

# UMSL CHEMIST



Volume 15

Department of Chemistry  
March 1997

## Chairman's Message

You will note a change in the design of the UMSL CHEMIST this year. We found that the inclusion of colors and glossy paper was getting to be too expensive. Randa Schneider, who has been on the office staff for more than 16 years, created the current design. We hope you like it and that you will let us know if you have any suggestions for improvement.

As I approach the end of my penultimate year as chair, it is remarkable to look back on the changes we have seen in the department and the campus these past 17 years. Twelve of the 20 current faculty members were not here in 1980 when I became Chair. We have moved the stockroom, occupied two new buildings, and increased the numbers of graduate students by a factor of two and the postdoctoral fellows by a factor of five. The campus now owns a substantial amount of property in the area around the campus. Dormitories and apartments, a convenience store, several new buildings, two light rail stations, and many other new features have appeared on the campus.

In the near future, as the Campus Master Plan is implemented, we can expect even more change. Soon construction will begin on a new Student Center and on a parking structure on the other side of Bugg Lake from the Science Complex. A new road system will be developed for the campus, with the result that West Drive, which runs in between Benton Hall and the neighboring community, Bellerive Acres, will be straightened out so that it meets Natural Bridge Road where Clearview enters Bel Nor. Another campus entrance to the east is planned, but the exact location has not been determined. The current main entrance will become less important as the traffic lights are to be removed.

The University accepted the Center for Molecular Electronics building, from the contractors in late February after a lengthy delay in completion. The X-ray laboratory and the three Physics faculty labs had already moved but others waited for final completion. As I write, the telephone and computer wiring has not been connected so no one has moved their office space yet. I will have an office in the new building and look forward to making some space in the chair's office by moving some journals, a computer, etc., so I can get more writing done.

The major change for the department in the next few years

**DON'T FORGET THE ALUMNI RECEPTION. IT WILL BE HELD ON FRIDAY MAY 2, FROM 7:00 TO 10:00 PM, IN THE ALUMNI CENTER, 7956 NATURAL BRIDGE ROAD (ACROSS FROM WOODS HALL). PLEASE CALL LISA HOGUET AT 516-5311 TO INDICATE WHETHER YOU WILL BE ABLE TO ATTEND. WE LOOK FORWARD TO SEEING YOU.**

will be the renovation of the teaching space in Benton Hall. We look forward to the renovation of the labs which are 32 years old. It is part of a three-phase project which will see the complete renovation of Benton and Stadler Halls. The first phase will be the East Wing of Benton where the undergraduate laboratories are located. The architects are currently revising the plans which we expect to see very soon. The first version suggested that we move the NMR Facility. That would not be a very good idea so they went back to the drawing board.

The department continues to be very productive. As we mentioned last year, in 1994-95 we graduated more chemistry graduates than any other institution in Missouri and also more than most of the universities in the surrounding states. Thus since 1992 we have averaged 37 graduates per year. These high numbers continue and for 1997-98 we expect to generate close to an all time high number of graduates at all levels. Unfortunately, enrollment has decreased slightly, due mainly to lower enrollments in nursing and other programs (except biology) which require chemistry. We are concerned about this problem and are taking steps to address it.



*Brian Grimmond receiving the John L. Coombs Graduate Teaching Assistant Award from Dr. Barton*

Campus enrollments have not kept up with projections thus we are undergoing some budget shortfalls this year. It appears that whenever the economy is good, enrollment on commuter campuses drops; this certainly has been our experience. At the moment the campus is therefore wrestling with some serious cuts in program funding and people funding. The campus has been under-funded for years. UM-St. Louis receives 12% of the University budget but have about 25% of the total enrollment. Until that 12% increases the campus will continue to be under-funded. On the other hand the development of new programs continues. A Master of Fine Arts (MFA) in Creative Writing and also a Ph.D. in Applied Mathematics were recently approved and last year a Ph.D. in Criminology and Criminal Justice and a Bachelors degree in Studio Art, among others, were approved.

We will be holding a reception again and an announcement appears on this page. We hope to see many of you

there. We continue to receive information about positions available so keep in touch if you are looking for a position or if your employer is looking for employees. We also hope you will keep us informed of your activities, both professional and personal. The most common reaction I receive to the UMSL CHEMIST is that former students enjoy reading about their former classmates, so please keep in touch. If you have not seen the campus recently you might want to come in for a tour of the department. We would be happy to provide one. In conclusion and as always we wish you the very best for the future.

Sincerely,

Lawrence Barton

### Alumni Information

1967

**Donald M. Kaesser, B.S.**, is the Clinical Director and Owner of *Central Iowa Psychological Services* in West Des Moines, Iowa. Don remarried on Feb. 14, 1995 to Patricia A. Sweeney. Pat is Senior Intellectual Property Attorney (Patent Attorney) at Pioneer Hi-Bred A biotech seed corn company. Don now has two stepchildren, Ryan age 12 and Patrick age 10. His daughter Kimberly is a sophomore at Iowa State University in Ames. Don's late wife Mary died of breast cancer in 1993.

**Jodie Duke, B.S.**, is still with Dupont-Merck in Wilmington, Delaware.

1968

**Robert Nicolotti, B.S.**, is now Director of the Environmental Laboratory for the St. Louis County Health Department. His daughter Pam graduated *Cum Laude* from Siena College, Albany, NY, in Finance. Daughter Linda is working on a Ph.D. in Child Psychology at Auburn U., and son Rob Jr., 16 years old, is on the Honor Roll at Vianny High School. Bob was helpful in providing some surplus materials for us from his laboratory.

**John Thompson, B.S.**, is President of T.T. Chemical in El Dorado, Arkansas. The company builds gas plants to remove H<sub>2</sub>S. He is also in the trucking industry. T. T. Chemical sells treatment chemicals to the mining industry. The company sells 10,000 tons of chemicals to Rio Tinto Zinc and Kennecott Copper Co for the removal of Mo from Cu in the crude ore.

**Raymond Novak, B.S.**, is a Councilor of the Society of Toxicology. Ray is Director of the Center for Chemical Toxicology at Wayne State University.

1969

**Jim Reilly, B.S.**, sent a Christmas card to the faculty, through yours truly, saying, "When you think of the holiday season, you think of warmth, good cheer, and friendship. I feel - and my old pal Dave Levitt agrees - a warmth, a camaraderie, a Gumuthlichkeit toward my old teachers at the UMSL Chemistry Department such as I've felt toward no other group of professors". He goes on to say "Sure, the teaching is top-notch, and yes - I've witnessed superlative research techniques. But this group has

human warmth. Any time during my post-UMSL career that I visited, I was welcomed like the Prodigal son. Whenever I telephoned or wrote for assistance, you were always there for me. So God Bless you all".

1970

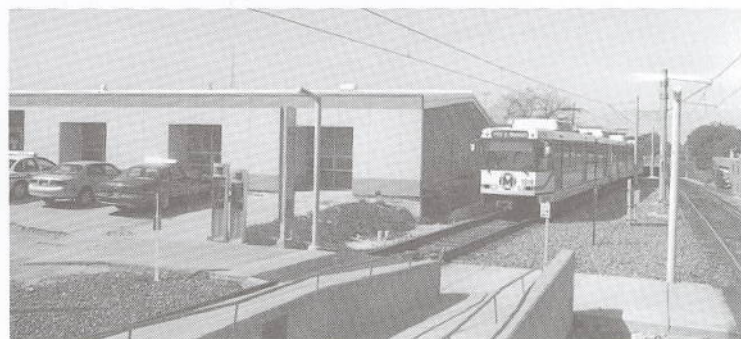
**Gene Bohn, B.S.**, is at Borden Chemical as a Plant Manager of a facility in Aurora, IL. The facility coats various types of sands with phenol formaldehyde thermoset resins for use in the foundry industry. Borden is better known to most consumers for its foods and dairy divisions, however its chemical division is very large and multinational. Gene still lives in Naperville, IL. He holds a M.S. degree from Iowa State University.

**Eugene Halet, B.S.**, was recently named Technical Director of Watson Coatings in St. Louis. According to a press release we received from **Cheryl Shea, B.A., 1976**, "Gene has 29 years experience in the paint and coatings industry, with research and development expertise in high performance polyurethane, epoxy, water reducible and water-borne coatings technology. His resume' includes development of aerospace coatings for military and private aircraft". Watson Coatings, Inc. is a manufacturer of corrosion resistant products for industry.

**John Kolb, B.S.**, lives in Livermore, CA and continues to work at the Lawrence Livermore Radiation Laboratory. John and his wife Judith now have four grandchildren - three boys and a girl - and life stays quite busy for them.

**Steven Mestamecher, B.A.**, has been in touch with us recently. Steve has been with the Dupont Company for many years. He holds a Ph.D. degree from Washington University.

**Alan Sapia, B.S.**, works for the St. Louis Metropolitan Sewer District in the Department of Environmental Compliance. Al had been with the St. Louis County Water Department since receipt of his Ph.D. degree in organic chemistry from St. Louis University in the 1970s. We recently saw him at a national ACS meeting.



Metro Link at the UM-St. Louis North Station

1971

**Sandy Asher, B.A.**, Professor of Chemistry at the University of Pittsburgh, received the *Chancellor's Distinguished Research Award*, in the senior category, for his work in vibrational spectroscopy and nanoscale periodicities. He won praise for helping to develop UV resonance Raman spectroscopy, and was the first researcher to construct a tunable UV resonance Raman spectrometer. His work in the field of self-assembling colloidal crystals has demonstrated a general new method for creating nanoscale periodicities in matter.

**Harry W. Orf, B.S.**, is the Director of Molecular Biology Laboratories, Massachusetts General Hospital and Principal Associate in Genetics at Harvard Medical School. Harry keeps in touch with us and won an Alumni Association Distinguished Alumni Award two years ago.

**Wil Solomon, B.S.**, is President of ATAS in S. Louis.

**Michael Young, B.S.**, is still with BASF and was site manager for several years at their dye synthesis plant in Rensselaer, NY. He spent three years as Marketing/Business Director for the Paper Dyes and process chemical business. Mike worked 6 months on special assignment at Company Headquarters in Ludwigshafen, Germany, and currently is Site Manager of the dye finishing and chemical auxiliaries plant in Charlotte, NC. Mike and his wife Dale have two boys, 16 and 13.

**Dennis Wester, B.S.**, is still in Moscow working with the International Nuclear Safety Program. He has been there about two years and is on assignment from his position at the Pacific Northwest National Laboratory in Richland WA. He has been traveling around Russia visiting the nuclear power plants. He still follows the Cardinals and was disappointed at the loss to the Braves last fall.

#### 1974

**H. Dennis Mollman, B.S.**, is a M.D. at Neurosurgical Associates, Inc., Missouri Baptist Medical Center, St. Louis, MO. Dennis completed a Ph.D. degree in organic chemistry from Washington University and then his M.D. degree from St. Louis University.

**John J. O'Connor, B.A.**, is a M.D., FAAFP at Arnold Health Center in Arnold, MO.

**Greg Wall, B.A.**, (M.S., 1980) is enjoying being the immediate past Chairman of the St. Louis section of the American Chemical Society. Greg will be presenting the Recognition Night address on March 22 and is busy planning for the 90 Anniversary celebration of the St. Louis Section scheduled for September.

#### 1975

**Daniel Breyfogle, B.S.**, still working at Butcher's (The Butcher Company) as the Director of Tech Service. He and his wife Bridget have been married for over 20 years. She is the laboratory coordinator at Assumption College, a small liberal arts school. His eldest daughter Molly is a senior in high school and the youngest daughter Laura is a high school freshman. Both girls are in synchronized swimming. Dan and his wife still play bridge, garden and occasionally do some home brewing.

**Paul G. Blystone, B.S.**, is principal of Purus Inc., an air pollution equipment company also principal of G.E.M.T. an environmental instrument company in Los Altos, CA.

**William Buxton, B.S.**, and his wife Jane have a 1 year old son, Nathan. Bill has been with Dupont in Wilmington, DE for several years and he was helpful to us in providing information and assistance on grants from his company. He works in regulatory compliance for fluoropolymer and Teflon products for the company

**Dan Claudy, B.S.**, after brief (~ 2 years) stint in Marketing for Mallinckrodt Laboratory and Performance Chemicals, he joined the newly formed Mallinckrodt Baker (Mallinckrodt acquired J. T.

Baker) organization as a Quality Assurance Manager with oversight responsibility for three manufacturing and production sites. Dan lives in Bethlehem, Pennsylvania. Due to job changes, he moved from Paris, KY, two years ago, to St. Charles, MO and then around one year later he moved to Pennsylvania.

**Robert W. Dugger, B.S.**, works at the Central Research Division, Pfizer Inc., in Groton, CT. We understand he is very busy and involved in pilot plant work and bringing products from the laboratory to production.

**William Z. McCarthy, B.S.**, (Ph.D., 1984) was recently in Ireland representing his company, Mallinckrodt Inc. We understand he rushed back to St. Louis to be here for St. Patrick's Day. We last saw Bill at the St. Louis Section's Recognition Night with his father who is a 50-plus year member of the ACS.

#### 1976

**Rick Hoyt, B.S.**, is with Mallinckrodt in St. Louis and is involved in Marketing and Manufacturing in pharmaceuticals and specialty chemicals.

**Andrew Hilliker, B.A.**, works for the City of St. Louis Air Pollution Control. He is taking computer courses here at UM-St. Louis. He and his wife Nancy Ann have two children, Harry 5, and Marianne 2.

**Andrew Ratermann, B.S.**, is senior Development Chemist at Cambridge *Where Solutions Take Shape* in Marion, Indiana. The company was formerly GenCorp Automotive but his division was sold. He continues to work on composites based on unsaturated polyesters and fiberglass.

#### 1977

**Cheryl (McClain) Shea, B.A.**, and Master in Business Administration, is the President of Creative Marketing Solutions in St. Louis. She announced the receipt of an *Arrow Award* for creative consumer print advertising. Creative Marketing Solutions' *Arrow Award* was earned for a Champion Boat ad titled "Ride and Decide", which increased sales. In the ad readers were encouraged to take a free, no obligation test drive at their local dealer and prove the superior handling claims for themselves. Creative Marketing Solutions is a full-service agency that provides expert assistance in planning and executing sales growth and from the awards she receives, it would appear that Cheryl has been very successful.

#### 1978

**Patricia J. Barton, B.A.**, (B.A., History, 1978; M.A., History 1980) is now at Spalding University in Louisville, Kentucky where she is Assistant to the President for International Development. She had been at Harris-Stowe College as Director of Sponsored Programs Development. She and the editor commute regularly between the two cities.

**Joseph W. Bullock, B.S.**, (M.S., 1982) is a Patent Attorney at Monsanto, St. Louis, MO.

**Michael Ennis, B.S.**, is the co-author of the journal article "Asymmetric Synthesis of cis-fused bicyclic pyrrolidines and pyrrolidinones via Chiral Polycyclic Lactams" which appeared in the *Journal of Organic Chemistry*. Mike and the editor had a nice visit at the ACS meeting in Orlando.

**H. Peter Kleine**, B.S. is Technology Leader - Preparations Laboratory, Discovery Medicinal Chemistry, at Monsanto/Searle in St. Louis. Pete was at Searle in Skokie, IL until quite recently. His brother-in-law Kevin Hupp, worked for the 1996 year in Dr. Barton's laboratory and co-authored an article in the *Journal of the American Chemical Society*.

**Russell Moutray**, B.S., after working for 10 years at Petrolite moved on to *Chemisco* and later on the same year moved to *Ethyl Petroleum* at the Sauget Plant. He worked at Ethyl for about 3+ months then went back to *Chemisco* - good offer. He helped design the new analytical laboratories, which was fun. He got his Alfa Romeo *Spyder* running earlier this year and has been driving it during good weather! He is still in search of a tennis game.

**Mark J. Pozzo**, B.S., is Senior Research Scientist at Monsanto/Searle in St. Louis. He worked in the Agricultural Division at Monsanto for several years and for the last four years he has worked in pharmaceutical development with Searle.

**Dale Vinyard**, B.A., is with *St. Louis Flavors*. He had been at *Seven Up* for several years prior to that.

**Timothy T. Wenzel**, B.S., is a Research Scientist at Union Carbide Corporation in South Charleston, West Virginia. Tim holds a Ph.D. degree in organic chemistry from Cornell University and we see him from time to time at ACS National meetings.

### 1979

**Bruce Ritts**, B.S., is an Analytical Specialist at Petrolite Corp., in St. Louis. We see Bruce frequently because he has been very active in the St. Louis Section of the ACS and also comes to the department quite often.

**Joan C. Kunz**, B.S., is the Chairperson of the Chemistry Department at Augsburg College in Minneapolis, MN. Joan did her Ph.D. degree at the University of Wisconsin-Madison on boron hydride chemistry with Professor Don Gaines.

### 1980

**Deborah Bergstrom**, B.S., lives in Midland, MI., with her husband Wayne and three daughters. Deb works at Dow Corning. The girls are growing up. Christina 15, went to Germany with a choir last summer, Stephanie 12, has gone from Western to English riding and is now jumping and Allison is 7 and very athletic as well as a phenomenal reader. We understand that all three are very talented musically.



The new convenience store on the South Campus

**Randy Johnston**, B.S., is now a faculty member at Union College

in Jackson, Tennessee. Randy was formerly on the faculty at the University of Memphis. We recently saw an article of his in the *Journal of Organometallic Chemistry* on some cyclopentadienyl-manganese carbonyl chemistry.

**Stanley J. Kulp**, B.S., is Technical Support Representative at Varian Analytical Instruments, in Sugar Land, TX. Stan was with Mallinckrodt Specialty Chemicals for many years

**Mark Leiber**, B.S., (M.S., 1986) works at Monsanto in St. Louis, in the Crop Protection, Glyphosate Process Research section, although the name of the company may have changed since we last heard from him. He contacted us last spring about summer part-time intern openings for undergraduates at Monsanto.

### 1981

**Mike Hauser**, B.A., (M.S. 1985) is an Assistant Professor at St. Louis Community College-Meramec. He continues his role coordinating the *Outstanding Junior Chemistry Student* award for ACS St. Louis Section. Mike corresponds with 4th grade science students across the nation using the "Science-by-Mail" program. Mike and his wife Lynn have two daughters, Katrina is 18 months and Rachel Ann was born on Jan. 21, 1996.

### 1982

**Michael Drain**, B.A., is Assistant Professor of Chemistry at Hunter College, CUNY, and has been there since January 1996. He was married last year to Patel Smita, who last year was working at Ohio State University as a biochemist, but was planning to move to New York in summer 1996. At Hunter Mike was busy applying for external research grants and had already received some internal ones when we last spoke to him. He had called us to talk about preparing borazine. He recalled making it when taking Chem. 343 with yours truly.

**Steve Lawrence**, B.A., (Ph.D., 1989) is an Assistant Professor of Chemistry at Saginaw Valley State University. He received a second award for teaching, the *1996 Honors Convocation Award* from the Michigan Association of Governing Boards of the State Universities. Steve recently was offered and accepted the position of Acting Assistant Dean of the College of Science, Engineering and Technology at SVSU. Steve claims to hate administrative work and indicates that this is a temporary assignment. We have all heard that before!!

**Jerry Orlando**, B.S., has been at Quanterra Environmental Services for about 10 years and he is currently the supervisor of mass spectrometry/gas chromatography. Jerry received a M.S. degree in environmental policy at Washington University.

**Dennis Parazak**, B.S., (M.S., 1987; Ph.D. 1996), is an Ink Chemist at Hewlett-Packard in Corvallis, OR. He and his wife Lynn moved to Oregon in January 1996. He is working on developing a new formulation for a product that will be released in a few years. He enjoys his position very much and often talks with **Chuck Thierheimer**, B.S., 1980, M.S., 1983, who is also with HP.

**Tom Reinsel**, B.S., is an M.D. and until recently was Assistant Professor at The Ohio State University, University Medical Center, Department of Orthopedic Surgery, in Columbus, OH. He graduated from the Washington University School of Medicine and trained as an orthopedic and spine surgeon. His new position is with Kaiser Permanente in Cleveland, OH.

**Sam Somawardhana**, Ph.D., continues to run his new company ACR Laboratories in San Antonio, TX. Dr. Janet (Braddock) Wilking has been helping Sam run some NMR samples in our facilities here at UM-St. Louis.

**Suzanne Saum**, B.S., is an Assistant Professor of Chemistry at Lindenwood College in St. Louis, MO. She also teaches organic chemistry at Florissant Valley Community College. Sue also serves as business manager of the *Chemical Bond*, the monthly newsletter of the St. Louis Section of the ACS.

**Susan (Jansen) Varnum**, B.S. (Ph.D., 1986) is an Associate Professor of Chemistry at Temple University. She received the *College of Arts and Sciences-Alumni Teaching Award* last year. Sue gave a seminar at Hunter College last year and was invited by Mike Drain (see previous). Sue is married to Jim Varnum who did some graduate work here in chemistry after graduating in biology from UM-St. Louis. He is now doing research in structural biology, specifically studying NMR of Proteins but we are not sure where.

1983

**David W. Haywood**, B.S., had been with *Scientific Associates* for several years but recently moved to the *Benjamin Ansehl Company* in St. Louis.

**Lura (Dee) Lange**, B.S., (Ph.D. 1990), stopped by the department in February. She is Base Commander at California Air National Guard, Van Nuys, CA and teaches at Antelope Valley Community College in Lancaster, CA. Dee has remarried and she and her husband Gary, an engineer, were here to see Dr. Corey.

**David Miller**, B.A., graduated from the University of Missouri-Columbia School of Medicine in 1989, completed his residency in Family Medicine at St. John's Mercy Medical Center in St. Louis and currently is in private practice in Crestwood, Missouri. He and his wife of three years, Nikki, reside in Chesterfield. David currently serves on the BJC Medical Group Adult Board of Directors and is completing a Masters Program at Webster University in Health Services Management. His most recent awards include the *American Medical Association's Physician's Recognition Award* and being named to the 1996 edition of "Outstanding Young Men in America". His father, Dick Miller, formerly in School of Education also sent us his regards.

**Martin Mantler**, B.S., works at *KV Pharmaceutical* and was recently promoted to two positions at once! He is Quality Control Compliance Coordinator and the laboratory LIMS Administrator. As the Compliance Coordinator he deals with the FDA, and if you have been following the news, one knows that such can be difficult in some circumstances.

**Joe Muo**, B.S., continues his work as a medical technologist at St. Mary's Hospital in Clayton. Joe has had a long-standing interest in the action of isoamylases in the G.I. tract and is still involved in that work although he is now involved full time in chemistry.

**Dawn Shiang**, B.A., (Ph.D. 88) is Support Leader - Global Process in Agricultural Chemicals Process Research for the Dow Chemical Company in Midland, MI. Dawn and her husband **William R. Shiang** (B.A., 1984, Ph.D., 1988), and a Project Leader in Agricultural Chemicals Process Research, have two sons William (4) and Alexander (1). They visited St. Louis during the Thanksgiving holiday and we are pleased to announce that they will be here at the end of April when Dawn will present the 1997

*Distiguated Alumnae Lecture.*

**Gerard Sullivan**, B.S., is a Senior Research Chemist at Abbott Laboratories, Pharmaceutical Products Division. The rank he holds is typically that of a Ph.D. with several years of experience. Gerry was the NMR operator for us when we shared the Joel FX-100 with Washington University. He and his wife Jie Li live in Round Lake Beach, IL.

1984

**Judy Shih**, B.A., is expecting a baby in March 97 so that Lili, a third grade student, will have a little brother. Judy has been promoted to a senior level position at Baxter Laboratories in Fort Lauderdale, FL. Judy keeps in touch with us and for that we are very pleased.

**Shankar Rananavare**, Ph.D., continues at the Oregon Graduate Center. He will be moving to the Physics Department and his research program is funded so we look for a bright future for him. Shankar lectured at Monsanto in April 1996.

1985

**Rajiv Banavali**, Ph.D., besides being the R & D Manager he is also the Primene Amine Global Research Director at Rohm and Haas Texas Incorporated. Scientifically, he had a good year with a couple of patents and three publications. His wife Marysusan is now a senior Technical Writer for EDS. We saw Rajiv in Orlando at the ACS meeting.

**Jettie Travis-Bryant**, B.S., is a pharmaceutical chemist for the Division of Testing and Analytical Development of the Food and Drug Administration. The division has offices in St. Louis and Laurel, MD. Jettie is located in St. Louis. She was recently featured in the African Exhibit at the St. Louis Science Center as a successful African American scientist.

**Steven Standley**, B.S., is employed with PM Resources in Bridgeton, MO as the Supervisor of the Analytical and Formulation Laboratories. He was recently looking for applicants for a student summer appointment with his company.

**Judy C. (Morris) Webber**, B.S., is a Patent Liaison, with the Law Department at the Monsanto Company, St. Louis, MO. Judy is married to Keith Webber (see below) and met him when taking Chem. 342 with yours truly in 1985.

**R. Keith Webber**, M.S., is a Research Scientist I, in Discovery Medicinal Chemistry for Monsanto/Searle Research and Development in St. Louis, MO.

1986

**Lisa McChesney-Harris**, B.A., is a Senior Research Scientist at Apotex Corp, a company specializing in the development of generic injectable products. She works with analytical data in the form of infrared scans, high performance liquid chromatograms, and gas chromatograms. She tells us that her daughter Kim is now 16 years old. That certainly makes us feel old!

**Ward J. Longolius**, B.S., after graduating from UMSL took a job at the Metropolitan St. Louis Sewer District, first as a laboratory technician in the treatment plant, then in the Environmental Compliance laboratory, and finally, in his current position as a

Treatment Plant Chemist. His fondest memories of UM-St. Louis are from when he spent a year doing research in Dr. Winter's laboratory.

**Becky Simeone, B.S.**, works at SmithKlyne Beecham as a chemist in quality improvement. She has been very helpful to us in providing surplus glassware etc., and also samples of her company's product, TUMS that are consumed regularly by the editor.

1987

**Stephen A. Kolodziej, B.A.**, (Ph.D. 1993), is Senior Research Investigator in the Medicinal Chemistry Group of Searle/Monsanto Life Sciences in St. Louis, MO. Steve had been a postdoctoral fellow, first with Dr. Garland Marshall at Washington University Medical School and later at Monsanto, prior to taking up his current position.



1996 REU Students after their presentations. The program is funded by the NSF and Monsanto.

**Tim Tolley, B.S.**, worked at Washington University Medical School for 10 years. He is married to Teresa Struggle and they have a daughter Lynda.

**Tianhe Zhu, M.S.**, is the owner of PNT Group Inc. The company specializes in import wholesaling and the manufacturer of beads, lace, crafts and trims in Los Angeles, CA. PNT stands for Polly and Tim. Tim's wife Polly has a M.Ed. from UM-St. Louis.

1988

**Alicia Beauty, B.S.**, is a postdoctoral fellow at Kansas State University with Dr. Christer Aakeröy, a recent seminar speaker in the department. Alicia received a Ph.D. degree at Washington University working with Professor John Blecke, and had been the X-ray Diffraction specialist there for a couple of years.

**Barbara Burglund, B.A.**, is a graduate student in the department of Physiological and Pharmaceutical chemistry at St. Louis University School of Medicine. She is doing her thesis work with Allyn Howlett and is married to Dr. Fred Joslin, former postdoctoral fellow with Professor Corey.

**William M. Lesko, B.A.**, (M.S., 1993) is Inorganic Group Leader at Quanterra Incorporated in St. Louis, MO. He had been with Maxim Technologies in St. Louis since graduation prior to moving to Quanterra.

**William Neumann, Ph.D.**, is the co-author of a journal article published in *Inorganic Chemistry* entitled "Synthesis Characterization, and Stability of Manganese(II) C-Substituted 4,4,7,10,13-Pentaazacyclopentadecane Complexes Exhibiting Superoxide Dismutase Activity". Another article appeared in the journal *Tetrahedral Letters* entitled "Synthesis of Conformationally

Tailored Pentaazacyclopentadecanes. Preorganizing Peptide Cyclizations." Bill still works at Monsanto and continues to teach occasionally in the department.

**Michael Provance, B.A.**, is Technical Service Representative at *Novamax Technologies* in St. Louis, MO. The company is located in Atlanta, GA., but Mike works out of St. Louis. He was formerly with *Calgon-Vestal* but we remember him best when he most ably stepped in as interim Stockroom Manager almost ten years ago.

1989

**Craig Lewis, B.S.**, is Business Owner and Anodizing Supervisor at the Foundry Company where he worked, we believe, prior to graduation.

**James G. Murphy, B.A.**, (M.S., 1996), is a chemist at Reliable Pharmaceutical Company in St. Louis, MO. He received the *Outstanding Masters Student Award* last spring.

**Gary Wester, B.A.**, is the Metals Facility Manager at the Midwest Research Institute in Kansas City. He supervises three people and they all do the metals analysis for MRI. He has a daughter at UMC Veterinary Medicine School, in Columbia. She graduated in biology from UM-Columbia and was Valedictorian at high school in Hawaii.

1990

**C. Marie Braton, M.S.**, was working at Lever Brothers Company until December 1996, and is now taking courses in the Biology Department prior, she hopes, to resuming graduate work in molecular biology at either the Biology Department at the University of Missouri-St. Louis, Washington University or St. Louis University.

**Mark Cooper, B.S.**, is a Research Chemist at the Monsanto Company, Chocolate Bayou Plant in Alvin, TX. Mark had been in St. Louis at Monsanto and he recently moved to Texas. He is enrolled in the Law School at the University of Houston studying environmental law. He and his wife have four children, three boys and a girl, and they enjoy living on Galveston Island and walking to the beach. In his position, he is one of two chemists in the whole facility. He has been impressed by the scale of production at the facility. He works with engineers in improving reaction yields and reducing wastes in the processes. He had been scheduled to begin work with another company in Houston last August but decided to stay with Monsanto.

**Michael Crowley, B.S.**, is working in the San Antonio area for Mission Pharmacal. He manages the Coatings Department, a production area in which they apply coatings to tablets (vitamins and drugs). He is also responsible for research and product development.

1992

**Todd R. Boehlow, B.S.**; (Ph.D. 1997) graduated with his Ph.D. degree in January 1997. He left UM-St. Louis in the fall for the University of Loughborough in central England. He is doing postdoctoral research with Professor Brian Marples. Marples was Professor Spilling's research advisor and Todd worked with Spilling here at UM-St. Louis.

**Scott Long, B.S.**, after graduating from UMSL he began graduate work at the University of Illinois at Urbana/Champaign. He

worked on the NMR characterization of organolithium complexes under the tutelage of Professor Peter Beak. He graduated from U of I with Masters Degree in the spring of 95. He is currently working as a medicinal chemist at SmithKline Beecham in Philadelphia, PA. Scott asked us to include his e-mail address in the UMSL CHEMIST. The address is (Scott\_A\_Long@sbphrd.com).

**Kathleen Talkington (Riordan), B.A.**, is a Chemist at St. Louis County Water Company. She has taken over the position held by **Mary Nahm** (BA 1988), testing for fungicides, disinfection by-products and total organic carbon. She took the Winter 1996 semester off school at UM-St. Louis as she and her husband were building a house.

### 1993

**Greg Bertin, B.A.**, works at Mallinckrodt Chemical in St. Louis. He was with NALCO in Naperville, IL. but had been anxious to get back to St. Louis.

**Jean L. (Huhmann) Vincent, B.A.** (Ph.D., 1997) completed her Ph.D. degree in August 1997 with Professor Corey and is now doing postdoctoral work at the Los Alamos National Laboratory. She lives in Santa Fe, N.M. Jean and her husband John are commuting until he completes his degree in engineering here at UM-St. Louis.



Chemistry Department Christmas Party at the Alumni Center with Dr. Welsh, Dr. Chris Pigge, his wife Beth Anne and their daughter Katie in the foreground.

**Loralee Mondl, B.S.**, received her teaching certification last year in Math/Chem. She is currently teaching in the Rockwood School District.

**Michelle Van Hee, B.S.**, has been working at Monsanto since May 96. When her boss at Washington University took a chair in Houston, she decided, having just purchased a house in St. Louis, not to go with him. The position at Monsanto, which was in her area of specialty, became available and she competed with more than 60 applicants for the position. She encounters many former UM-St. Louis colleagues in spite of being somewhat isolated at the Chesterfield campus. Among those she encounters are **Steve Kolodziej**, **Matt Mahoney**, (B.S., 1993), **Melinda McCann** (B.A., 1993) and **Kevin Koeller** (former postdoc with Dr. Spilling).

### 1994

**Bradley Hart, Ph.D.**, stopped by the office last September. Brad will be working with Dr. G. R. Pettite at Arizona State University on marine natural products chemistry. Brad, who completed his doctoral degree here with Jim Chickos, had published two papers and had two in press from his work as a postdoctoral fellow at the

University of Georgia with G.W. Pelletier.

**John Mathai, B.A.**, from whom we heard last year, is planning to go to graduate school in the near future.

**Jeff Milner, B.A.**, works at Ethyl Research Center as a Senior Research Chemist in Midlothian, VA. Jeff had been with Ethyl Petroleum Additives Division in St. Louis for several years.

**Scott Kretzer, B.S.**, is a Research and Development Chemist at Epic Resins in Palmyra, WI.

### 1995

**Hong Fang, Ph.D.**, is employed by the St. Louis County Crime laboratory as a criminalist. Hong's husband Weida Tong, formerly a postdoctoral fellow with Dr. Welsh, now is employed at the Food and Drug Administration National Center for Toxicological Research in Jefferson, AR. This is another commuting family.

**Kristin Frost, B.S.**, is a second year graduate student at the Ohio State University. She is doing research in analytical chemistry with Dr. Richard McCreery and is working on Raman Spectroscopy.

**Michael Groaning, B.A.**, (M.S. 96), is in graduate school at Colorado State University working towards his Ph.D. degree. He has selected Professor A.I. Meyers as his research advisor. When he contacted us in November, he had already passed two cumulative exams. Mike completed a M.S. degree with thesis in one year, working with Dr. Spilling. He had previously done undergraduate research with Dr. D'Souza, the work having been recently published in *Supramolecular Chemistry*.

**Craig Siman, B.A.**, was to be going to Washington University Law School in the Fall 1997 semester. He will work towards M.S. degree in Health Administration and an LL.D. He is working at Title Associates in the Real Estates Law Dept. Although he had been admitted to Yale Medical School he decided to forgo that and take the path described

### 1996

**Wade Benny, B.S.**, works at Scientific Associates in St. Louis. He informed us that **John Blair, B.A.**, and **Angel Hayakawa, B.S.**, also work there. **Tracy Schweitzer, B.S.**, 1995, has been there for 18 months.

**Achilles M. Karakas, B.S.**, is Sales and Marketing representative at Marcus Distributors in St. Louis, MO.

**Tim A. S. Marzan, B.S.**, is an Analytical Chemist at Chemsico, a Division of United Industries Corporation in St. Louis, MO.

**Christine Wiersmeuller, B.A.**, is doing her student teaching at Ladue High School.

**Siu Wa Au-Yeung, B.A.**, is a graduate student at the University of Massachusetts-Lowell. We were pleased to hear from him this past Christmas.

### 1997

**Maria Antonette de la Cruz, Ph.D.**, is a Research Associate with Dr. Douglas Covey at Washington University School of Medicine in St. Louis, MO. She received her Ph.D. degree with Dr. Spilling

last August.

**Mark D. Elking, M.S., (B.A., 1995)** completed his degree with Professor Zhu and now works for Anderson Consulting.

**Dan Griesenauer, B.A.,** works at ModCol in St. Louis.

**Geanine Howard, B.A.,** works in Jefferson City with the state of Missouri Health Department in human health risk assessment.

**Mark Jackson, B.A.,** is employed at Ralston Purina in St. Louis. He is planning to move from a laboratory job to a sales position.

**Rafaat Shaltout, Ph.D.,** is doing postdoctoral research at Louisiana State University in Baton Rouge, L.A with Professor Peter Rabideau. Raef completed his Ph.D. degree working with Professor Corey, graduating in August 1996.

### Career Day - April 24, 1996

This year the St. Louis Section of the American Chemical Society and the Department of Chemistry cosponsored Career Day for High School Students as a part of Chemical Progress Week which was chaired by Dr. Lawrence Barton. It was held on April 24, 1996, at the UM-St. Louis campus. Approximately 130 students from area high schools attended the event. Once again the role models were UM-St. Louis chemistry graduates. **Jettie Travis Bryant, B.S., 1985,** spoke on *The Chemist in Government Laboratory*. Jettie works at the FDA Division of Drug Analysis in St. Louis. **Pauline Bellavance, Ph.D., 1978,** spoke on *The Chemist in Education*. Pauline works at Fontbonne College. **Harold Messler, B.A., 1970,** spoke on *The Chemist in a Crime Laboratory*. Harold is a criminalist at the St. Louis Metropolitan Police, Crime Laboratory. **Mark Cooper, B.S., 1990,** talked about *Chemistry in Industry as Applied to Agriculture*. Mark worked for the Monsanto Agricultural Company, at that time. **Mary Nahm, B.A., 1988,** spoke on *Chemistry in a Public Utility Laboratory*. Mary works at St. Louis County Water Company.

### Graduates 1996

#### MAY 1996

Elizabeth Amin BA	Siu Wa Au-Yeung BA
John Blair BS	Wade Benny BS
Craig M. Brawley BA	Radu Duta BS
Daniel B. Griesenauer BA	Wesley Gerber BS
Kelli R. Herries BA	Lisa M. Meyerkord BS
Gary A. Nichols BA	Ivan Rivera BS
Arvell Steeples, BA	Julie L. Schuette BA
Christine Weiersmueller BA	Ricardo Delgado MS
Yihua Liao MS	James Murphy MS
Bradley E. Resnick MS	Hong Yong MS
Robert A. Stockland, Jr MS	Dennis Parazak Ph.D.
Mohamed Shaharuzzaman Ph.D.	

#### AUGUST 1996

Mark H. Jackson BA	Abdul M. Muhammad BA
Sherry Ann Teemul BS	Lashawn Johnson BA
Michael Groaning MS	Mark D. Elking MS
Antonette de la Cruz Ph.D.	Jean L. Huhmann Ph.D.
Rafaat Shaltout Ph.D.	

### DECEMBER 1996

Karla K. Hangsleben BA	Geanine Howard BA
Anthony Kuntz BA	T. P. Lavelle BS
Victor Nelson BS	Jeffrey Ortinau BA
Kirstin J. Talir BS	Heng-hu Zhu, MS
Todd M. Brown MS	Yu Chen, MS
Donald Crozier, MS	Xiaopeng Sang MS
Todd R. Boehlow Ph.D.	Yu Lin Ph.D
Shengping Tian Ph.D.	

### The Faculty

**Gordon K. Anderson** has the largest research group he has had in some time, with 4 graduate students and one undergraduate. His laboratory space was renovated during May and it was scheduled to be completed by the end of July. His research group didn't move back until November and thus they had a very frustrating time. Now there are rumors that the remodeling of Benton Hall will result in the disruption of his lab again. He is serving a second term as member of the UM Research Board. He and his wife Jayne have adopted two more children (summer 1996) bringing the family to five children.

**Charles W. Armbruster** continues to teach Chemistry 11 and also sophomore organic chemistry in the department. Currently we have an all-time high enrollment in Chemistry 262, the second semester organic chemistry course. Dr. Armbruster also continues as the campus premed advisor and he reports that activity has increased very much in the past two years. Medical School applications have increased substantially. He is still very active in his other avocation, music. He continues his singing and regularly does it at Temple Israel but also at several other locations in the St. Louis area. He is still very active, and successful, on the racquet ball court!

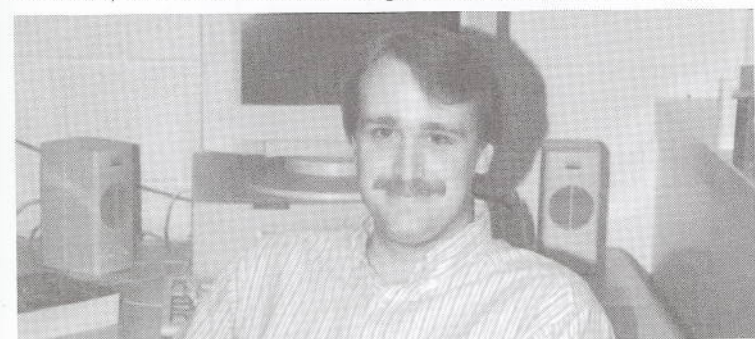
**Lawrence Barton** continues to juggle the chairmanship and an active research program. His research group consists of a graduate student, Paul McQuade from Glasgow, Scotland, a postdocs Rhodri Thomas and Ramon Macias who are described elsewhere and are supported by grants from the ACS-PRF and the Missouri Research board, both awarded in early 1996. After a summer of much traveling to chemistry conferences, his itinerary tends to be to and from Louisville these days where his wife Pat (B.A., 1978) has taken a position. 1996 saw Dr. Barton author or co-author 11 articles including a volume of the *Gmelin Handbook of Inorganic Chemistry* and articles in *Organometallics*, *Inorganic Chemistry*, *Chemical Communications*, *Applied Organometallic Chemistry*, *Acta Crystallographica*, *Journal of the Chemical Society*; *Dalton Transactions*, *Acta Crystallographica*, *Main Group Metal Chemistry* and the *Journal Of Organic Chemistry*. In April he will present a paper at the ACS meeting in San Francisco on some metallaborane chemistry which was just published as a communication, in JACS. This work, his first JACS publication, is co-authored by former postdoc Jonathan Bould, former graduate student Hong Fang, undergraduate Kevin Hupp, Nigam Rath and Charles Gloeckner, formerly of Monsanto.

**Lee Brammer** continues his work in hydrogen bonding and in the investigation of structure and bonding in organometallic chemistry through experimental charge densities studies, and received tenure and promotion to Associate Professor last year. His research group was joined last Fall by postdoctoral associate Dr. Yuri Abramov, from Moscow, who is working in the charge density area. The research labs of Dr. Brammer and Anderson were refurbished over



the summer from a National Science Foundation infrastructure grant. The X-ray lab was also moved, and a new specialty low temperature diffractometer added, to a new purposely-designed lab in the CME Building. Dr. Brammer gave invited presentations at the International Union of Crystallography Congress, in Seattle, and at the Pittsburgh Diffraction Conference last Fall, and will give invited talks at conferences in Portugal and South Africa this summer. He recently finished editing a volume of the American Crystallographic Association Transactions, based upon a symposium that he organized called "Structural Tools in Organometallic and Coordination Chemistry." On the near horizon is the American Crystallographic Association annual meeting, to be held in St. Louis at the Hyatt Regency, Union Station; Dr. Brammer is co-chair of the meeting. He and his wife Louise are quite busy with their baby boy George, these days

**Ian Brown**, who had been with the department for two years, and also as a Fellow in the Center for Molecular Electronics, retired last summer. He and his wife Anne will split living in St. Andrews, Scotland, and in Indiana near daughter Moragh and her family.



Dr. Christopher Pigge

**James S. Chickos**, who at the time we went to press was serving jury duty in St. Louis County continues work in thermochemistry. His sublimation enthalpy compendium is on the web at [webbook.nist.gov/chemistry](http://webbook.nist.gov/chemistry). Many of the undergraduates enrolled in Chemistry 202 helped make this possible and he thanks them. An unusual project in which he is involved in concerns the radiocarbon dating on the *Shroud of Turin*.

**Joyce Y. Corey** attended the *Organometallics Gordon Conference* in July 1996 as a Session Chair and also attended the *12th International Organosilicon Symposium* in Montpellier, France in September, where she gave both an oral presentation and a poster. Dr. Corey is an invited speaker at the 1997 *Organometallics Gordon Conference*. She had two Ph.D. students (Jean Huhmann and Raef Shaltout) and an M.S. student (Steve Rooney) complete theses and graduate in 1996. Dr. Corey has had a very productive year in research, publishing 15 papers during 1995 and 1996.

**Valerian T. D'Souza** is completing his 10th year in the department. His fourth doctoral student, Dr. Shengping Tian, graduated last Fall. Last year he collaborated with Professor Jerald S. Bradshaw at Brigham Young University, Professor Roberto Cao at University of Havana in Cuba and Dr. Stine in this department. He visited Cuba and presented two lectures at the University of Havana last year. During the year he published papers in the *Journal of Organic Chemistry*, *Supramolecular Chemistry*, *Langmuir*, and *Tetrahedron Letters*. He is also invited to be the guest editor for a special edition of *Chemical Reviews* on Cyclodextrins. In the department he serves as advising Coordinator and also chair of the graduate admissions committee. If you know of any potential graduate students, encourage them to attend UM-

St. Louis and contact Dr. D'Souza. In fact that also applies to potential undergraduate students. Please let us know if you encounter good prospective applicants.

**David L. Garin**, was an invited speaker for the symposium, *Mobilizing the Science Community for Political Action* at the AAAS national meeting in Seattle in Feb. 1997. His invitation and presentation were based on his experience co-founding a science lobby in Washington, D.C. in the 1980s. Dr. Garin is directing the research of two students in the area of synthetic bioorganic chemistry. This year, he is teaching the undergraduate organic chemistry Laboratory course (Chem. 263) and using the new *Manual for Undergraduate Organic Lab*, written by Garin, Chickos and D'Souza which will be on the World Wide Web for general distribution.

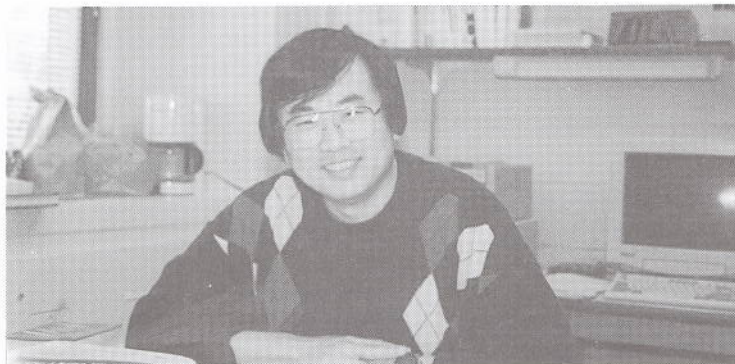
**Harold H. Harris** is co-author of the kit *Hands On Plastics: A Scientific Investigation* kit, of which 5000 copies were produced. Almost all of the copies have been distributed by the National Middle Level Science Teachers Association (NMLSTA) and the American Plastics Council (APC). The APC has agreed to continue to support the project, with the production of several thousand additional curriculum kits. Interested educators can read about the project on the NMLSTA's Web pages, <http://www.nsta.org/nmlsta>, which were also designed by Dr. Harris. The *Chemical Education Resource Shelf*, a project originated by Harris and now part of the Journal of Chemical Education - On-line, has been cited in the InterNIC Net Scout Report, January 10, 1997. InterNIC, based at University of Wisconsin, chooses worthy education and research Web sites and publishes a weekly report. The *Resource Shelf* also provided the data for the *Journal of Chemical Education's* new Spring "Book Buyer's Guide", a 48-page supplement to the March, 1997 issue, also produced by Dr. Harris.

**Wesley R. Harris** reported last year that he had attended a conference in Vancouver at which he coordinated the preparation of a review article on aluminum speciation for the *Journal of Toxicology and Environmental Health*. He now reports that this review is one of a collection of articles that will be published in book form by Taylor and Francis under the title *Research Issues in Toxicology*. Last summer he returned to Vancouver to attend the *International Conference on Coordination Chemistry*. He also spent a week on Vancouver Island and reports that the British Columbia Provincial Parks are fantastic. Unfortunately, he has been unable to come up with an excuse (or the money) to visit Vancouver for a third summer. Dr. Harris has also started a formal research collaboration with the local company *MetaPhore* (where **Jim Wheatley**, B.S., 1989 now works). The company is designing specialized chelating agents, which will be evaluated in Dr. Harris' lab. Dr. Yuejin Li, a postdoctoral fellow will be working on the *MetaPhore* project. Dr. Harris' contact within the company is none other than Dr. Leonard Rosik, who was a postdoc with Dr. Harris for two years. Apparently, it does pay to be nice to ones postdocs. For the last nine months, Dr. Binsheng Yang from the Institute of Molecular Science, Shanxi University, has been a visiting scholar in Dr. Harris' lab. The Chinese make much wider use of lanthanides than the U.S., and Dr. Yang came specifically to study the interactions of lanthanide ions with transferrin. He returned to China the first week in March after a pleasant and productive visit. Next month, Dr. Harris will be attending the ACS meeting in San Francisco, where he will participate in a special symposium celebrating the 80th birthday of his Ph.D. advisor, Dr. A. E. Martell from Texas A&M University. He has previously served as a guest editor for a special issue of the *Journal of Coordination*

*Chemistry* celebrating Dr. Martell's 80th birthday. It now appears that Dr. Harris may retire before Dr. Martell does.

**David W. Larsen's** research and development of a patented gasification method for the treatment of hazardous wastes is progressing well due to continued funding from the Department of Energy. The patented method, called the ChemChar Process, was developed at the University of Missouri by Prof. Larsen in collaboration with Prof. Stanley Manahan on the Columbia campus. The focus of continuing research is on "mixed waste," which is chemically hazardous material that is also radioactive. A four inch diameter continuous feed gasifier is currently installed in the Columbia Chemistry Department hydrogenation room. The treatment of mixed waste surrogates is being evaluated in a sub-pilot level study using this reactor. Recently, university research reactor personnel have begun assisting them by doing neutron activation analysis to monitor the fate of key substituents. These analyses greatly simplify the analytical problems associated with the study and they are fortunate to have access to this reactor. They are also in the process of licensing our technology to several large engineering firms for use on remediation problems in several parts of the world.

**Robert W. Murray** continues to be very active in his research program. In a recent paper (*Tetrahedron Letters* 1997, 38, 225) Murray, and postdoctoral fellow K. Iyanar, reported that the methyltrioxorhenium - hydrogen peroxide system can be used to convert [60]Fullerene to its monoepoxide. While the yield is not great (35%) it is the highest thus far reported for this reaction. The realization of the complete technical potential of the fullerenes requires that methods for converting them to useful derivatives be available. Drs. Murray and Iyanar hope that their results will play a role in that realization. In the Murray group's dioxirane work, they have shown that dimethyldioxirane reacts with hexamethylbenzene to give an interesting oxepane trioxide. The trioxide results from an epoxidation of an intermediate oxepin. This example and others which they are exploring are of interest as potential ionophores. Dr. Murray just completed service on a system-wide university faculty committee which interviewed candidates for President of the University.



Dr. Zhi Xu in his office before it moved to the Center for Molecular Electronics

**James J. O'Brien** was awarded tenure and promoted to Associate Professor this past year. He is scheduled to move to the Center for Molecular Electronics Building soon but it is clear that the move will not be easy. He constructed a new chemical vapor deposition system in the Summer of 1996 which is used to make diamondlike nanocomposite (DLN) films using a proprietary plasma discharge technology. DLN films are thought to consist of 2 interpenetrating and mutually stabilizing networks of diamondlike carbon (a-C:H) and silicon dioxide. A third metallic network also can be incorporated in the films. DLN films can be tailored to have properties (such as

hardness, metallization, smoothness and adhesion to various substrates) that are more desirable than those of diamondlike carbon films. He is working in conjunction with a company in Buffalo (ART, Inc.) who has licensed the technology from Russian scientists. The objective is to understand how the films are formed and how their properties can be varied in a predictable fashion. He uses intracavity laser spectroscopy and optical emission spectroscopy to characterize species in the gas phase during the formation of the films from the plasma discharge process. Post-doctoral research associates who have worked on the project are Dr. Dean Peterman (till September 1996) and Dr. Harish Barshilia (since January 1997). Dr. O'Brien also continues to study the high resolution overtone spectrum of methane using a Ti:sapphire laser in intracavity laser spectroscopy measurements. Balazs Kalmar, a graduate student working on this project, presently is looking at the 790 nm band of methane. The objective is to provide absorption coefficients that can be used by astronomers in interpreting the reflected Sunlight spectra from the Outer planets (e.g., Neptune and Uranus). To provide appropriate data, measurements are made at various temperatures down to that of liquid nitrogen (-196 °C). Elizabeth Amin, a graduate student who joined the group this year, will work on a variation of the intracavity laser spectroscopy technique which will enable spectra to be obtained at higher resolution. When the new technique is perfected, it will be directed also at making measurements on the high overtone bands of methane.

**F. Christopher Pigge**, an organic chemist who joined us last Fall from a postdoctoral position at Wayne State University, has set up his new laboratory and is busy working in the lab. He picked up two graduate students this year so he is all set. Indeed he will be able to support them with the Missouri Research Board funding he received this year.

**Nigam P. Rath**, has been busy setting up the X-ray diffraction laboratory in the new Center for Molecular Electronics building. He co-authored more than 36 publications in 1995-96. He presented an invited talk at the Internal Union of Crystallography meeting at Seattle titled "How Small a Crystal is Too Small". During his recent visit to India, he also presented a seminar titled "Use of Single Crystal X-ray Diffraction as an Analytical Tool" at the Regional Research Laboratory (CSIR), Trivandrum. His collaborative research efforts with industry and other academic institutions are growing due to the availability of data collection time on the new area detector system. During the summer of '96, he was also involved in the REU program and the George Ingelmann Mathematics and Science Institute.

**Christopher D. Spilling** is currently at Cambridge University on a combined research/sabbatical leave. He is working in the laboratories of Steven V. Ley, Professor of Organic Chemistry. Two of Dr. Spilling's graduate students were awarded Ph.D. degrees last summer. Toni de la Cruz and Todd Beohlow, mentioned elsewhere, are now doing postdoctoral fellowships. Last summer he was pleased to learn that his N.S.F. proposal had been funded for \$238K.

**Keith J. Stine** was promoted to Associate Professor and awarded tenure last year. He runs the *Research Experiences for Undergraduates* Program, and at the moment is working with Dr. Barton to try to raise funds for the summer 1997 program. He was pleased to be able take 6 students to the *Argonne Symposium on Undergraduate Research* last November to present talks and also to continue to serve as faculty advisor to the ACS Student Affiliates Chapter. He continues his collaboration with Professor D'Souza on the surface chemistry of modified cyclodextrins and in the past year has learned how to conduct electrochemical measurements on

modified electrodes, and is nearing completion of setup of a Raman system for studying monolayers. Since last year he has published 3 new articles. In addition to undergraduates, his research group now consists of two graduate students and a postdoctoral fellow.

**William J. Welsh** just learned that he has been promoted to Full Professor. He continues to pursue his research activities in computer-aided molecular design of compounds ranging from pharmaceuticals to aerospace polymers. He has enjoyed a productive year aided by grants from the NIH, NASA, FDA, National Center for Toxicological Research (NCTR), National Alzheimer's Association, Monsanto, and McDonnell Douglas to support his research team. He and his research team have recently moved to their new facilities in the University's Center for Molecular Electronics.



Administrative Secretary Betty Eshbaugh looking much younger than the colleagues who were here with her in the 1960s

**Janet Braddock-Wilking** continues to supervise the NMR Facility in the department and carry out independent research in organometallic chemistry. She is co-author on some papers from collaboration with other faculty members in the department and has written a review article with Joyce Corey on Non-Classical Interactions of Hydrosilanes with Transition Metals. It is in press in *Main Group Metal News*. Janet presented the results of some of her research at the Organosilicon Symposium in Evanston, Illinois in March 1996 and at the *International Organosilicon Symposium* in Montpellier, France in September 1996. She currently has an undergraduate working with her and became a member of the UM-St. Louis Graduate faculty in the Fall of 1996.

**Rudolph E. K. Winter** is still here as he told me to say. He continues to teach the second semester organic chemistry laboratory course, with his usual flair. We nominated him for the *Chancellor's Award for Teaching* and we await word on the decision from the selection panel. He serves as Director of Graduate Studies in the department. His research program continues to center on the chemistry of naturally occurring substances. Professor Winter's research involves organic and bioorganic chemistry of plant metabolites, particularly terpenes. His research projects include isolation and identification of novel biologically significant compounds, synthesis and chemical transformation among structurally related classes, and biosynthesis and chemical ecology of plant materials. His current research group consists of two graduate students and one undergraduate.

**Dr. Zhi Xu** will present a paper entitled "Tuning the orientation of organic molecules at solid-liquid interfaces using an electrochemical potential" at the 213th American Chemical Society National Meeting in San Francisco. During the last year, his group has published three papers. They appear in the *Journal of Physical Chemistry*, *Chemical Physics Letters*, and the *Journal of Chemical Physics* and concern probing chemistry at solid-liquid interfaces using nonlinear optical spectroscopy. One of his undergraduate students, Christina Echhoff, gave a talk at the *Argonne Symposium*

for *Undergraduates in Science, Engineering and Mathematics* last November on the subject of energy transfer among coadsorbed molecules on quartz surface. Her research is expected to generate a publication this year. Zhi's group will move into the new CME building before this summer.

### Adjunct Faculty

**Larry Brannigan**, a recent retiree from Monsanto has been teaching in the department this past year. He has taught organic chemistry (02 and 261) and general chemistry for us these past two years. He has also taught at the St. Louis College of Pharmacy.

**Daniel Connolly** now splits teaching both of our biochemistry courses with Wil Ridley. These are some of the highest enrollment 300-level course that we offer. Both continue to work for Monsanto in St. Louis.

**Joseph Dence** splits teaching chemistry for us part-time with the teaching of mathematics. He recently published his second text in mathematics, in collaboration with his brother Thomas, which means that he is now the author of 7 books on subjects ranging from biochemistry, through physical chemistry to mathematics. He reminds me that this is a labor of love since he doesn't make any money on these projects. He has also published several research papers on number theory the past few years.

**Donna Friedman** (Ph.D., 1981) continues to teach Quantitative Analysis for us in the summers. Donna is a very active member of the ACS St. Louis Section, currently serving on the Steering Committee, the Board of Directors and the Council of the National Society.

**John Gutweiler** continues his interests in flying and he spends much time burning a groove in Highway 40 commuting to and from UM-St. Louis and St. Louis College of Chiropractic where he also teaches.

**Dennis Moore**, a chemist at what used to be *Mallinckrodt Medical* has been alternating chemistry 01 and 02 in the evenings now for several years. Dennis is a graduate of SEMO (B.S.) and Washington University (Ph.D.).

**William Neumann** (Ph.D. 1987) is less involved in teaching for us than he was, but he taught Intermediate Organic Chemistry last Fall.

**Robert Orth** has been teaching physical chemistry for us in the evening now for several years. He is currently on leave from teaching while the Monsanto reorganization takes place but we are pleased to hear that he will not be transferred from St. Louis.

**Raghavan Rajagopalan** is a colleague of Denny Moore at Mallinckrodt. He took over from Bill Neumann teaching organic chemistry and has been doing so ever since that time.

**Robert Stearns** continues to teach introductory chemistry in the evenings. This summer he and his wife Sandy will visit the UK so yours truly has been giving them some tips. As I write Bob and Sandy are spending Spring Break in Italy.

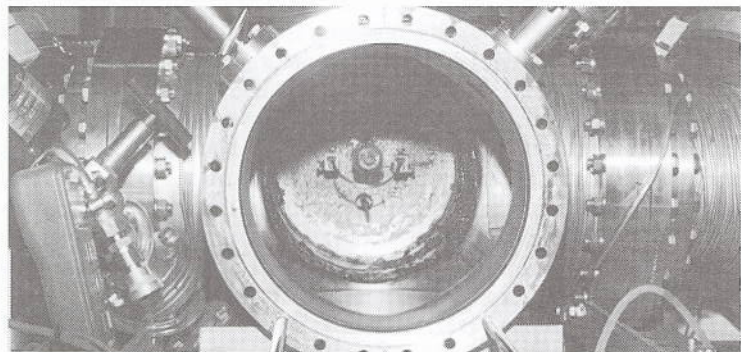
### The Staff

**Betty Eshbaugh** continues to be very active in square dancing. She was at the Winter Snowbird in McAllen, Texas, the square

dance capitol of the nation, in February and will attend the National Square Dance Convention in Orlando, in June.

**Lisa Hoguet** embarks upon her fourth year here at UMSL and continues to enjoy taking classes here on campus. She has become proficient at hmtl and thus has been editing our web page. See <http://www.umsl.edu/divisions/artscience/chemistry> if you want to check her work.

**Gordon Kerschmann** is our NMR electronics guru and he does a very good job in keeping the instruments running. Last year he was recognized for five years of service at the University..



Interior of a CVD chamber used in the deposition of diamondlike films in Dr. O'Brien's laboratory

**Joe Kramer** and **Donna Kramer** were married on May 11, 1996, and honeymooned in New York City. We understand they had a wonderful time. Donna is scheduled to complete her B.A. degree in chemistry in December and Joe is anxiously waiting for a new mass spectrometer.

**Ken Owens**, who had been working part time in the department since Bob Cabaniss took early retirement, continues to do that. He is working full time at ATCOM in St. Louis where he has been since leaving McDonnell-Douglas three years ago. We had hoped that he would be able to apply for the regular position in the department in August, but recent university budget problems have muddied the waters.

**Randa Schneider** celebrated her 15 year anniversary in the department in 1996. She has been very helpful putting the UMSL CHEMIST together again this year. She will be going with her husband Mike for a visit to Jordan and the Holy Land sometime this summer.

**Ted Windsor** was recognized last year for his 25 years of service to the University. He still tells visitors that I take to his shop that he is "general flunky" in the department. What that really means is that no job is too tedious for Ted to do. His job description, Senior Electronics Technician, belies the fact that he does just about everything in the department from electronics to machining, repairing vacuum pumps, balances, making slides and taking pictures, etc., etc.

### Postdoctoral Fellows

**Yuri Abramov** joined Dr. Brammer's group last fall from the National Institute for Inorganic Materials, Tsukuba, Japan. He is from Moscow and studied at Mendeleev University of Chemistry and the Karpov Institute of Physical Chemistry. He is an expert in the topology of charge densities and applications to chemical bonding, and is currently applying this expertise to studies of

compounds with transition metal-hydrogen interactions.

**Harish Barshilia** has been with Dr. O'Brien since the beginning of the year. He is from India and received a Ph.D. degree in physics from the Indian Institute of Technology in New Delhi working on microcrystalline diamond thin films formed by a microwave generated chemical vapor deposition process. He also holds an undergraduate degree in physics from Kumaon University and a masters of technology in Physics from New Delhi. He is working with Dr. O'Brien on the gas phase species observed prior to diamond-like film deposition.

**Jonathan Bould** who left Dr. Barton's lab in 1995 but continues to collaborate with him from a base at Leeds University in the U.K., was seriously injured in a bicycle accident in El Salvador in June 1996. He had been at the Boron-USA-MEX Conference in Guanajuato, Mexico with Dr. Barton in May. His badly broken leg is on the mend. He was in the department, on a trip funded by Dr. Barton, in March this year to continue the collaboration.

**Elizabeth Collantes** recently accepted a position at Monsanto in their Ceregen unit as a computational chemist. Dr. Collantes received her Ph.D. in Medicinal Chemistry from the University of Illinois at Chicago under the supervision of Prof. William Dunn. Dr. Collantes' expertise is in the area of quantitative structure-activity relationships (QSARs) and the statistical analysis of data. She and Prof. Welsh have been collaborating with the U.S. FDA in developing artificial neural networks and related chemometric techniques as tools for "pharmaceutical fingerprinting" and with the U.S. NCTR in developing structure-function relationships of natural and synthetic estrogens.

**Sudha Cowsik** has been a postdoctoral research fellow in Prof. Welsh's laboratory for the past year. She received a B.Sc. and M.Sc. in Physics (Hons) from Punjab University in India and a Ph.D. in Biophysics from the All India Institute of Medical Sciences. Dr. Cowsik and Prof. Welsh collaborate with Dr. Allyn Howlett of the St. Louis University School of Medicine in the computer-aided studies of the structure and functions of cannabinoids.

**Hong Gu**, (Ph.D., 1995) has been working part time with Dr. Welsh. He was the last graduate student to complete a thesis with Dr. Murray.

**Kaliappan Iyanar** has been with Dr. Murray for several years but is currently considering offers and will probably be leaving here soon. We wish him well.

**Abdul Khan** (Ph.D., 1994) has been working with Professors Stine and D'Souza since he received his degree two years ago. He has prepared some important surface active cyclodextrin derivatives which will be investigated as molecular switches. Some of his recent synthetic work resulted in a publication in *Langmuir*.

**Yuejin Li** is in his third year with Wesley Harris. He had been working on the kinetics of iron release from mutant proteins related to Serum Transferrin but recently had been studying Aluminum binding to Transferrin.

**Jainwei Li** has been with Dr. Xu since the summer 1996. He is from Shanghai, China and did his Ph.D. degree at the University of Bern, Switzerland. Most recently he was a postdoctoral fellow at Detroit-Mercy University. He is studying non linear optical properties of materials at solid-liquid interfaces.

**Ramon Macias Maza** joined Professor Barton's research group in October 1996. He is from the Basque Country in Spain and did his undergraduate degree at Bilbao University and his doctoral degree at the University of Leeds in England where he worked with Dr. J. D. Kennedy on metallaborane chemistry.

**Megh Singh** may be the most useful resource in the research activities of the department and is the person to whom many students postdocs and even faculty go to for advice. Megh joined UM-St. Louis in February 1986 to work with Tom Jones and in December 1987 moved into Bob Murray's lab where has been since, working on dimethyl dioxirane and related chemistry. He received all his degrees from the University of Jodhpur in India. In 1993 he was appointed Research Assistant Professor of Chemistry.



1996 Monsanto Undergraduate Chemistry Awardees

**Joong-Youn Shim** joined Prof. Welsh's research team as a postdoctoral research fellow in August 1996. Dr. Shim has a B.S. in Agricultural Chemistry and an M.S. in Organic Chemistry from Seoul National University in Korea and a Ph.D. in Medicinal and Organic Chemistry with an emphasis in Computational Chemistry from the University of Georgia. Prior to joining Prof. Welsh, he was a postdoctoral research fellow at the U.S. Environmental Protection Agency. Dr. Shim and Prof. Welsh are collaborating with Dr. Allyn Howlett of the St. Louis University School of Medicine in computer-aided studies of the structure and functions of cannabinoids.

**Rhodri L. Thomas** joined Professor Barton's research group in October 1996. He is from Carmarthen in South Wales. He did his undergraduate work at Oxford University and his Ph.D. degree in Edinburgh working with Professor Alan Welch on polyhedral boranes.

**Weida Tong** still collaborates with Bill Welsh but he moved to a permanent position at the Food and Drug Administration National Center for Toxicological Research in Jefferson, AR

**Peter Wolohan** joined Bill Welsh's research group last fall. He is a theoretician and has been doing some *ab initio* calculations on some catalyst systems. Peter is from Liverpool in England and received his Ph.D. degree from the University of Reading.

**Li Xing** also joined Bill Welsh in late 1996 from the University of Akron where she did her Ph.D. degree with Professor Wayne Mattice in Polymer Science.

### The Robert W. Murray Lectureship

We continue to appeal for contributions to the fund which will establish the *Robert W. Murray Lectureship*. Many of you

have heard from us on this subject. We are about one fourth of the way towards raising our goal of at least \$50,000. Thus we are looking for some rather substantial contributions from alumni, faculty colleagues, other faculty and administrators on the campus and colleagues of Dr. Murray in his field. If you have already made a contribution, perhaps you would consider making another one. If you find these requests to be too much, all at once, perhaps a commitment to contribute over an extended period would better suit your situation. We hope that the inaugural lecture will be held next year, which will be the year in which Dr. Murray retires.

## Departmental Awards

### Undergraduate

The award for the *Outstanding Student in Introductory Chemistry* was **John Hemmersmeier**. He received a certificate and a Handbook of Chemistry and Physics from the Chemical Rubber Company. The *American Chemical Society for Award for Analytical Chemistry* went to **Radu Duta** who received a certificate and a one-year subscription to *Analytical Chemistry*. The *American Chemical Society - St. Louis Section's Outstanding Junior Award* went to **Yanina Levchinsky**. The award was presented at the annual Awards Night during the ACS St. Louis Section's Chemical Progress Week. **Wade Benny** received the *Alan F. Berndt Outstanding Senior Award*. **Yanina Levchinsky** received the *Eric G. Brungraber Fellowship for 1996-97* academic year. The *William and Erma Cooke Scholarship for 1996-97* went to **Anjanette Smith**. The *Robert Lamberg Fellowship 1996-97* was awarded to **Deborah Wyman**. The *1996 Undergraduate Chemistry Awards sponsored by the Monsanto Company* was awarded to the following: **Michelle J. Barnett, Don Butler, James T. Fetsch, Mark H. Hathaway, Yanina Levchinsky, Chad M. Musser, Robert L. Otte, Donna A. Kramer, Anjanette Smith and Deborah Wyman**.

### Graduate

The *1996-97 Mallinckrodt Fellowship* went to **Henghu Zhu**. The *1996 Alumni Summer Graduate Fellowships* went to **Anne Cafferty, Tamara Gahimer, Brian Grimmond and E. Thomas Kuefler, Jr.** The *1996 Graduate School Summer Fellowships* went to **Yu Lin and Shengping Tian and Michael Groaning**. The *1995-96 Outstanding M.S. Student* award was split between **Michael Groaning and Jim Murphy**. A *1995-96 Graduate School Dissertation Fellowship* was awarded to **Todd Boehlow**. The *1995-96 Commendations for Excellent Performance by a Teaching Assistant* were awarded to **Todd Boehlow and Joe Wilson**, and the *1995-96 Graduate Teaching Assistant Award in Memory of Jack Coombs* was awarded to **Brian Grimmond**.

### Alumni

The *Ninth Annual Distinguished Alumni Lecture* was presented by **Dr. Robert L. Lamberg** (B.S., 1972). His title was "Trends in Eye Surgery".

## Support

### Contributions 1995-96

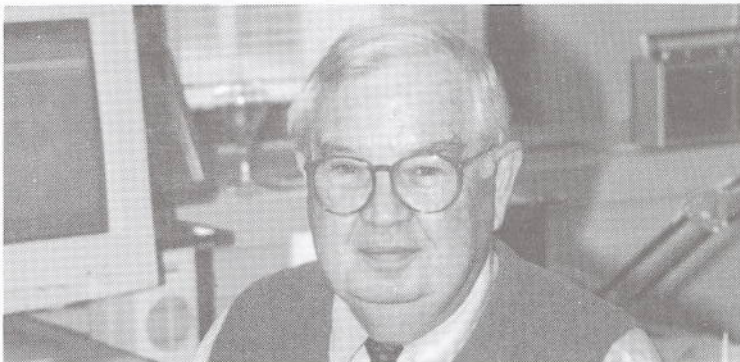
Below we list all the chemistry alumni who made contributions to the university last year. The list includes those whose contributions went into general accounts in addition to those which went into the chemistry account, and it also includes those who made payments as part of larger pledges. The list is very

impressive and we are most grateful for your support, especially during these very difficult times. There are some names included who are alumni of other departments but who returned to UM-St. Louis to take the prerequisite chemistry courses prior to applying to medical school. We have done our best to assure that the listing is up-to-date. If we missed out your name, we apologize and hope you understand that we are fallible. Recent gifts will be listed next year.

## ALUMNI CONTRIBUTIONS

Mr. Courtney C. Aldrich IV	Dr. Razia Ahmed
Dr. David A. Armbruster	Ms. Patricia Armbruster
Dr. Phillip V. Asaro	Susan J. (Moritz) Auinbauh
Dr. Rajiv M. Banavali	Mr. Brian K. Barrett
Dr. Ali A. Bazzi	Dr. David L. Beach
Ms. Elyse (Gherardini) Bernstein	Dr. Teresa M. Blase
Mr. Jeffrey B. Blume	Ms. Marie C. Braton
Dr. Barbara W. Brown	Mr. Roger W. Buchanan
Mr. Joseph W. Bulock	Mr. Charles W. Busenhardt Jr.
Mr. Thomas J. Byrd	Dr. Kathleen Cammack
Mr. Gussie I. Carpenter	Mr. Brent T. Cole
Mr. Charles M. Copper	Mr. Kevin R. Criscione
Mr. Michael M. Crowley	Dr. Dennis M. Delfert
Mr. Robert L. Dittrich	Ms. Irene Drizin
Mr. Michael J. Finkes	Mr. James C. French
Ms. Elizabeth Viviano Galie	Dr. Gregory P. Genova
Mr. Lee L. Gori	Dr. Dorothy C. Greco
Mr. James J. Grib	Dr. Brian M. Gross
Ms. Janet (Zander) Harris	Mr. Ronald B. Harris
Mr. Steven J. Harrison	Mr. Richard E. Hauhart
Dr. Mary K. Hays	Mr. Kenneth O. Henderson
Dr. Gary Henley	Dr. Lloyd P. Hill
Ms. Kim (Rankin) Huelskamp	Mr. Larry A. Justice
Dr. Herbert J. Kaiser	Mr. Siddharth G. Kamath
Ms. Shari M. Keith	Mr. Lucky K. Kelley
Dr. Mark A. Knollman	Dr. John R. Kolb
Mr. Roger T. Kopp	Dr. Shailendra Kumar
Mr. Binh V. Lam	Dr. Robert L. Lamberg
Mr. Gerald C. LaMotte III	Ms. Karen M. Linck
Ms. Bo Liu	Ms. Judith (Taylor) Logsdon
Mr. Kevin G. Mallon	Mr. Christopher S. Mallory
Mr. Kerry L. Martin	Mr. Tim A. S. Marzan
Mr. John K. Mathai	Ms. Melinda. McCann
Mr. Stephen L. McCarthy	Dr. William Z. McCarthy
Mr. Steven J. Mertens	Mr. Thomas J. Mertle
Dr. Steven A. Mestemacher	Ms. Suzanne Metz
Ms. Mary Mierkowski	Mr. Fredrick R. Mitchell
Mr. and Mrs. Brian Mohr	Ms. Sharon J. Moran
Mr. Richard J. Morfing	Mr. Russell W. Moutray
Mr. Gary A. Nichols	Dr. Harry W. Orf
Mr. Kenneth E. Owens	Mr. Mark H. Owens
Dr. Dennis P. Parazak	Dr. Dennis R. Patterson
Mr. John A. Phipps	Dr. Janet (Dobbins) Place
Mr. John K. Pratt	Mr. Michael G. Provance
Mr. Gregory W. Przygoda	Dr. S. B. Ranavare
Mr. Bruce E. M. Ritts	Mr. Robert T. Roither
Dr. Jeffrey A. Ronecker	Dr. Suzanne E. Saum
Mr. John J. Schuster	Dr. Karl W. Seper
Dr. Dawn L. Shiang	Dr. William R. Shiang
Ms. Becky Simeone	Dr. Jeffrey W. Siria
Ms. Deborah (Allen) Sprinkle	Mr. Kevin W. Stewart
Mr. Daniel P. Stueck	Ms. Deborah Tannenbaum
Mr. Stephen J. Szymczak	Ms. Kathy Talkington
Dr. Charles V. Tatosian	Mr. Gregory E. Thudium
Ms. Joan Twillman	Dr. Susan (Jansen) Varnum

Dr. Dolores Vermont	Ms. Arlene F. Vogelsang
Mr. Carl T. Von Till	Mr. R. Keith Webber
Ms. Judy (Morris) Webber	Mr. Michael J. Welsch
Dr. Timothy Wenzel	Mr. James R. Wheatley Jr.
Dr. Janet (Braddock) Wilking	Mr. Mark R. Williams
Ms. Karen Wright	Mr. Tianhe (Tim) Zhu



*Dr. Robert W. Murray*

## CONTRIBUTIONS FROM NON ALUMNI

Mrs. Lois Brunngraber	Dr. Edward H. Brunngraber
Dr. John Wei-Ping Lin	Ms. Wen-Yuan Lu
Dr. V. Ramachandran	Dr. Richard D. Smetana
Dr. Frank E. Stary	

## COMPANY/ORGANIZATION/FOUNDATION/ETC

Abbott Laboratories Fund  
 Albemarle Corporation  
 Anheuser-Busch Foundation  
 Aristech Foundation  
 Alumni Association of UM-St. Louis  
 Boeing Company  
 Dow Chemical Company Foundation  
 Hewlett-Packard Company Foundation  
 Law Offices of Milt Harper  
 Mallinckrodt, Inc  
 McDonnell Douglas Foundation  
 Monsanto Company  
 Monsanto Fund  
 Petrolite Corporation  
 Pharmacia & Upjohn Foundation  
 Rohm and Haas Company  
 SmithKline Beecham Foundation  
 SBC Foundation  
 Tenet Healthcare Corporation.



*Dr. Robert Lamberg receiving commendation as the Distinguished Alumni Lecturer from Dr. Barton.*

UM-St. Louis Chemistry Alumni Fund

Enclosed is my contribution of \$ \_\_\_\_\_ Yes I work for a matching gift Corporation.

Designation for funds:

Robert W. Murray Lectureship \_\_\_\_\_

E.G. Brunngraber Fellowship \_\_\_\_\_

Undergraduate \_\_\_\_\_

Graduate \_\_\_\_\_

Unrestricted \_\_\_\_\_

Please make check payable to UMSL. "Chemistry Alumni Fund" and return to:

Lawrence Barton  
Department of Chemistry  
University of Missouri-St. Louis  
St. Louis, MO 63121

=====

INFORMATION UPDATE-SPRING 1997

Please respond to this questionnaire. We have mentioned previously how important it is for us to keep track of what are you doing, both professionally and personally.

Name \_\_\_\_\_ UMSL Degree \_\_\_\_\_ Year \_\_\_\_\_

Current mailing address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Employer: \_\_\_\_\_

Current Position: \_\_\_\_\_

Recent Activities:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Other News:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_