory of Dr. Daniel Goldberg (Molecular Microbiology). In addition, under the direction of Dr. Frank Anderson (Obstetrics and Gynecology), Sarah designed and conducted a public health study investigating the possible correlation between maternal mortality and child survival in rural Haiti.

Sarah graduated in May with an Honors B.S. Chemistry in Chemistry and Biochemistry with a minor in French and Francophone Studies. She is currently enrolled in the M.D./Ph.D. program at the University of California, San Francisco.

Andrew H. Weiss

For the past four years at Michigan Andrew Weiss has majored in Biochemistry and Honors Chemistry. During this time Andrew received numerous awards. Those awards include the Senior Leadership, Sidney Fine Teaching Award, Phi Beta Kappa Honors Society, National Starch Chemistry Scholarship, James B. Angell Scholarship, Pharmacia and Upjohn Foundation Summer Fellowship, Moses Gomberg Sum-
New Faculty

Hashim M. Al Hashimi
Assistant Professor of Chemistry and Assistant Research Scientist in Biophysics
Ph.D., MIT
Structure and dynamics of nucleic acids and ribonucleoproteins using NMR spectroscopy

Our laboratory applies solution state NMR spectroscopy to investigate the molecular basis of RNA function in processes ranging from gene expression (e.g., transcriptional activation and translation) to virion functioning (e.g., genome packaging and reverse transcription). We make extensive use of new NMR techniques involving measurements of residual dipolar couplings in determining global aspects of RNA structure, dynamics and interaction.

Although much of our understanding about RNA function comes from analyses of ground-state conformations, structurally distinct excited states accessible through molecular dynamics are frequently the ones carrying out catalysis and undergoing recognition. A central goal of our laboratory is to develop and apply NMR techniques for determining high-resolution RNA structures as a function of time and other reaction coordinates. Research involves biochemical preparation/purification of isotopically labeled RNA samples, design of NMR experiments, and development of theoretical frameworks for analyzing data. Specific areas of interests include the Mg$^{2+}$ induced folding trajectory of the 56-nucleotide P5abc subdomain of the Tetrahymena group I ribozyme important for catalysis, and symmetrical dimerization of homologous genomic RNA strands important for HIV-1 viral replication. In another area, and as part of a multi-institutional RNA structural genomics program, we are developing approaches for high throughput RNA structure determination. These advances will enable large-scale systematic studies.

Robert T. Kennedy
Hobart H. Willard Professor of Chemistry and Professor of Pharmacology;
PhD, UNC
Analytical Chemistry, Chemical Biology, Bioanalytical Chemistry, Chemical Separations, Mass Spectrometry

Our primary goal is to develop nanoscale analytical techniques and explore their use in the measurement of neurotransmitters and hormones both in vivo and at single cells. This goal requires the development of techniques capable of measuring zeptomole (10^{-21} mole) quantities in chemically complex nanoliter samples.
For in vivo measurements, we are coupling capillary zone electrophoresis (CZE) and capillary liquid chromatography (LC) with in vivo sampling methods. The sampling probes continuously remove samples that are periodically and automatically injected into the separation column. In one project, we have developed a 1 s CZE separation of several neurotransmitters which allows high resolution monitoring of neurotransmitter activity. Another project, just underway, involves combining capillary LC with mass spectrometry to discover novel neurotransmitters.

In the area of single cell analysis, we have focused on development of microsensors and confocal fluorescence microscopy for measurement of insulin secreted from cells with millisecond resolution. We are also pursuing analytical methods that allow simultaneous detection of intracellular messengers such as Zn2+, Ca2+, oxygen, and glucose at the same cells.

As we begin to understand the dynamics of extracellular signaling molecules, it also becomes important to understand the intracellular chemical changes that result from the interaction of such molecules with receptors. To facilitate these studies, we are developing techniques based on capillary electrophoresis, fluorescence detection, and mass spectrometry to detect and monitor intracellular signal transduction. Applications include detection of G-proteins, proteins with SH2 domains, and phosphorylated proteins. Such measurements can be considered directed proteomics measurements.

All of these techniques involve development of novel analytical chemistry as well as instrumentation. In addition to the fundamental analytical work, application of these methods to studies of brain and endocrine function as well as diseases such as diabetes, addiction and Alzheimer’s are underway in various collaborations.

**John P. Wolfe**  
Assistant Professor of Chemistry; PhD, MIT  
Organic Chemistry, Organometallic Chemistry, New Synthetic Methods, Catalysis and Asymmetric Catalysis

The invention of new methods, strategies, and reactions is of great importance to the progress of organic synthesis. Chemical technology and knowledge have advanced to a point where, given a sufficient amount of time, money, and manpower, it is possible to synthesize almost any organic molecule known to man. However, the synthesis of important, biologically active molecules in an efficient, practical, economical, and environmentally benign fashion still remains a great challenge to organic chemists. One way to address this challenge is to devise new means of assembling molecules by taking advantage of the unique reactivity of transition metals. To this end, our research is focused on the creation of new metal-catalyzed reactions that are applicable to the synthesis of important molecules. Research in my group will involve aspects of catalyst discovery, asymmetric catalysis and synthesis, the development of new synthetic methodology, the study of new reaction mechanisms, and the total synthesis of natural products. Two representative areas of interest are described below.

*The metal-catalyzed insertion of olefins into small heterocycles.* A large number of tetrahydropyran and pyrrolidine derivatives have been shown to possess useful and interesting biological activity. Our approach to these compounds involves the development of a transition metal-catalyzed insertion reaction of olefins into small, strained heterocycles. This strategy would produce complex molecules in a single step from simple starting materials in a stereocontrolled manner. The utility of this methodology may be demonstrated in the total synthesis of several natural products including plakortone E, hyacinthacine B2, and cylindricines C and D.

*The metal-catalyzed hydroacylation of imines.* Nitrogen heterocycles are a class of compounds that contain interesting, useful, and diverse biological activities. Many of these compounds can be derived from amines that contain a stereocenter adjacent to the nitrogen. However, despite much effort, the development of a generally applicable method for the highly efficient, catalytic, asymmetric synthesis of these compounds remains elusive. Our approach to this problem involves the development of a catalytic, asymmetric intramolecular insertion of imines into aldehyde C-H bonds to form chiral lactams. The lactam products may then be converted into interesting targets, such as indolizidine, pyrrolizidine, and tropane alkaloid natural products.
The Carnegie Initiative on the Doctorate (CID)

In 2002, the Carnegie Foundation for the Advancement of Teaching solicited nationally in four disciplinary areas (chemistry, English, mathematics, and education) for departments that thought they might contribute to the first long-term study of doctoral education in the United States. Our department was subsequently selected as one of seven chemistry departments to join the Carnegie Initiative on the Doctorate (CID), along with Duke, Wisconsin, Colorado, Howard, Ohio State, and Texas.

The following statement is from the program description for chemistry (for additional information, see http://www.carnegiefoundation.org): “It is surely opportune to ask in what ways traditional research training works well, and in what ways it can be done better. The studies and reports that have gone before ours, and our own initial discussions with leading chemists, have revealed some concerns with chemistry doctoral education as it is currently practiced.”

In early June 2003, the first convening of the CID chemistry departments took place near the Foundation’s offices in Palo Alto, CA. The UM team consisted of Professor William Roush (chair), and graduate students Robyn Gdula (Johnson) and Gorka Peris (Vedejs). Professor Brian Coppola, is a member of the CID Chemistry advisory board. Many of the department’s efforts were lauded as both being ahead of the curve and particularly well aligned with the prospective target areas of the CID. In particular, participants were intrigued by our work on future faculty education, implementing of research rotations, facilitating interdisciplinary collaboration, and our efforts to address climate issues that contribute to the choice that individuals make - particularly those from underrepresented populations - to go into chemistry and pursue academic careers.

Our graduates are valued and overlooked sources of information, ideas and energy when it comes to understanding doctoral education. We look forward to working with any and all you who may be interested in these topics. Indeed, by early 2004 you should be hearing from us again as we conduct a survey of our alumni. We intend to do as much of this by electronic communication as possible, so please be sure we have your latest e-mail contact information (please feel free to send an email message with your current contact information to chem.alum@umich.edu).

Chemical Sciences at the Interface of Education (CSIE)

Chemical Sciences at the Interface of Education (CSIE) is a program to broaden the Ph.D. education for students interested in academic careers. In his August 9, 2002 editorial in The Chronicle of Higher Education, Professor Brian P. Coppola concluded: “Professors of the future should arrive on campus as capable of carrying out the full obligation of being faculty members as they are of performing disciplinary research today.”

Since 1994, Coppola and his collaborators have been creating a program that provides a more comprehensive scholarly development for individuals interested in faculty careers - beginning with undergraduate curriculum activities that, like all courses, help identify students with particular talents, and proceeding through post-doctoral activities.

In 1998 and 2001, our second and third successful grants from the U.S. Department of Education Graduate Assistantships in Areas of National Need (GAANN) helped us to establish CSIE (Chemical Sciences at the Interface of Education). CSIE is a training grant program in which Ph.D. students interested in academic careers can add activities in future faculty education to their programs. Blending teaching and carrying out research on teaching and learning, 30 graduate students (singly and in teams) have collaborated with 10 faculty members to design, implement and/or assess educational projects. These graduate students take courses in educational design and assessment, write proposals for projects, present their results, and organize symposia at national meetings (including the Gordon Conferences on Innovations in College Chemistry Instruction). These students organize and run completely a seminar and brown-bag program of internal and external speakers on higher education for the department.

In 2003, the first two graduate students who also participated in the CSIE activities received their Ph.D. degrees. They are Ryan Sweeder (2003, Banaszak-Holl), and Brett Duersch (2003, Beck). In both cases, they presented theses that included chapters of publishable scholarship on design, implementation and assessment of teaching and learning projects alongside their chemical laboratory work.

Broadening the Post-Doctoral for Future Faculty

As the department began to build the components of its program for future faculty education, adding in a component for post-doctoral students was inevitable. While the traditional, research-intensive post-doctoral position is appropriate and desirable for many types of academic positions, we set out to explore the breadth of that model.

In 1996-97, with generous funding from the Research Corporation, Dr. Nancy Goroff (Ph.D. UCLA) extended her post-doctoral in the state of Michigan from 2 years (at Michigan State) to 3 years by adding a year with us in Ann Arbor. While still spending some of her time in East Lansing, Nancy worked with Professors Ege and Coppola learning about teaching practices and education research methods while participating as an instructor in the Structure and Reactivity courses. Nancy received excellent job offers from good departments, including the one from Stony Brook, where she launched her independent academic career. “I have been able to do a better job with less effort because of what I learned on my postdoc,” she wrote after her first year at Stony Brook.

In 2002-03, we put together some internal funding to pursue the post-doc question, again. Dr. Amy Gottfried (Ph.D. UNC) began a jointly mentored post-doctoral position with Professors Banaszak-Holl and Coppola. Armed with instructional development experiences during her graduate education, Amy began a planned three-year stay in Ann Arbor doing laboratory chemistry as a member of Banaszak-Holl’s research group, and also taking over the leadership role for a team of CSIE students designing the “Studio Chemistry” course. As with any excellent post-doc, Amy jumped feet first into these projects and has made superb contributions both to the instructional program of the department and to chemistry in the Banaszak-Holl group.
Faculty News

L.S. Bartell was honored as the Most Influential Member of the local chapter of Alpha Chi Sigma at its national centennial celebration. F.E. Bartell was a founding member of the UM chapter.

Zhan Chen received a Beckman Young Investigator Award and the 2003 Dow Corning Assistant Professorship. The 19th Annual Sarah Goddard Power Award was presented to Seyhan N. Ege, professor emerita, Chemistry. The chemistry curriculum she developed with Brian Coppola has become a model in undergraduate education throughout the United States.

Please join us in congratulating B.J. Evans for receiving the 2003 Regents’ Award for Distinguished Public Service. The award will be presented at an awards ceremony in the fall.

Carol Fierke and Raoul Kopelman are the two senior investigators on a Keck Foundation award for intracellular studies, based on Kopelman’s invention of nano-PEBBLEs (Photonic Explorers for Biomedical use with Biologically Localized Embedding). This started a cross-campus wide investigation of “live cellular inner space” with a nano-toolkit (Nature, May 2, 2003), involving the Engineering, Public Health and Medical schools.

Anthony H. (Rick) Francis, was named UM Associate Vice President for Research by the Board of Regents. Francis’s appointment begins Sept. 1. Francis will succeed James E. Penner-Hahn. Penner-Hahn has served as an Associate Vice President for Research since May 1, 2000. He recently accepted a position as chair of the Biophysics Research Division (BRD), a unit of the Office of the Vice President for Research.

Robert Kuczkowski, emeritus professor, has been appointed as program officer, Special Projects and Education, Chemistry Division at the National Science Foundation in Arlington, VA.

Raoul Kopelman will be honored at a special symposium, the “Kopelman Symposium on Nano-Science and Nano-Technology,” November 14-15, 2003 organized by Anthony Francis, Associate Vice-President for Research at the University of Michigan.

Anna Mapp received the 2002 Basil O’Connol Scholar award from the March of Dimes.

Adam Matzger received the Beckman Young Investigator Award.

Mark Meyerhoff was the 2003 recipient of the ACS Analytical Chemistry Award in Electrochemistry.

Will Pearson was the 2003 recipient of an Arthur C. Cope Scholar Award.

William Roush received the Paul G. Gassman Distinguished Service Award recognizing outstanding service to the organic chemistry community. Roush is also the 2004 recipient of the ACS Ernest Guenther Award for Natural Products Chemistry.

Melanie Sanford received the Dreyfus New Faculty Award.

Ed Vedejs has received the 2004 HC Brown Award for Creative Research in Synthetic Methods, as announced in Chemical and Engineering News.

Nils Walter is the recipient of the 2002 Dow Corning Assistant Professorship. He was the co-organizer of the MI RNA Society Meeting 2002 and the PECRUM Symposium 2003. He was the Session Chair of the “Single Molecule Studies” at the Gordon Research Conference for Nucleic Acids in June, 2003.

John Wolfe received the Dreyfus New Faculty Award, the Research Corporation Innovation Award, the 3M Untenured Faculty Award, and a Lilly New Faculty Grant.

Omar Yaghi is the recipient of the first Department of Chemistry Chairman’s “Award for Excellence in Research”. This award will be given annually to a departmental faculty member showing excellence over the past year in research, service, or teaching. Omar received the award for his work on the synthesis of metal-organic frameworks as new materials for storage of hydrogen and methane. His work resulted in the publication of papers in both Science and Nature this past year.

Graduate Program News

Annual Awards

During the annual awards ceremony, a number of outstanding students were recognized for their research, teaching, and academic achievements. Opening Remarks and Presentation of Awards - Dr. Pecoraro, Chair, Graduate Committee and Professor of Chemistry

Florence Fenwick Outstanding Graduate Student Instructor Award
Presented to Graduate students who taught undergraduate courses in Chemistry during the 2002-03 academic year. Winners are chosen by their contribution to
innovation in the lab or classroom, teaching evaluations, and written recommendation of the Professor. These awards are provided from the Florence Fenwick Memorial Fund.

Jessica Pankuch (Coward)

Seyhan Ege ADVANCE Travel Award
The ADVANCE Travel Award is given to female students who are interested in an academic career and will be attending a conference.

Jessica Pankuch, Seyhan Ege

Wirt & Mary Cornwell Outstanding Graduate Student Research Award
Presented to Graduate students based on research advisor recommendation, publications, posters, meetings presented at, uniqueness of research and nature of research. These awards are provided from the Wirt and Mary Cornwell Prize.

Katherine Wildman (Ramamoorthy)
Kevin Schneider (Banaszak Holl)

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.

Megan Frost (Meyerhoff)

Milton Tamres Outstanding Teaching Award
This award is given by one of our emeritus faculty, Professor Milton Tamres, to recognize outstanding cumulative teaching service.

Curtis Zaleski (Pecoraro)

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 of many. 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 morale and welfare support person. This award is provided by Bob and Carolyn Buzzard.

Melissa Batchelor (Meyerhoff)

American Chemical Society Outstanding Graduate Student Instructor Award
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.

Jessica Hessler (Banaszak Holl)

Milton Tamres Outstanding Teaching Award
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Melissa Batchelor (Meyerhoff)

Seyhan Ege ADVANCE Travel Award
The ADVANCE Travel Award is given to female students who are interested in an academic career and will be attending a conference.

Jessica Pankuch (Coward)
Graduate Student Fellowship Recipients

Graduate Fellowships 2002-2003

Abbott Laboratories Graduate Fellowship in Synthetic Organic Chemistry
   Douglas Mans (Pearson)

ACS Analytical Chemistry Summer Graduate Fellowship
   Megan Frost (Meyerhoff)

Bristol-Myers Graduate Fellowship
   Patrick Stoy (Pearson)

2003 Eastman Chemical Company Analytical Focus School Fellowship
   Jonathan Shackman (Kennedy)

Eastman Kodak Fellowship
   Aaron Aponick (Pearson)

Eli Lilly Graduate Fellowship
   Liming Zhang (Koreeda)

Howard Hughes Predoctoral Fellow
Prestigious and highly competitive national fellowship sponsored by the Hughes Foundation.
   Katherine Wildman (Ramamoorthy)

National Science Foundation (NSF) Fellowship
   Stephanie Gantt (Fierke)
   Maria Rhodes (Walter)
   Scott Shaw (Vedejs)

Pfizer Graduate Fellowship in Organic Chemistry
   Dustin Mergott (Roush)

Pharmacia Graduate Fellowship
   Matthew Zajac (Vedejs)

Rackham Merit Fellowships
Fellowship support funded by the Rackham Graduate School for students from historically underrepresented groups.
   Jason Brown (Curtis)
   Tara Lynn Conser (Coward)
   Joseph Gallegos (Francis)
   Tamiika Hurst (Fierke)
   Obianuju Inya-Agha (Morris)
   William C. Johnson (Chen)
   Rebecca Tinsley (Walter)

Rackham One-Term Dissertation Fellowship
   Marja Huhta (Marsh)
   Tsu-Chien Weng (Penner-Hahn)

Regents’ Fellows
Fellowship supported for students provided by the Regents of the University.
Jeffrey Bartolin (Banaszak Holl)
Zuzanna Cygan (Banaszak Holl)
Timothy DeVries (Vedejs)
Trisha Duffey (Vedejs)
Emily Jameson (Kennedy)
Joshua Ney (Wolfe)
Morris Slutsky (Marsh)
Ryan Sweeder (Banaszak Holl)

Rackham Merit Fellowships, (l to r) Tara Lynn Conser, Obianuju Inya-Agha, Vincent Pecoraro

UNCF/Merck Graduate Science Research Dissertation Fellowship
Dinari Harris (Walter)

Cellular Biotechnology Training Program (CBTP) - Fellow
Megan Frost (Meyerhoff)
Nissa Westerberg (Fierke)

Chemistry-Biology Interface Training Program (CBI) - Fellow
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 at the Medical School and Medicinal Chemistry in the College of Pharmacy.
Gina DeVault (Roush)
Melissa (Hindenlang) Bobeck (Glick)
Zikiya Norton (Mapp)
Jenny Rush (Glick)
Thomas Sundberg (Glick)
Debra Touw (Pecoraro)
Jennifer Willard (Kennedy)

Graduate Assistants in the Area of National Need (GAANN) - Fellow
Enhance teaching and research capacities to increase level 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.
Jeffrey Bartolin (Banaszak Holl)
Emily Burke (Coward)
Robyn Gdula (Johnson)

Integrative Education and Research Training Program (IGERT) - Fellow
Training Grant sponsored by the National Science Foundation for research in materials chemistry.
Annabelle Benin (Yaghi)
Dan Fosnacht (Banaszak Holl)
Brian Haines (Gland)
James Johnson (Matzger)
Gregory Less (Rasmussen)
Cheryl Loch (Chen)
Bonnie Ludwig (Banaszak Holl)
Andrew Millward (Yaghi)
Jamie Nichols (Zellers)
Katherine Plass (Matzger)
Christopher Price (Matzger)
Dusty Sawall (Yaghi)
Matthew Stewart
Michael Stewart (Johnson)

Medical Scientist Training Program (MSTP) - Fellow
Steven Rowe (Mapp)

Molecular Biophysics Training Grant (MBTG) - Fellow
John Hoerter (Walter)
Joslyn Kravitz (Pecoraro)
Thomas Kuntzleman (Yocum)
Amy Wu (Pecoraro)

Pharmacological Sciences & Biorelated Chemistry Training Program (PSTP)
Garrette Belanger (Mapp)

Program in Biomedical Sciences (PIBS) - Fellow
Benjamin Farrar (Glick-PIBS)
Lance Rider (Fierke-PIBS)

Regents Fellows (back l to r) Timothy DeVries, Vincent Pecoraro, Joshua Ney
(front l to r) Trisha Duffey, Zuzanne Cygan, Jeffrey Bartolin, Emily Jameson
Graduate Degrees
Doctorates for August, December 2001 & May 2002

Patricia C. Ackroyd (Gary Glick)
The Thermodynamic Sources of Affinity and Sequence-Specificity: Analyses of Binding by Autoantibodies.

Neil B. Blatt (Gary Glick)
Characterization of Novel Pro-Apoptotic Benzodiazepine.

Matthew Braun (Omar Yaghi)

Matthew Brukwicki (M. David Curtis)
Structure-Property Relationships in Bithiophene and Bithiazole Polymers.

Hung-Wei Chih (E. Neil G. Marsh)
The Free Energy Profile of the Reaction Catalyzed by Glutamate Mutase.

Joanne Cleary (Gary Glick)
Role of Binding Site Residues in the Sequence-Specific Recognition of ssDNA by An Autoantibody.

Olivia de Carmejane (Michael Morris)
Investigation of DNA Electrophoretic Migration Dynamics by Capillary Electrophoresis and Three-Dimensional Fluorescence Video-Microscopy.

Sunil Dourado (Raoul Kopelman)
Advances in Fluorescent Ion and Gas Sensors.

Jaehong Han (Dimitri Coucouvanis)
Synthesis of the Clusters with the MoFe3S3 Core and Core Rearrangements of Conditions.

Jennifer Suzanne Holt (Anthony Francis)
Spectroscopy of MPS3DAMS+ Composite Materials.

Maureen Therese Kachman (David Lubman)
The Development of Separations and Mass Spectrometry Technologies for the Analysis of Biomolecules.

Maricel Kann (Richard Goldstein)
Protein Sequence Alignment: Theory, Algorithms and Optimal Score Function.

Jeongkwon Kim (David Lubman)
Application of On-line Capillary Electrophoresis/Tandem Mass Spectrometry to the Study of Myelin Basic Proteins.

David William Konas (James Coward)
New Syntheses of Optically Active Fluoroamino Acids and Methods for their Application to the Study of y-Glutamyl Hydrolase and Polyglycyl-y-Glutamate Synthetase.

Amy B. Koren (David Curtis)
Side-Chain Control of Morphology in Bithiazole Oligomers.

Hailian Li (Omar Yaghi)

Prashanti Madhavapeddi (E. Neil G. Marsh)
Identifying the Active Site of Adenosylcobalamin-Dependent Glutamate Mutase.

Jason S. Newcom (William R. Roush)
Studies Directed Toward the Total Synthesis of Tedanolide and Studies of Conformationally Controlled E2 Elimination Reactions in Acyclic Systems.

Kenneth Thomas Nicholson (Mark M. Banaszak Holl)
The Nature of Si-H Bonds in Model Device Interfaces.

Ipsita Roymoulik (E. Neil G. Marsh)
Mechanistic Studies of the Glutamate Mutase Reaction.

Matthew W. Schiesher (Arthur J. Ashe, III)
Synthesis and Chemistry of Aromatic Heterocycles Involving Sulfur and Boron.

Thomas Smith, II (Vincent Pecoraro)
Exploring Reactive and Spectroscopic Models of the Vanadium Haloperoxidases.

Corey D. Steffek (Omar M. Yaghi)
Functionalized and Mixed Metal-Organic Frameworks.

Catherine Perso Tarnowski (Michael D. Morris)
Raman Spectroscopic Studies of Early Mineralization in Biological Tissues.

Daniel B. Wall (David Lubman)
Development of Novel Multi-dimensional Separation Methods for Analysis of the Reversed Phase HPLC, MALDI TOF/MS.

Doctorates for August, December 2002 & May 2003

Jeffrey J. Bednarski II (Gary Glick)
Modulation of Activation-Induced Cell Death in Lymphocytes by a Pro-Apoptotic Benzodiazepine.

Murphy Brasuel (Raoul Kopelman)
Liquid Polymer Nano-Optodes for Intracellular Applications: Fibers and Pebbles.

Jason R. Brown (M. David Curtis)

Jie Cao (M. David Curtis)

Angela Carden (Michael Morris)
Effects of Applied Load on Bone Ultrastructure Explored by Raman Microspectroscopy and Imaging.

Stephanie E. Gabelnick (James Penner-Hahn)
Kevin J. Hallock  (A. Ramamoorthy)  
Investigation of Membrane-Disruption by Peptides Using Solid-State NMR Techniques.

Rick L. Hamler  (David Lubman)  

Matthew C. T. Hartman  (James Coward)  
The Synthesis of 5-Fluoro Glycosides and Pyrophosphates and Their Use in Mechanistic Studies in Carbohydrate Enzymology.

Wen-Yuan Hsieh  (Vincent Pecoraro)  
Synthesis and Reactivity of the High-Valent Monomeric and Dimeric Manganese Complexes.

Srikanth Kidambi  (A. Ramamoorthy)  
Investigation of Cadmium and Zinc Complexes Using Solid-State NMR and \textit{ab initio} Calculations.

Roxanne K. Kunz  (William Roush)  
Studies Toward the Total Synthesis of Quartromicin D$_3$.

Anderson L. Marsh  (John Gland)  

Karla A. Miller  (Mark Banaszak Holl)  
C-H and C-C Bond Activations of Organic Molecules by Stable Germynes.

Sridhar Narayan  (William Roush)  
Methodology for the Synthesis of 2-Deoxy-\(\alpha\)-Glycosides and Studies Directed Towards the Total Synthesis of Angelimycin B (Hibarimycin B).

Joel C. Nemes  (M. David Curtis)  
The Synthesis and Characterization of Conjugated Phenylene Vinylene Violgen Dimers.

Hanh N. Nguyen  (Joseph Marino)  
Developing Methodology for the Total Synthesis of Oxazole-Triene Antibiotics.

Laura M. Rozan  (Robert Fuller)  
A Biochemical Analysis of Substrate Specificity for the \textit{Saccharomyces cerevisiae} Endoprotease, Kex2, and the Kex2-related Prtl Protease from \textit{Pneumocystis carinii}.

Bradley M. Savall  (William Roush)  
Synthesis of the Formamimic Aglycon and Development of \(\alpha\)-Alkoxo Propargylstannanes for the Synthesis of 1,2-Antidiol Derivatives.

William J. Smith  (William Roush)  
Selected Studies in Asymmetric Synthesis: I. Factors Which Control the Stereochemistry of Methyl Ketone Aldol Reactions II. An Experimental Test for the Involvement of Boat-Like Transition States in Methyl Ketone Aldol Reactions III. Studies Directed Towards the Total Synthesis of Apoptolidin.

Todor I. Todorov  (Michael Morris)  
Capillary Electrophoresis and Migration Dynamics of RNA.

Tincuta M. Veriotti  (Richard Sacks)  
Selectivity Enhancement for High-Speed GC and GC Time-of-Flight MS Using a Tandem Column Ensemble and Stop-Flow Operation.

David T. Vodak  (Omar Yaghi)  
Directed Assembly of Structures Using Coordination and Covalent Bonding.

Haixing Wang  (David Lubman)  
Interlysate Comparison Studies of Human Ovarian Cancers - Development and Application of a Two-Dimensional Liquid Separation/Mass Mapping Technique.

Don L. Warner  (Edwin Vedejs)  
Oxazolium Salt/Azomethine Ylide Approach to Aziridinomitosenes.

Derek W. Yoder  (James Penner-Hahn)  
Physical Characterization of Manganese Catalase and its Halide-Bound Forms.

Huiping Zhang  (Mark Meyerhoff)  
Development of Nitric Oxide-Releasing Polymers with Improved Blood Compatibility.
Research Experiences for Undergraduates (REU) Program Summer 2002 & 2003

The National Science Foundation creates opportunities for undergraduates to join research projects each summer. One of the principle vehicles of NSF support for such projects is through the Research Experience for Undergraduates (REU) program.

The REU program involves students in ongoing research projects and proposals being conducted at the University of Michigan, and thus allows them to experience first-hand how basic research is conducted at an internationally prestigious university. For the past 14 years, the University of Michigan has invited students from around the country to spend a summer on campus working closely with faculty and graduate student mentors, conducting research in their area of interest. The REU program is an excellent way to reach into the student talent pool and encourage the participation in chemical research of women, underrepresented minorities, persons with disabilities, and students from institutions where research opportunities may be limited.

The Department of Chemistry provides abundant opportunities for individuals to work in tandem as researchers, educators, and students, engaged in joint efforts that encourage educational discovery through a range of learning perspectives. The REU program reflects the Department’s conviction that collaborative intellectual relationships are an essential component of successful learning experiences. Dr. Brian P. Coppola coordinates the Department’s REU program, which runs for 10 weeks during the summer.

In response to the increasing requests from non-U.S. citizens for summer research experience such as the REU program provides, the UM Rackham Graduate School this year provided matching funds to bring 2 such undergraduate researchers onto campus in an expansion of the traditional program.

Summer 2002 REU Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Sracic</td>
<td>Wash &amp; Jefferson</td>
</tr>
<tr>
<td>Stephen Chen</td>
<td>Muhlenberg College</td>
</tr>
<tr>
<td>Carla Salomoni</td>
<td>Florida Atlantic U.</td>
</tr>
<tr>
<td>Stefan Kilyanek</td>
<td>Grand Valley State</td>
</tr>
<tr>
<td>Matthew Kelley</td>
<td>John Carroll U.</td>
</tr>
<tr>
<td>Ramona Schaeffer</td>
<td>U of Wyoming</td>
</tr>
<tr>
<td>Todd Gruber</td>
<td>U of Utah</td>
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<tr>
<td>Sarah Zeile</td>
<td>U of M</td>
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<tr>
<td>Donald Allison</td>
<td>U of M</td>
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<tr>
<td>Maria Pak</td>
<td>Missouri Western</td>
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<tr>
<td>Yevgeniv Kondrateno</td>
<td>Howard U.</td>
</tr>
<tr>
<td>Delon Wilson</td>
<td>Monterrey</td>
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<tr>
<td>Gabriela Lopez de Lara</td>
<td>Monterrey</td>
</tr>
<tr>
<td>Paola Gutierrez Penagos</td>
<td>Cambridge</td>
</tr>
</tbody>
</table>

Summer 2003 REU Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damian Carrieri</td>
<td>Washington &amp; Jefferson</td>
</tr>
<tr>
<td>Sara Koenig</td>
<td>Yale</td>
</tr>
<tr>
<td>Anne Marie Laake</td>
<td>Earlham</td>
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<tr>
<td>David (Sam) Oxley</td>
<td>Virginia Tech</td>
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<td>Daniel Paluchowski</td>
<td>U of Maryland</td>
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<tr>
<td>Rebecca Roush</td>
<td>Wellesley</td>
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<tr>
<td>Jesse Savickas</td>
<td>U of N. Carolina</td>
</tr>
<tr>
<td>Kate Sensenig</td>
<td>Muhlenberg</td>
</tr>
<tr>
<td>Ryan Trovitch</td>
<td>King’s College</td>
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<tr>
<td>Sarah Zeile</td>
<td>U of Michigan</td>
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<tr>
<td>Roseanne Sension</td>
<td>Gary Glick</td>
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<td>James Coward</td>
<td>James Penner-Hahn</td>
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<td>John Wolf</td>
<td>Gary Glick</td>
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<tr>
<td>Anna Mapp</td>
<td>Richard Sacks</td>
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<tr>
<td>Richard Sacks</td>
<td>Mark Banaszak-Holl</td>
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<tr>
<td>Brian Coppola</td>
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</tbody>
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Sokol Visit

Each year the department sponsors a reception to welcome distinguished benefactress, Mrs. Margaret Sokol to campus. The yearly visit provides an opportunity for Mrs. Sokol to meet with current and past recipients of the Margaret and Herman Sokol Fellowship.

Established in 1991, the fellowship is awarded on a yearly basis to eight incoming freshmen. In addition to the Sokol Scholars program, Mrs. Sokol is responsible for the Margaret and Herman Sokol Faculty Award in the Sciences program. Faculty award recipients are selected by Rackham Graduate School and give a lecture on campus in the spring.

2002 SOKOL award recipients:
Lauren Joan Wilkinson
Nicole J Smith
Chaim Aryeh Schramm
Anna Marie Meerman-Bader
James Merico Mainero
Carolyn Montse Johnson
Jennifer M. D’Souza
James Terrance Carson
Undergraduate Awards and Sponsors 2002– 2003

2002

2001-02 Margaret and Herman Sokol Scholarships
Alexandra Achen, Ian Campbell, Amanda Fox, David Hucul, Anna Hodges, Jason Krol, Michelle Ramia

CRC Outstanding Freshman Achievement Award
Lev Prasov

First Year Chemistry Achievement Awards
Alexandra Achen, Laura Gadzala, Ann Haas, Shauna Puhl, Sahand Rahnama-Moghadam, Sara Scott, Eric Watt, Alexander Wong

AXE Outstanding First Year
Rudolph Kohn

Summer Research Funding

Abbott Labs
Justin Christy (Vedejs), Meredith Miller (Roush)

Alumni
Austin Cole (Johnson), Diana Dinh (Johnson), Adam Goldberg (Yaghi), Gary Klein (Meyerhoff), Todd Mekjian (Fierke)

Amoco Fdn
Adam Grzesiak (Matzger)

Gomberg
Michael McCormick (Pecoraro), David Wenzler (Matzger)

Harris
Alex Poniatowski (Mapp), Costas Lyssiotis (Glick)

Lilly
Nicole Tuttle (Vedejs)

Pfizer Inc.
Semyon Zarkhin (Koreeda)

Pharmacia & Upjohn Fdn
Todd Senecal (Koreeda), Alefiyah Mesiwala (Mapp)

Smeaton
Ron Smaldone (Townsend)

Outstanding Second Year Student
Bethany Percha (Coppola)

Goldwater Scholars
Alefiyah Mesiwala (Mapp), Semyon Zarkhin (Koreeda)

Honors College Vanko Award
Samantha Tarras (Votjek)

Carlene Friedley Scholarship
Nousheen Humayun (Uhler), Sarah Uhler (Walter)

Lubrizol Scholarship
Alefiyah Mesiwala (Mapp)

National Starch Scholarship
Zachary Nagel (Yocum), Andrew Weiss (Vedejs), Semyon Zarkhin (Koreeda)

ACS Analytical Chemistry Award
Brandon Odom (Marino)

Merck Index
Erik Epp (Griffin), James Trenkle (Roush), Joseph Wachter (Yaghi), Pamela Wong (Fierke), Zeynep Yilmaz (Nichols)

ACS Outstanding Senior Leadership Award
Phillip Sekella (Walter)

S.N. Ege WISE Award
Hillary Peltier (Townsend)

AIC Biochemistry Award
David Rosen (Coward)

AIC Chemistry Award
Ian Stewart (Coppola)

Margaret and Herman Sokol Scholars (left to right) David Hucul, Jason Krol, Anna Hodges, Michelle Ramia, Ian Campbell. (Not present) Alexandra Achen, Amanda Fox.

AXE Outstanding First Year Award (left to right), Prof. Brian Coppola, Rudolph Kohn, Ronald Smaldone.
Summer Research Fellowships (first row left to right) Austin Cole, Diana Dinh, Alefiya Mesiwala, Nicole Tuttle, Semyon Zarkhin (second row left to right) Adam Grzesiak, Gary Klein, Michael McCormick, Todd Mekjian (third row left to right) Alex Poniatowski, Todd Senecal, David Wenzler, Ronald Smaldone.

Upperclass Awards (front left to right) Bethany Percha, Joseph Wachter, David Rosen, Samantha Tarras, Brandon Odom (back left to right) Zeynep Yilmaz, Erik Epp, Bruce Roth, Pfizer V.P. Chemistry, Prof. Joseph Marino, Ian Stewart, Pamela Wong

First Year Awards (front left to right) Rudolph Kohn, Sahand Rahnama-Moghadam, Lev Prasov, Eric Watt (back left to right) Sara Scott, Shauna Puhl, Laura Gadzala.

Margaret and Herman Sokol Scholars (left to right) James Carson, Lauren Wilkinson, James Mainero. (Not present) Jennifer D’Souza, Carolyn Johnson, Anna Meerman-Bader, Chaim Schramm, Nicole Smith

Scholarships (front left to right) Sarah Uhler, Meredith Miller, Nousheen Humayan, Alefiya Mesiwala. (back left to right) Justin Christy, Zachary Nagel, Semyon Zarkhin.

ACS Leadership Award (left to right) Prof. Brian Coppola, Phillip Sekella

S.N. Ege WISE Award (left to right) Prof. Seyhan Ege and Hillary Peltier.
2003

2002-03 Margaret & Herman Sokol Scholarships
James Carson, Jennifer D’Souza, Carolyn Johnson, James Mainiero, Anna Meerman-Bader, Chaim Schramm, Nicole Smith, Lauren Wilkinson

CRC Outstanding Freshman Achievement Award
Walter Haberaecker

First Year Chemistry Achievement Awards
James Carson, Ryan Grant, Allison Hardin, Jenny Knoester, Pelton Phinizy, Chaim Schramm

AXE Outstanding First Year
Rebecca Farmer; Chen/Kramer

Summer Research Funding
Abbott Labs
Kate Longcore (Townsend), Lev Prasov (Mapp), Todd Senecal (Koreeda), Milad Sharifpour (Coppola)
Alumni
Donald Allison (Yagbi), Brian Church (Koreeda)
Gomberg
Shailesh Agarwal (Matthews), Alan Poon (Ramamoorthy)
Harris
Elizabeth Cordara (Uhler), Rami Kassis (Morris), Arieh Kestler (Koreeda), Sanyo Tsai (Coward)
Lilly
Eric Chanowski (Coppola)
Pfizer Inc.
Paul Tanis (Koreeda)
Pittsburgh Plate & Glass
Esther Joo (Coward), Zachary Tolstyka (Matzger), Eric Watt (Al-Hashimi)
Smeaton
Costas Lyssiotis (Glick)

Outstanding Second Year Student
Alan Poon

Goldwater Scholars
Bethany Percha-2003; Alefiyah Mesiwala (Mapp)-2002; Sarah Uhler (Walter)-2001; Semyon Zarkhin (Koreeda)-2002

Honors College Vanko Award
Zachary Nagel (Yocum)

Carlene Friedley Scholarship
Kate Longcore (Townsend), Bethany Percha

Lubrizol Scholarship
Costas Lyssiotis (Glick)

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Alefiyah Mesiwala (Mapp)

AIC Biochemistry Award
Semyon Zarkhin (Koreeda)

AIC Chemistry Award
Sarah Uhler (Walter)

First Year Awards (front left to right)
Jenny Knoester, Pelton Phinizy, Walter Haberaecker, (back left to right) James Carson, Allison Hardin, Prof. Brian Coppola, Ryan Grant.
Summer Research Fellowships (first row left to right) Esther Joo, Sanyo Tsai, Milad Sharifpour, Brian Church, Kate Longcore, Elizabeth Cordara (second row left to right) Zachary Tolstyka, Paul Tanis, Alan Poon, Costas Lyssiotis, Lev Prasov, Eric Watt, Donald Allison, Eric Chanowski, Shailesh Agarwal, Rami Kassis, Arieh Kestler.

AXE Outstanding First Year Award (left to right) Michael Kramer, Rebecca Farmer, Prof. Zhan Chen

ACS Leadership Award (left to right) Andrew Weiss, Prof. Paul Jones (Huron Valley ACS)

S.N. Ege WISE Award (left to right) Prof. Seyhan Ege, Faith Boman, Dr. Cinda Sue Davis.

Scholarships (front left to right) Paul Tanis, Costas Lyssiotis, Eric Chanowski, Kate Longcore, Lev Prasov

Upperclass Awards (front left to right) Michael McCormick, Sarah Uhler, Meredith Miller, Alefiyah Mesiwala, Kate Longcore (back left to right) Adam Grzesiak, Jason Rush, Alan Poon, Prof. William Roush, Prof. Terry McDonald, Alex Pontatowski, Zachary Nagel, Justin Christy, Semyon Zarkhin.
Bachelors Degrees
August, December, 2001 & May, 2002

Chemistry

**August 2001:**
Charles John Strohacker, Jr.
Jason Gordon Weatherhead

**December 2001:**
Eric Joseph Anderson
Michael Zachary Asuncion
Adam Christopher Beck
Albert John Gelles
Michael James Huck
Ha Son Nguyen
Erica Lynn Nuechterlein
Kelly Lynne Shaffer
Phillip Edward Sholtes
Kelly J. Stankiewicz

**May 2002:**
Brad Cameron Bailey
Meghan Eileen Burns
Shan-Mei Chiu
Jorge Ivan Contreras
Jessica Regina Elmore
Joshua David Hansen
Monica Julie Kalman
Hillary Maria Peltier
Luke Thomas Redman
Wendy Elizabeth Schumacher

Daniel Stein
Ian Christopher Stewart
Brett Alan Teran
James Douglas Trenkle
Clifford Charles Wakeman

Biochemistry

**August 2001:**
Ryan Patrick Breideweg
Leslie Wei Chinn
Darrell B. Joyce
Brian Richard Magnuson
Karen Ann Soules

**December 2001:**
Matthew Wallace Buczynski
Jarvis Wyatt Carter, Jr.
Nicholas Freeman Oeming
Kelly Lynne Shaffer

**May 2002:**
Elvera Baron
Rhiannon Katherine Biddick
Meghan Eileen Burns
Lam Chang
Elizabeth Mary Cook
Steven John D’Sa
Elizabeth Du

Lecia Erin Harmer
Jonathan Morgan Kirley
Scott T. Laughlin
Philip Francis Lobert
Hillary Ann Loomis
Beth Rose Manoogian
Daniel Miller
Kathryn Evelyn Morris
Sapna Nagar
Joshua Allan Newsted
Stacy Chioma Obioku
Matthew William Pennington
Amanda Marie Preston
Luke Thomas Redman
Joao Pedro A. Reinhard
David Aaron Rosen
Phillip Trabert Sekella
Robert Daniel Shereda
Stephanie Alise Steinhoff
Mark Francis Suchter
Katsuhiko Sueda
Samantha Leigh Tarras
Gregory Daniel Tchou
Pamela Tinmoi Wong
Zeynep Naciye Yilmaz
Alissa Renee Zuellig

Chemistry

**August, December, 2002, May 2003**

Daniel Stuart Goldberg
Amran Ali Gowani
Adam Leo Grzesiak
Brent Christopher Jacobs
James Klein Leonard
Michael Scott McCormick
Meredith Wetherbee Miller
Abinash Mishra
Zachary David Nagel
Alexander James Poniatoowski
Vincent A Rogalski
Jason Samuel Rush
Gurpartap Singh Sahota
Ronald Alexander Smaldone
Guru Prasad Srinivas
Michael Christophe Stagliano
Sarah Ann Uhler
Andrew H Weiss
David Lawrence Wenzler
Vinay Yakkundi

Biochemistry

Gina Carol Bane
Foaz Mohammad Kayali
Bradley P Martin
Justin R Hamilton
Preetha Janaky Iyengar
Andreea Na Neaga
Chukwuemeka Obiora
Thomas John Reedy
Andrea Olivarez Sethi
Jerry Yuan
Nicholas David Armstrong
Michael L Bass
Katherine Anne Braunstein
Georgina Maria Cirrincione
Nancy Lynn Duncan
Katie Eileen Easton
Whitney Elizabeth Elliott
Katie Anne Eschenburg
Leslie Ann Field
Graduation 2003!

Visit our website at http://www.umich.edu/~michchem for the latest news.
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.

**Sultan T. Abu-Orabi** (PhD 1982, Ashe) is Dean of Student Affairs at Yarmouk University (Jordan). He organized the Third Jordanian International Conference in Chemistry held in April 2000 at his institution.

**Irving M. Adler** - has recently taken a position as Adjunct Professor at Indiana Purdue Fort Wayne University in the Department of Business. He is also active as an international consultant in the wire and cable industry.

**Lester M. Deguzman** (BSC 1996; MPH 1998 Michigan; MD 2002, Wayne St.) is a resident in Family Practice at Providence Hospital, Southfield, MI.

**Theodore S. Dibble** (PhD 1992, Bartell) was promoted to associate professor of chemistry at SUNY College of Environmental Science and Forestry Syracuse, NY, in spring 2002.

**Ron C. Gaba** (BS 1998) graduated from UM Medical School in June 2002. He is a resident in Radiology at the University of Illinois at Chicago.

**Rony Harlan** (MS 1936) has retired from a career in research and material development at Wright Patterson Air Force Base in Dayton, OH.

**Ramy Hassan** (BS 1998) is a regional chemical research associate for United Health Care of Basking Ridge, NJ.

**Morton Z. Hoffman** (PhD 1960, Bernstein), professor of chemistry at Boston University, is the 2002 recipient of the New England Association of Chemistry Teachers’ John A. Timm award for his excellence in chemical education.

**Leah Hollier** (BS 2000) is an account manager at Xerographic Solutions in Plymouth, MI.

**Taha Jamil** (BS 1996) has graduated from medical school and started residency in Physical Medicine and Rehabilitation at Ohio State University.

**Raymond Jasinski** (BS Chem. 1954; PhD 1958, Iowa State) has retired to Cape Cod from Schlumberger Ltd, where he spent 15 years as a senior scientist in oilfield chemistry. He published nominally 100 papers and patents, primarily in electrochemistry.

**Timothy Jiggens** (BSC 1992) is a Lieutenant in the United States Public Health Service Commissioned Corps. As an Environmental Health Officer, he is assigned to the Chemical Demilitarization Branch of the Centers for Disease Control and Prevention to provide support to the Army’s chemical weapons destruction programs.
In Memoriam

We were sorry to learn of the deaths of the following alumni, alumnae and friends of the Department.

Beulah R. Elving, wife of deceased Emeritus Professor Philip J. Elving, passed away on Jan. 6, 2003 in DeKalb, IL. Her volunteer work in the Ann Arbor community was extensive. For many years, she regularly attended the Philip J. Elving biennial lecture and she was beloved by chemistry faculty and spouses for her warm friendship and wisdom.


Edward James (BS 1937) died on June 15, 2001. He spent his career at Sherwin Williams, Los Alamos National Laboratory and Livermore National Laboratory. He remained a consultant with LNL until his death. He was an expert in the development of high explosives and energetic materials.

Oliver Johnson (PhD, 1943) died on July 10, 2001. He is survived by his wife, Phyllis Hewitt Johnson.
Hashim Al Hashimi, Assistant Professor. Chemical Biology.

Ion Andricioaei, Assistant Professor. Chemical Biology.

Arthur J. Ashe III, Professor. Organometallic Chemistry.

Mark M. Banaszak Holl, Associate Professor. Synthetic and Mechanistic Solution, Surface, and Solid State Chemistry.


Larry W. Beck, Assistant Professor. Analytical NMR spectroscopy of Materials; Zeolite Catalysis.

Heather A. Carlson, J. D. Searle Assistant Professor of Medicinal Chemistry and Chemistry, Computational Chemistry, Drug Design, Theoretical Biophysics.

Mary Anne Carroll, Associate Professor, Chemistry and Atmospheric, Oceanic and Space Sciences. Chemical Kinetics, Atmospheric Chemistry.

Zhan Chen, Assistant Professor. Biomaterial and Polymer Surface, Biocompatibility.


Dimitri Coucouvanis, Lawrence S. Bartell Professor. Synthesis, Structures and Reactivities of Metal Clusters and Supramolecules.

James K. Coward, Professor, Medicinal Chemistry and Chemistry. Bioorganic Chemistry and Medicinal Chemistry.

M. David Curtis, Professor. Organometallic and Conducting Polymers.


Carol A. Fierke, Professor, Biological Chemistry.


Eitan Geva, Assistant Professor. Theoretical and Computational Chemistry.


Gary D. Glick, Werner Bachmann Professor. Bioorganic Chemistry, Molecular Recognition.

Henry C. Griffin, Professor. Nuclear Chemistry: Gamma-Ray Spectroscopy of “Hot” and “Cold” Nuclei.


Kristina Hakansson, Assistant Professor. Analytical Chemistry.

Marc Johnson, Assistant Professor, Inorganic Synthesis.

Robert T. Kennedy, Professor. Analytical Chemistry.

Nancy K. Kerner, Lecturer, Coordinator of General Chemistry Laboratory. Chemical Education: Learning and Instructional Methods.


Masato Koreeda, Professor, Chemistry and Medicinal Chemistry. Synthesis of Natural Products. Small Molecule-DNA Interaction, Chemical Carcinogenesis, Glycobiology.


Anna K. Mapp, Assistant Professor. Organic Chemistry, Chemical Biology, New Synthetic Methods.

E. Neil G. Marsh, Associate Professor. Enzymes: Structure, Mechanism, and Specificity; Protein Engineering and Molecular Recognition.

Rowena G. Matthews, Professor. Biological Chemistry.

Adam J. Matzger, Assistant Professor. Organic, Polymers/Organic Materials.

Mark E. Meyerhoff, Professor. Bioanalytical Chemistry, Electrochemical and Optical Sensors.


Kathleen V. Nolta, Lecturer. Organic Biochemistry.


Vincent L. Pecoraro, Professor. Synthetic Inorganic and Bioinorganic Chemistry.

James E. Penner-Hahn, Professor. Physical Chemistry and Inorganic Spectroscopy.

A. Ramamoorthy, Assistant Professor and Research Scientist, Chemistry and Biophysics Research Division. Structural Studies of Biological Molecules.

Paul G. Rasmussen, Professor. Polymer/Inorganic Chemistry.


Richard D. Sacks, Professor. High Speed Analytical Separations.

Melanie Sanford, Assistant Professor. Organometallic Chemistry.

Roseanne J. Sensing, Associate Professor. Physical Chemistry, Ultrafast Laser Spectroscopy.


Dotie Sipowska, Lecturer, General Chemistry.

Edwin Vedels, Moses Gombarg Professor. Organic Chemistry.

Nils G. Walter, Assistant Professor. Chemical Biology.

John P. Wolfe, Assistant Professor. Organometallic Chemistry.

Ronald Woodward, Professor. Medicinal Chemistry.

Omar Yaghi, Professor. Materials Chemistry.

Charles F. Yocum, Professor. Biological Sciences and Chemistry. Biological Chemistry of Photosynthesis.

Edward T. Zellers, Associate Professor, Chemistry and Environmental and Industrial Health. Environmental-Analytical Chemistry.

Erik R. P. Zuiderweg, Professor, Chemistry and Biophysics. NMR Studies of Biomacromolecular Conformation and Dynamics in Solution.

Views of Campus & Chemistry
Alumni Survey

As I am now beginning my second year as Chair of the Department of Chemistry, I have been thinking about some of the experiences and acquaintances I have enjoyed in this new role. A real highlight of this past year was the opportunity I had to learn about departmental alumni from all over the country. There is a tremendous wellspring of support for Michigan’s Chemistry program from our alumni, people like you whose gifts over the years have meant a lot to the department. Many alumni have written personally to wish me well; others have sent tangible good wishes in the form of annual gifts to support the department. I am writing now to thank you for your goodwill to the department, and to tell you a little about my plans for the future.

In conversations with my fellow faculty and with alumni who serve on the Department’s Alumni Advisory Committee, I have explored a number of ways in which we might do a better job of reaching out to our alumni. Among the suggestions we are considering is an annual (or bi-annual) “Alumni Day” that would offer a mix of intellectual and social programming designed to appeal to alumni from all walks of “life after Chemistry.” I hope to continue these discussions over the next year with a view toward implementing some sort of pilot program in 2004. A key part of this effort will begin with a survey of alumni that is inserted into our annual newsletter, attached. I would encourage you to take a look at the survey, fill it out and send it back to me. Your input would be very helpful to us as we go forward.

The annual newsletter has information about some of the past year’s accomplishments of our faculty and students. There is much to be proud of and many who justly deserve recognition. I am particularly pleased that so many of our faculty and students have received awards for their scholarly accomplishments. Our continued successes in recruiting top notch faculty and students is definitely something we will strive to continue this year also!

I hope that you will continue to support the Department as we go forward. I have been gratified to know that you, and others like you, have been instrumental in our continuing success, and I thank you for it. I hope to hear from you in future and will look forward to our continuing pleasant association.

Sincerely,
William R. Roush, Chair
Alumni Survey

Name: _____________________________________________________________________________________________
Preferred Mailing Address: _____________________________________________________________________________
Telephone: (     ) ______________________ Email:  _____________________________________________
Degree information: ___________________________________________________________________________________
If Ph.D. degree conferred, mentor’s name: _________________________________________________________________
Occupation: _________________________________________________________________________________________
Business address (if different from above): ________________________________________________________________
Business telephone: (     ) _______________________ Business email:  _____________________________________

The Department of Chemistry is contemplating a number of outreach activities to engage alumni. If invited back to campus for a reunion-like activity, what is the likelihood you would attend such an event:
__ Very likely ___ Somewhat likely ___ Not very likely

What programming would influence your decision to attend?
__ Intellectual presentation related to my career
__ Substantive scientific talk for more general audiences
__ Activities for pre-college children
__ Opportunity to meet with current students and faculty
__ Alumni mentoring and/or recruiting session with current students
__ Invitation to meet with former faculty and mentors  (specify: ____________________________)
__ Likelihood of meeting fellow classmates
__ Football tickets
__ Cultural event, such as concert or play
__ Golf or Tennis

At what general time of the year would you be most likely to attend:
__ Spring (April/May) __ Fall (September-November)

What is the best time plan?
__ Thursday evening-Friday ___ Friday-Saturday morning __ Friday only ___ Saturday only

Volunteer: Would you be willing to serve on a planning committee, or to write letters or make telephone calls on behalf of this event? __ Yes __ No

Costs: We propose making all intellectual programming free, although alumni would be responsible for assuming the costs for athletic and cultural tickets, in addition to their travel and hotel expenses. If we elected to charge for meals, what would you consider a fair charge for the following:
__ Luncheon ___ Dinner ___ Special event (such as a play or concert):

Additional thoughts:

Please return in the enclosed envelope (no postage necessary) to the Department of Chemistry on or before December 15, 2003.
Thank You!
**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 _____________________________________

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☐  This is a New Address

**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*.

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

World Wide Web Address:  http://www.umich.edu/~michchem   E-mail:  chem.alum@umich.edu

**University of Michigan**

**DEPARTMENT OF Chemistry**

**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 information on making a bequest to the Department.

☐  I would like information on establishing an endowment within the Department of Chemistry.

☐  Charge my gift to:  ☐ Visa  ☐ Master Charge *(for gifts of $25 or more)*

Account Number  Exp. Date

310080/AG/M/LS05
University of Michigan
Department of Chemistry
930 N University
Ann Arbor MI 48109-1055

Address Service Requested

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