



UMSL CHEMIST

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Chairman's Message

Although it is one of the most enjoyable activities as Chair of the department, I have found it difficult to find the time to work on the UMSL CHEMIST this year. This seems to have been a particularly busy year. Writing departmental Long Range Plans, research proposals and papers, along with teaching and chair duties doesn't leave much available time. Again I am pleased to report that I received many and various types of communications from you. Whether or not I find the time to respond to them, please understand that they are received with appreciation and satisfaction. This is my thirtieth year on the faculty here and I couldn't have spent a more rewarding and satisfying career anywhere else. I continue to believe that we have the best possible focus in the chemistry department and we tend to attract faculty members who value that focus. We have, in my view, just the right balance between emphasis on undergraduate teaching, and on graduate research. Both aspects of the program are going well as I indicate below.

There is much good news to report. The new building, the Center for Molecular Electronics, is on schedule and will open in July. The research groups of Professors Welsh, O'Brien, Stine and Xu will move there in addition to the X-ray Diffraction Facility. Also there are current discussions about other physical chemists moving into the space. We continue to improve both the NMR and X-ray facilities and we have plans for replacing one of the mass spectrometers. Professor Winter and I recently organized a proposal to the National Science Foundation for a high resolution mass spectrometer. Several Silicon Graphics workstations were recently installed in the

DON'T FORGET THE ALUMNI RECEPTION. IT WILL BE HELD ON FRIDAY APRIL 19, FROM 7:00 TO 10:00 PM, IN THE ALUMNI CENTER, 7956 NATURAL BRIDGE ROAD (ACROSS THE STREET FROM WOODS HALL). PLEASE CALL RANDA SCHNEIDER OR LISA HOGUET AT 516-5311 TO INDICATE WHETHER YOU WILL BE ABLE TO ATTEND. WE LOOK FORWARD TO SEEING YOU.

department for student and faculty use and the university's program for installing new computers on faculty desks will be completed this year. There are rumors that there will be state funds for renovation of one building this year and the renovation of Benton and Stadler Halls is the top of the priority list. We are keeping our fingers crossed because the teaching labs are due for much more than a face-lift.



Science Complex showing a view of the location of the CME Building (far right).

The campus administration has made strides in the implementation of the Campus Master Plan. Property has been acquired around the campus for expansion. The former Logan College property, most recently Cardinal Newmann College, is currently being renovated to house the Studio Art Program and the University just purchased Mount Providence School, across Florissant Road from the campus and several other properties in that neighborhood. Campus housing continues to expand. The apartments on the South Campus opened in the Fall 1995 semester and the University has leased the administration building from the Daughters of Charity at Marillac Seminary. The Passionist House on Bellerive Drive in Belnor has been purchased and it will probably be used as an International Student Training Center. The road system on the campus will soon be reconfigured. The West Drive on the north campus will be re-aligned so as to meet Natural Bridge Road across from Clearview in Belnor and a new parking garage will be constructed into the hillside across Bugg Lake from the Science Complex. The next new building on campus is expected to be the Communication Arts

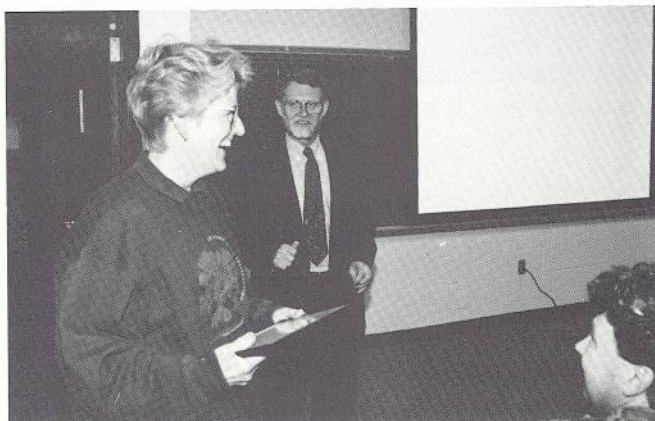
building and plans are also underway for a new Student Center.

Departmental statistics continue to paint a very healthy picture of our activities. The Report of the ACS Committee on Professional Training which appeared in *Chemistry and Engineering News* last December indicated that in 1993-94 we graduated more total chemistry majors than any other institution in Missouri and more than any of the institutions in the surrounding states except for the very large programs such as Illinois, Illinois State, Kansas, Iowa and Iowa State Universities. There were 25 BA/BS graduates, 10 MS graduates and 3 Ph.Ds. The number of Ph.Ds was lower than I would have preferred but these number are cyclical. For example in 1994-95 we had 23 BA/BS, 9 MS and 7 Ph.D. graduates for a total 39 and I expect that for the current year we may see a new all-time high. Enrollment continues to hold approximately steady although this year enrollment in the evening seems to have dropped. The 19 faculty members published 60 articles, presented 87 papers at conferences last year and raised \$1,049,702 from external sources to support research.

We are pleased to announce that we have hired a new organic chemist, Dr. P. Christopher Pigge, currently a postdoctoral fellow at Wayne State University. There is a section on him below. He will occupy a laboratory in the Science complex next to Dr. Winter. A renovation project in the department will be completed this summer. With the help of a NSF Academic Research Infrastructure Grant, matched by the campus, the remaining research labs in Benton Hall will be renovated. The space involved includes that occupied by Dr. Anderson along with small spaces below on the second floor currently occupied by Drs. Brammer and Welsh.

A most exciting announcement is that we are establishing an endowed lectureship in honor of Professor Robert W. Murray. The *Robert W. Murray Lectureship* will be modeled on the successful series the *Kennedy Lectureship* at Washington University. We thought that these last few years prior to his retirement provided us with the ideal opportunity to begin raising funds for the project. The idea is to raise \$50,000 from contributions. The Lectureship will involve an annual lecture by a preeminent chemist and a banquet which will honor the individual. The funds will pay for the travel, accommodation and honorarium for the invited speaker and for the banquet cost for invited guests. (Faculty members and alumni who attend the banquet will be expected to pay for their dinners!) Thus we are launching a general appeal for contributions and hope that friends of the department will establish donation targets which they will plan to reach over a 3-4 year period. Thus far I have only asked faculty members to contribute and we have raised almost \$4,000. I say more about this later.

Alumni contributions continue to be very strong and certainly much appreciated. The various award and fellowship programs continue to do very well but as we increase these activities our need to raise even more funds becomes clear. The chemistry department leads the College of Arts and Sciences in fund raising and we hope to continue that tradition. All the funds contributed by alumni go towards student financial support and the cost of producing the UMSL CHEMIST.



Dr. Barton presents Cathy Thomasson with Outstanding Masters Student Award

Another request I have is that you continue to let me know about your activities. Former students seem to enjoy the section Alumni Information not surprisingly, more than any other section of the UMSL CHEMIST. Many of you have been chided by me for not keeping in touch. A very pleasant surprise recently was the appearance of Tom Jenkins in the office. Tom graduated in our first class and we had not been in touch for many years (see below). Thus I hope you will send me information about your progress, current status or any new developments in your life or career. Your former colleagues, and Professors are very interested in them. If you are near the campus, we would be very pleased to visit with you, to show you our new facilities and introduce you to our new colleagues, and to reacquaint you with some older colleagues. We hope you will be able to attend the Alumni reception. Finally I wish you all the best in your personal and professional lives.

Sincerely,

Lawrence Barton

If you are a web surfer you might like to see our World Wide Web page. The web-site address is given below. If you have any comments, please let us know. Our e-mail addresses are also available. You could even send me news for inclusion in the UMSL CHEMIST that way.
<http://www.umsl.edu/divisions/artscience/chemistry>

Alumni Information

1967

Thomas Jenkins, B.S., received his M.S. degree from the University of Colorado, in 1969 and his Ph.D. in analytical chemistry in 1988 under the guidance of Dr. C. Grant at the University of New Hampshire. He is a Research Chemist at the Department of the Army, Cold Regions Research and Engineering Laboratory, Corps of Engineers in Hanover, NH. Tom went to graduate school in Colorado immediately after graduation but was drafted into the Army two years later. Thus he left with a M.S. degree and was stationed at the Cold Regions Research and Engineering Laboratory. He stayed on at the Laboratory after leaving the Service and completed his doctoral degree 20 years later in New Hampshire. Currently he is heavily involved in analytical and environmental chemistry research and is a contributor, as senior author to such journals, in the 1990s, as the *Journal of Chromatography*, *Environmental Toxicology and Chemistry*, *Talanta*, *Analytical Chemistry*, *Journal of the Association of Official Analytical Chemists*, and *Artic*. I found the article in the latter, "The Physical, Chemical and Biological Effects of Crude Oil Spills on Black Spruce Forest, Interior Alaska" very interesting reading. (See also Armbruster)

1968

Robert Nicolloti, B.S., is Manager in charge of qualifying raw materials in process testing and manufacturing at Sigma chemical in St. Louis. Bob is involved in training people in the facility. He holds a Ph.D. degree in pharmacology from Washington University.



Harold Messler participates in a mock television interview at ACS Sparkle Conference. Reprinted from ACS publication *Chemistry*.

Raymond F. Novak, B.S., was in the department this past summer with his daughter who was visiting Washington University. Ray has been Director of the Institute of Chemical Toxicology at Wane State University since 1986.

He holds a Ph.D. degree in physical chemistry from Case-Western Reserve University and was on the faculty at Northwestern University School of Medicine and rose through the ranks to become Professor of Pharmacology prior to moving to Detroit. Since 1994 Ray has also been Director of Wane State's *Center for Molecular and Cellular Toxicology with Human Applications*. Ray is Editor of the journal *Drug Metabolism and Disposition* and a member of the Editorial Board of *Toxicology and Applied Pharmacology*.

1969

Joseph Bono, B.S., continues his career in the Drug Enforcement Administration as a Supervisory Chemist at the Special Testing and Research Laboratory in McLean, Virginia. Joe and his wife, Barb, have been married for 24 years. Their daughter Gina was to graduate in June, 95, from the University of West Virginia with a degree in Music. Their first son, Matthew, is a second year Mechanical Engineering major at the University of Virginia; and their youngest son, Daniel, is a sophomore in high school. Joe has been active in the American Academy of Forensic Sciences; and presented two papers at the 1995 annual meeting in Seattle, WA. He has been appointed Program Chairman for the Criminalists Section for next year's AAFS meeting in Tennessee. He has been involved in a program called *Odyssey of the Mind* which involves young people from kindergarten through high school to develop the ability to think creatively in science and arts. In June he participated in the Presidential Classroom Program in Washington, DC as a mentor to students from all over the country.

Lee Gori, B.S., is Quality Assurance Manager at Buse Industries in Bridgeton MO. In September 1995, Lee obtained ISO 9002 Certification for Quality and Process Control.

1970

John Kolb, B.S., continues to keep in touch and to provide support. One of these days we hope to visit John and his wife Judith in the Bay area.

Harold R. Messler, B.S., attended the "Sparkle" Workshop at the ACS Belmont Conference Center last May. A "sparkle" Workshop is a two-day intensive training session for ACS local section public relations chairs. (See picture).

1971

Sandy Asher, B.A., is a member of the organizing committee of the "ICORS '96" the *XVth International Conference on Raman Spectroscopy* which will be held in Pittsburgh, PA, August 11-16, 1996.

Glen Snow, B.A., is market manager, Polymers, at Calgon Corporation in Pittsburgh, PA. Last year he met Professor John Gillingham of the History Department at UM-St. Louis, on a plane going to Pittsburgh from St. Louis. Professor Gillingham passed on a note to us from Glen which we were happy to receive.

Dennis W. Wester, B.S., visited the department last year with his wife Vicki and son Adam. They are all now in Moscow where Dennis is office manager of the Moscow Adjunct Office for the International Nuclear Safety Program. The program is a huge DOE effort to upgrade the safety of Soviet-designed nuclear reactors. He also gets involved with the conversion of former plutonium-production reactors to commercial use. They live in an apartment across the street from the American Embassy. Dennis is still employed by the Battelle Pacific Northwest Laboratory in Richland, WA.

1972

Robert L. Lamberg, B.S., who has a successful ophthalmology practice and includes among his patients several faculty members has agreed to give the 1996 *Distinguished Alumni Lecture* on May 6. Bob received an M.D. degree from Washington University School of Medicine.

Roger A. Riemann, B.S., works at Environmental Management Corporation in St. Louis, MO. He had previously been with Digital Equipment. Roger was in the department last year, for the first time in about 20 years. We were happy to show him around and to talk of old times.

1974

Virginia (Martin) Hauserman, B.A., and her husband Ray were blessed with twin boys, Michael James and John Raymond, born on Sept. 29, 1995.

Donald Scharlotte, B.S., received his pharmacy degree from UM-Kansas City. He is working at UM Medical Center and had occasion to meet Curator Mary Gillespie during discussions about the future of the UMC Medical Center. Mary was kind enough to pass this information along to us.

A. Greg. Wall, B.A., (M.S., 1982) is Chairman of the St. Louis Section of the American Chemical Society. Greg., or Alan as we use to call him, was a high school teacher for some time after graduation. In 1980, he returned here and completed his MS degree and then left with Professor Eric Block, to attend SUNY-Albany. Greg. received his Ph.D. degree with Block and since then has been with Sigma Chemical in St. Louis.

1975

Paul Blystone, B.S., is the director of a small company called *Purus* which he helped found in 1990 in Silicon Valley. Recently he has been managing the business side of the company. This has involved writing a corporate prospectus and taking the company public on the NASDAQ. He is currently working on mergers and acquisitions.

Dan Claudy, B.S., works at Mallinckrodt Chemical, Inc. in St. Louis. He is responsible for laboratory acids and solutions as well as the disposal service and the safety products. Dan recently relocated from Mallinckrodt in Paris, near Lexington, KY. Over a 9 year period he held various positions in the Paris facility ranging from Quality Assurance/Technical Service to managing a disposal service.

1976

Andrew Hilliker, B.A., was in the department recently. He has been with the City of St. Louis Air Pollution Control Department for several years now. Andy has been taking courses at UM-St. Louis, on and off since graduation and is currently taking computer courses here.



Greg Wall, Chair St. Louis Section ACS, presides at Recognition Night

Jim Troll, B.A., is Head Chemist at Smith Klyne and Beckman in St. Louis.

1977

Cheryl McClain Shea, B.A., is the President of Creative Marketing Solutions in St. Louis. She received two *Arrow Awards* for creative direct marketing her company produced to increase the sale of Champion Boats and Fred Arbogast Lures. The awards were from the Direct

Marketing Association. Cheryl was formerly with Carboline in St. Louis and she holds an M.B.A. degree.

1978

Pauline Bellavance, Ph.D., continues as Treasurer of the St. Louis Section of the American Chemical Society. She is Professor of Chemistry at Fontbonne College in St. Louis.

Mark Hildebrand, B.S., works at Ethyl Petroleum Additives in Richmond, VA. He moved a couple of years ago when the company relocated from St. Louis to Virginia.

Dale Vineyard, B.S., is with St. Louis Flavors. Dale was for several years with the Seven-Up Company in St. Louis.

1979

Dolores Vermont, M.S., is teaching in the Washington area. Dolores left her position as Environmental Science Supervisor at Monsanto in St. Louis when her husband, George Vermont, a senior official at Mallinckrodt Chemical for many years, and also a good friend of many of us as well as the department, left to take an appointment as Science Fellow in the White House Office of Science and Technology Assessment.

1980

Deborah Bergstrom, B.S., lives in Midland, MI and has survived the problems encountered by her employer Dow-Corning. She and her husband Wayne have 3 growing daughters who must be as big as Deb by now.

Marc Leiber, B.S., (M.S., 1986) has been at Monsanto for 15 years. He is a Senior Research Chemist and continues work on the chemistry of Roundup. Another former student working in the same group is **Cindy (Benson) Snoddy**, B.S., 1077. Marc called us recently looking for summer students.

1981

Michael A. Hauser, B.S., (M.S., 1986) continues to teach chemistry at the St. Louis Community College at Meramac. Mike is also involved in the *College Awards Program* for the St. Louis Section of the American Chemical Society. Mike and his wife Lynn have a child, daughter Katrina, 18 months and were just blessed with another daughter Lynn, 2 weeks old.

1982

C. Michael Drain, B.A., took a faculty appointment at Hunter College of the City University of New York in

January. Mike had most recently been a postdoctoral fellow with Professor Dewey Holton at Washington University in St. Louis. We last saw Mike when he held a reception at his home in University City for Nobel Laureate Jean-Marie Lehn.

Shailendra Kumar, Ph.D., is a Professor of Organic Chemistry at Governors State University, University Park, IL. Shelly and Sangeeta were blessed with a daughter, Himani. Shelly and the author had lunch together at the ACS meeting in Chicago last fall. Two of his students graduated with M.S. degrees last Fall.



Dr. Braddock-Wilking is honored as Outstanding Alumni Lecturer

Steve Lawrence, B.A., Ph.D., 1989, is an Assistant Professor of Chemistry at Saginaw Valley State University. He received the prestigious *Landee Teaching Excellence Award* from the University last year. Steve is the principal designer of SVSU innovative chemistry degree option in environmental chemistry. He serves as research scientist with the Saginaw Valley Research and Development Corporation and has conducted proprietary research in conjunction with *Omni Tech International, Ltd.* In addition to having published several scholarly papers and delivering a number of addresses, presentations and papers, Steve involves students in research projects and encourages them to present their results at regional and national conferences. He serves as faculty representative for "Project Get Set", has participated as a judge for the 1993 Tuscola County Academic Games and as a finalist judge of the Saginaw County Science and Engineering Fair.

Martin Mantler, B.S., is currently with KV Pharmaceutical in St. Louis.

Dennis Parazak, B.S., is writing his thesis on his dissertation research completed with Dr. Stine in December. He moved to Corvallis, OR in January to take up an appointment with Hewlett Packard. There he will join former Petrolite colleague Chuck Theirheimer, B.S. 1980, M.S. 1984, who has been there since the late 1980s. Dennis was married to Lynne last fall.

Carl Seper, B.S., is *Manager of Technology & Development* at Occidental Chemical in Niagara Falls, NY. Carl received his Ph.D. degree in chemistry at SUNY Albany in the mid 1980s.

C. W. (Sam) Somawardhana, Ph.D., from whom we last heard in 1990, had been in Riyadh, Saudi Arabia at the King Faisal Specialist Hospital Research Center as a Research Scientist, contacted us recently. Sam and his family left Saudi Arabia just prior to the beginning of the Gulf War. He returned to San Antonio where he had last worked in the US and where he owned a house. He and his wife are now in business. They own and operate a child care center and Sam recently built a laboratory where his company, ACR Laboratories Inc. makes precursors for the radiopharmaceutical industry. Sam has been involved in radiopharmaceutical chemistry for the past several years.

1983

James Essinger, M.S., works at Monsanto in Formulation. We heard this from Mark Vilmer (see below).

Joe Muo, B.S., continues to update us on his work as a medical technologist at St. Mary's Health Center. He has been working on the role of isoamylases in the gastrointestinal system for several years and has become quite an expert. More recently his work has been more involved in chemistry.

Colleen Jonsson, B.A., (also B.A., Biology) continues on the faculty at New Mexico State University in Las Cruces, N.M. as a biochemist. Colleen was featured in the recent issue of the magazine *UM-St. Louis*.

Mark Vilmer, B.S., works at Monsanto in Formulations. He was in the department recently to donate some of his journals to graduate students in the department. Mark holds a M.S. degree from UM-Columbia and a Ph.D. degree from the University of Toledo.

1984

Yuan Shih, B.A., Judy is still with the same company. Only the name changed from Baxter Diagnostics to Dade International. She is continuously developing therapeutical drug monitoring assays. Judy's husband Henry had an opportunity to attend a conference in China last August. This was his first time to visit China since he came to the U.S. Daughter Lili is now seven years old. She is in the gifted program of her school. In addition to piano and art lessons, she is learning Chinese hoping some day she will visit China. We are very pleased that Judy keeps in touch with her undergraduate advisor!

1985

Floris Homan, B.S., (Ph.D. 1989) is the Director of Quality Control Operations at Ferndale Laboratories, Inc. in Ferndale, MI. His wife Peggy (Ponzar B.A., 1985) is going to school. Their son Randy must be almost 5 years old now. Floris was in the department last fall.

Scott Kretzer, B.S., is a R. & D. Chemist with Epics Resins in Palmyra Wisconsin. His work involves the formulation of epoxy and polyurethane resins for a wide variety of applications.

Christopher Wachter, B.S., works at Scientific Associates as a supervisor in the evening shift. We heard this from

Mike Pasioka, B.S. 1996 who is also there and still does some research in his spare time with Dr. Barton.

1986

Kevin Berdak, B.A., Member of Society of Flavor Chemist. Kevin is *Senior Flavor Chemist* at Beck Flavors.

Becky Simeone, B.S., works at Smith Klyne and Beckman in St. Louis.

1987

Brian Barrett, B.S., who had been with Goetrace in Mount Vernon, Illinois, recently joined QC Corporation in Cape Girardeau as a chemist. The company produces FeSO_4 and he enjoys the challenging work there.

R. Louis Feldenberg, B.A., graduated from UMC Medical School and is doing his residency (4th year - Internal Pediatric Medicine) in Peoria, IL. He was in the department recently.

Steve Kolodziej, B.A., Ph.D. 1992, is with Monsanto where he has been a postdoc. He was formerly a postdoc with Garland Marshall at Washington University Medical School. He had an oral presentation in the Young Investigators' Mini symposium; American Peptide Symposium. Steve co-authored a paper in the *Journal of Medicinal Chemistry* with Garland Marshall and more recently had an article published in the *Journal of Organic Chemistry*. He is currently considering two offers of permanent employment with Monsanto.

Michael C. Merriman, B.S., is a Research Molecular Neurobiologist II at Hoechst-Roussel Pharmaceuticals, Inc. in Somerville, NJ. We tend to see Mike at ACS meetings and he occasionally visits the department

Bill Schmitt, B.A., is a postdoctoral fellow at University of Indiana, Bloomington, Cyclotron Facility. Bill who received his Ph.D. degree in physics at M.I.T. was in the office during the Christmas break.

Alan Schneider, B.S., continues working as a GC-MS analyst for Quanterra Environmental Services in Austin, Texas. He enjoys visiting Mexico and Austin's famous live music. Alan has a MS degree from Iowa State University.



View of new campus apartments

Tiahne (Tim) Zhu, M.S., and his wife Polly Wu (M.A. Education, 1987) were in town last summer. Tim did research in Dr. Barton's laboratory during completion of his degree. After graduation, Tim worked in environmental analysis doing mass spectrometry. They moved to the Los Angeles after a year or so and Tim continued in the same field. Polly became involved with a small business, a craft shop, which she eventually took over. The business became more successful and more work and eventually Tim and Polly became partners in a growing business. Now they operate three *Craft World* stores in the LA area, two in Mexico and factories in China.

1988

Alicia Beatty, B.S., is a postdoctoral research associate and director of the X-ray facility at Washington University. She co-authored a poster presentation at the ACS National Meeting in Chicago.

Barbara Berglund, B.A., is a Ph.D. student in biochemistry at St. Louis University School of Medicine, working with Professor Lynn Howlett on cannabinoid receptors. Interestingly they are collaborating with Professor Welsh on the work. Barbara is married to Dr. Fred Joslin, former postdoctoral fellow with Professor Corey.

Gregory R. Bradburn, M.S., is a doctoral candidate at Washington University. He presented a poster at the ACS National Meeting in Chicago.

Harry Harlow, Ph.D., is doing molecular modeling at *Novus International* in St. Louis. The business was purchased from Monsanto by a Japanese Company.

Chet Lee, M.S., still lives in Ann Arbor, MI. We heard from Chet and Sherry (Ph.D. 1987) at Christmas and most recently through an e-mail message.

Ko-Chung Lin, Ph.D., is at Biogen, Inc. in Cambridge, MA. We usually see him at ACS meetings but haven't done so in the past year.

Peggy Nevels (McMullen), B. S., is now in the Ph.D. program at Washington University. Peggy had formerly been at Monsanto.

Mike Provance, B.A., is now at Detrex. He was with Calgon-Vestal but the business was bought out by Novamax in Oct. 93. His work involves technical service in the metal working facility.

1989

Humy Ateeq, Ph.D., as we noted previously, is at the H.E.J. Research Institute of chemistry at the University of Karachi, Karachi, Pakistan. Although we haven't heard from him we saw that he presented the paper, "Higher Order Cycloaddition Reactions in Natural Product Synthesis" at the *19th International Symposium on Natural Products* in Karachi, in 1994.

Greg Duncan, B.S., graduated from the University of Southern California this past May with a Ph.D. degree after working with Professor Charles McKenna. Since June 1995 he has been working as a postdoctoral fellow in the laboratory of Professor John Griffin at Stanford University. Last summer, he was awarded a Cancer Biology Postdoctoral Fellowship through the Stanford University School of Medicine. His research is in bioorganic and medicinal chemistry. They are studying the molecular recognition characteristics and therapeutic properties of the antibiotic polypeptide bacitracin A and designed derivatives. He is also actively searching for a permanent position in pharmaceutical chemistry or possibly academia.

Jim French, B.S., is a supervisor at Mallinckrodt Chemical.

James G. Murphy, B.A., expects to receive his M.S. degree in the department this summer. Jim had been with Sigma Chemical Company since graduation but is now with Reliable Pharmaceuticals.

Tom Thompson, B.A., is with Chemtreat, a water treatment company. He had been with Calgon-Vestal

James R. Wheatley, B.S., is now with Metaphore a company recently founded by Professor Garland R. Marshall of Washington University. Jim had been at Mallinckrodt Medical. He works with Leonard Rosik, former postdoctoral fellow with Professor Wesley R. Harris.

Yong Yang, M.S., is a Development Chemist in the Central Laboratories of Benjamin Moore & Co. in Flanders, NJ. Yong received a Ph.D. degree in polymer chemistry with Jim Mark at the University of Cincinnati. A paper from the work recently appeared in *Macromolecules*.

1990

Nurse Coruh, Ph.D., is a professor at The Middle East Technological University in Ankara in Turkey.

Marc Cooper, B.S., is still at Monsanto in Formulations. As we mention elsewhere he made a presentation at the ACS Career Day last year on the campus.

Teresa Hardesty, B.A., is working at the Chrysler Plant in the Engineering department in Fenton and is active in the Rubber Division of the American Chemical Society.

Siddharth (Sid) Kamath, M.S. and his wife Sharmila were blessed with a son Nelil on Jan. 11, 1996. Sid is still doing research in Molecular Biology at Washington University. He was in charge of setting up a molecular biology program in their lab to develop an assay to study levels of messenger RNA.

Minren Lin, Ph.D., still at Penn State University with Professor Sen. Minren sent us a Christmas card and was at the ACS Meeting in Chicago this past Fall.

1991

Tom Bedard, B.S., is in his fifth year in the graduate program at University of Illinois-Champaign. Tom and his wife Belinda are expecting their first child. We understand he is currently considering offers from industry. Tom and Belinda were in town for Jean Huhmann's wedding in January.

Todd R. Boehlow, B.A., (M.S. 1993) expects to receive his Ph.D. degree this summer. Todd works with Dr. Spilling on a research project involving the synthesis of some tyrosine-derived sponge secondary metabolites.

Kurt Simmons, B.S., works at Lighthouse for the Blind in Florissant, MO.

1992

Jonathan Buerck, B.S., works at Maxin (formerly TCT, and once Envirodyne) in St. Louis.

Jack Hammer, B.A., is third year graduate student at Yale. He is working with Professor Ken a on attempts to understand the origin of NMR chemical shifts. He has also been doing some NMR solid state measurements in Kurt Zilm's laboratory. Jack, an accomplished strings player, currently plays with the Yale Philharmonia. This is the Yale Music School's graduate orchestra.

Jean Huhmann, B. A., (M.S. 1995) is completing her Ph.D. degree with Professor Corey and expects to graduate this summer. Jean was married to John Vincent in January and at the time of writing this they were honeymooning in Cancun. Jean recently accepted a postdoctoral position at the Los Alamos National Laboratory.

Phillip Ordoukhanian, B.S., is a doctoral candidate at Washington University. He presented a poster at the ACS National Meeting in Chicago.

Liu Jian Zhao, Ph.D., lives in Arcadia, California. The last we heard she was considering more graduate work in the graduate program at UM-Rolla.

1993

Sohrab Abdollahi, M.S., Ph.D., 1995, is now teaching at the Open University of Iran in Shiraz.

Greg Bertin, B.A., works at Nalco in Naperville. He and his wife Monica would like to move back to St. Louis.

Mark Bono, B.A., moved to Portland, OR but we are not sure what he is doing there.

Patricia Chernovitz, M.S., Ph.D. 1995, is currently teaching chemistry at California State University-Bakersfield.

Estatara Razavi, B.A., is a graduate student in the Biochemistry Program at the University of California Los Angeles.

Mike Schreiner, B.S., works at Mallinckrodt with Bill McCarthy.

Kim Gorman (Wein), B.A., is enrolling in the Master's program in biology at UM-St. Louis. The Gormans were at Founder's Day last fall. Kim is doing PCR and DNA testing for the St. Louis City Crime Laboratory. Her boss is **Harold Messler**, B.S. 1971.

1994

Courtney Aldrich, B.S., is in the graduate program at UCLA. He is working with Craig Merlic in organometallic chemistry, but in the Organic Chemistry division. . We recently received an e-mail message from him.

Rhea Henderson, B.A., also works at Maxin in St. Louis.

Dennis Kraichely, B.A., is a graduate student at St. Louis University, Department of Pharmacology and Physiology Science. In the summer of 94 he worked at Searle/Monsanto as an intern in medicinal and structural chemistry. Was directly involved with synthesis of second generation HIV-1 protease inhibitor analogs.



View of Center for Molecular Electronics construction

Karen Linck, B.S., is now with Environmetrics in St. Louis.

Jeffrey Milner, B.A., who was with Ethyl Petroleum Additives Division in St. Louis, moved with the company to Richmond, Va. Jeff is now Senior Research chemist at the Ethyl Research Center in the analytical services group. Jeff and his family live in Midlothian, Va.

Lori Pollette, B.A., was working at Monsanto. Her husband recently took a faculty appointment at the University of Texas-El-Paso so we presume she is there now.

Michael Underwood, M.S., is working at Phillips Environmental Testing in Columbia, IL.

1995

Michael Groaning, B.A., is currently completing his M.S., degree with Dr. Spilling. Mike intends to go on for a Ph.D. degree and is currently considering several offers.

Binh Lam, B.S., worked at Maxin in St. Louis and intends to continue his education in Business School.

Sharon Woods, B.A., is a Chemist I at the St. Louis County Water Company. Sharon's picture was featured on a recent brochure which came with county water bills.

Career Day - April 19, 1995

Another successful Career Day!! 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. The event was chaired by Dr. Lawrence Barton and Dennis Parazak. It was held on April 19, 1995, on the UM-St. Louis campus. Approximately 204 students from area high school attended the event. Moderators were Dr. Lawrence Barton, Chairman of the Chemistry Department and Dennis Parazak, UM-St. Louis Chemistry Graduate Student.. Once again the role models were UM-St. Louis chemistry graduates. **Kimberly Story**, B.A., 1993, spoke on *The Chemist in Government Laboratory*. Kimberly works at the FDA Division of Drug Analysis in St. Louis. **Pauline Bellavance**, Ph.D., 1978, spoke on *The Chemist in Education*. Pauline is Professor of Chemistry at Fontbonne College. **Donald Hesse**, Ph.D., 1990, spoke on *The Chemist in an Analytical Laboratory*. Don is at the Quanterra, in St. Louis and manager of the organic laboratory. **Harold Messler**, B.S., 1970, spoke on *The Chemist in a Crime Laboratory*. Harold is criminalist at St. Louis Metropolitan Police, Crime Laboratory. **Mark Cooper**, B.S., 1990, spoke about *Chemistry in Industry as Applied to Agriculture*. Mark works at Monsanto Agricultural Company. Another presenter was **Mike Meisinger**, M.S., 1993, spoke on *Chemistry in an Industrial Laboratory*. Mike is at Mallinckrodt Chemical. **Mary Nahm**, B.A., 1988, spoke on *Chemistry in a Public Utility Laboratory*. Mary works at St. Louis County Water Company.

ACS National Meetings

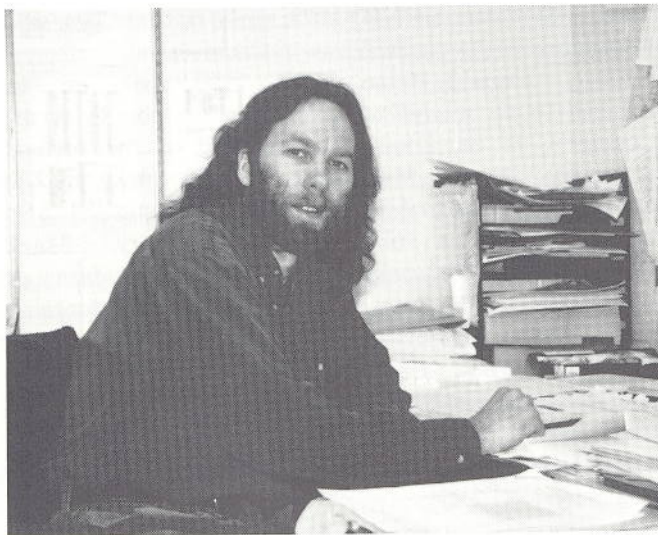
We met several former students at the **209th American Chemical Society National Meeting** held in Anaheim, CA, on April 2-6, 1995. **Lloyd Hill**, (B.S. 1967), **Randy Johnston**, (B.S. 1980) who presented a poster at the Inorganic Mixer and is now at Union College in Jackson Tennessee, **Sandy Asher**, (B.A. 1971) who was making plans for the symposium he is chairing this year, **Tom Bedard**, (B.S. 1991), whose paper we attended, **K. C. Lin** (Ph.D. 1988), **Donna Friedman** who was representing the St. Louis Section as a Councilor and **Stephen Lawrence Shankar Rananavare** was there as chair of a symposium

Departmental alumni were similarly well-represented at the **210th American Chemical Society Meeting** held in Chicago, IL, on August 20-24, 1995. We met the following alumni at the meeting: **Cecilia Marzabadi**, (Ph.D. 1995) who is a postdoc at Hunter College; **Minren Lin**, (Ph.D. 1990) now at Penn. State, **Mike Merriman**, Hoechst-Roussel Pharmaceuticals; **Mike Drain**, then a postdoc at Washington University; **Tom Bedard**, University of Illinois and **Shelly Kumar**, Governors State University; Chicago

Departmental Facilities and Programs

Departmental facilities will receive a big boost when the Center for Molecular Electronics building opens in July. The research laboratories of Professors Welsh,

O'Brien, Stine and Xu will definitely move into the facility and there are current discussions about the laboratories of Professor Larsen and H. Harris moving also. The X-ray Diffraction Facility, including the specialized equipment for Professor Brammer's research will also move. The X-ray Facility has improved substantially with the addition of a CCD diffractometer which allows much more rapid data collection and structure solution than old technology instrumentation an also will do it for much smaller crystals.



Dr. Lee Brammer

The NMR Facility upgrade is complete. the new magnet for the Varian XL-300 has been in place now for about a year and the solids probe in the new Varian Unity-Plus 300 is now functioning well. Dr. Wilking and Anderson recently secured funds from the campus to replace the workstation used with the Bruker ARX-500. As mentioned elsewhere, we are in the process of seeking funds for a new high resolution mass spectrometer.

The one area wherein we have not seen improvement but are hopeful is the undergraduate laboratories. They are more than 30 years old and, we understand, the highest priority for renovation projects on the campus. there is one renovation project planned for Benton Hall. That involves the remaining research labs in the building and we refer to that elsewhere.

The undergraduate degree program received approval as a consequence of the five-year review of the accredited B.S. degree program by the American Chemical Society's Committee on Professional Training. As we mention elsewhere, the undergraduate program continues to be very healthy in terms of numbers of graduates and, the successes they are able to achieve following graduation. Undergraduate research remains a high priority in the department and we continue our NSF and Monsanto-funded summer undergraduate research program.

Graduates 1995

MAY 1995

Sohrabi Abdollahi, Ph.D.
 Patricia Chernovitz, Ph.D.
 Herb Kaiser, Ph.D.
 George Limpert, MS
 Michael Underwood, MS
 Joseph L. Barringer, BA
 Vicki L. Chlanda, BA
 Michael D. Groaning, BA
 Brenda Renee King, BS
 Binh V. Lam, BS
 Kevin G. McHugh, BA
 Francis W. Moser III, BA
 Michael Pasiaka, BS
 Bradley J. Rowe, BS
 Tracy Schweitzer, BS
 Craig D. Siman, BA
 Elizabeth Sloan, BA*
 Shadonna P. Tansil, BA
 Jennifer L. Wendt, BS
 Sharon Woods, BA

AUGUST 1995

Hong Fang, Ph.D.
 Jeffrey B. Kreyer, BA
 Angel Hayakawa, BS
 Geanine Howard, BA

DECEMBER 1995

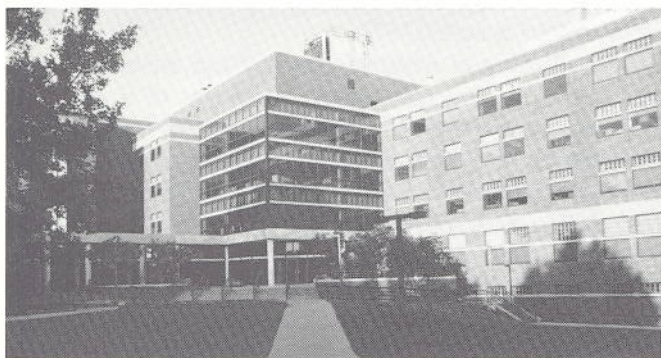
Hong Gu, Ph.D.
 Donna M. Andrauskas, MS
 Gerald Hook, MS
 Lori A. Lankow, MS
 Bradley E. Resnick, MS
 Steven Rooney, MS
 Todd A. Staley, MS
 Catherine Thomasson, MS
 Achilles Karakas, BS
 Tim A. S. Marzan, BS

The Faculty

Gordon K. Anderson had a lengthy chapter on organoplatinum compounds appear in the recent "Comprehensive Organometallic Chemistry II". He continues to serve on the UM Research Board, and to pursue his work in palladium and platinum chemistry for which he recently received further NSF funding. Along with Lee Brammer and Bill Welsh he also received NSF funding to renovate their research labs in Benton Hall. The work will be done over this summer, so a very disruptive

time is in prospect then, but the end result will be well worth it.

Charles W. Armbruster continues to teach freshman and organic chemistry for us. I thought it would be nice to quote from the letter sent by Tom Jenkins, B.S. 1967 on the influence Dr. Armbruster had on him. "I feel I need to especially remark on the tremendous inspiration I received from Professor Armbruster while at UMSL. As you know, Professor Armbruster started at UMSL the same year as our class and the same year UMSL itself started in 1963. I had two semesters of Introductory Chemistry and two semesters of Organic Chemistry from him as did all of the Chemistry majors in our class. In all my years taking chemistry classes at three Universities, I never had a Professor who was as effective a teacher as Professor Armbruster. If it wasn't for him, I certainly would not be a Chemist today. I know the trend these days is to concentrate heavily on research output as a measure of a Professor's worth, but I feel that generating enthusiasm for the science is an enormously important role as well. I never had a professor in any course who did this as well as Professor Armbruster".



Entrance to Science Complex

Lawrence Barton, continues to write the UMSL CHEMIST. In spite of serving his sixth successive term as chairman, his research program continues to go well. Since last September he has authored or co-authored articles in *Organometallics*, *Chemical Communications*, *Inorganic Chemistry* and *Applied Organometallic Chemistry* and has been invited to write a review article on his work for the *Journal of Cluster Science*. This summer he will present papers at the *Fifth Biennial Boron Chemistry Workshop*, in Guanajuato, Mexico and the *Ninth International Meeting on Boron Chemistry* in Heidelberg, Germany. Although pleased with his research, he is most proud of his children and grandchild. The oldest, Andrew is back in St. Louis after several years in the U.K. and lives with his English wife Debbie in Florissant. He is currently selling Subaru and Mazda cars and tells me he has a great deal for you! Cathy received her M.A. degree in education at Maryville University this past summer and currently teaches at McKinley School in Normandy. Cathy, James and our grandson Kyle live in Greendale, near the

UM-St. Louis campus. Hilary, the youngest of our children, is currently at Eastern Washington University, near Spokane, WA., working on a second master's degree. She graduated with a M.F.A. degree in creative writing last June and now is working on a M.A. in technical writing.

Lee Brammer, authored or co-authored papers published in the journals *Organometallics*, *Acta Crystallographica* and *Journal of Organometallic Chemistry* during 1995. Dr. Brammer and his coworkers have made presentations at a number of conferences in the past year, and in early 1996 he will be presenting the results of ongoing work on hydrogen bonding in organometallic complexes at Los Alamos National Laboratory and at universities in California. He continues his long term collaboration with researchers at Brookhaven National Laboratory where he and his coworkers visit to obtain neutron diffraction data, and with colleagues in England. Dr. Brammer took an appointment as a co-editor of the journal *Acta Crystallographica* at the beginning of 1996, and is now gearing up for the annual meeting of the American Crystallographic Association, which will take place in St. Louis in July, 1997. His research group has been joined recently by graduate student Juan Mareque from Santiago, Spain, and by undergraduate student, Eric Bruton. Dr. Witek Kwitakowski, a postdoctoral research associate, has recently left to take up an appointment at Dalhousie University in Halifax, Canada.

James S. Chickos had one of his graduate students, Mohamed Shaharuzzaman complete his Ph.D. degree this semester. The other members of his research group are graduate student Joe Wilson and undergraduates Anjanette Smith and Gary Nichols. Anjanette won a citation for a poster she presented at the ACS Undergraduate Research Symposium at SIU-Edwardsville last year. Dr. Chickos continues to collaborate and publish with colleagues from all over the world. They include Tim Keiderling from the University of Illinois-Chicago, Michael Sternberg of the Imperial Cancer Research Fund in London, Sergei Gagarin of the Russian Academy of Science in Moscow, Roberio De Silva of the University of Porto, Portugal, Raphael Sabah of CNRS in Marseilles, France, and Duane Killin of NIST in Washington DC.

Joyce Y. Corey will be presenting a paper at the International conference on Organosilicon Chemistry in Montpellier, France this summer and will be an invited participant at the Gordon Research conference on Organometallic Chemistry. Two of her graduate students, Jean L. Huhmann and Rifaat Shaltout expect to receive their Ph.D. degrees this summer and another, Steven Rooney, B.A., 1994, received a M.S. degree in January. Joyce's research group will not vanish since she has Debbie Wyman, an undergraduate working in her group, and a new Ph.D. student Brian Grimmond, from Glasgow, Scotland, just joined her.

Valerian T. D'Souza continues his research in cyclodextrin chemistry. He had four publications and made 11 presentations of his research at conferences in 1995. He collaborated with Jerald S. Bradshaw of Brigham Young University and Keith Stine here at UM-St. Louis. He visited the University of Concepcion in Chile and presented a short course in Bioorganic Chemistry last Fall. Dr. D'Souza was recently invited to present two seminars at the University of Havana.

David L. Garin, is still directing the Center for Science and Technology and serves on the boards of the National Center of Environmental Information and Technology and the Missouri Coalition for the Environment. He is currently organizing a laboratory manual for use in the UMSL undergraduate organic laboratory. Recently, Floris Homan was in St. Louis for a program. Floris now with Ferndale Laboratories, Inc. near Detroit, Michigan, as Director of Quality Control Operations. Alan Schneider visited the campus during the Christmas holidays and claims to be the best GC/MS operator in the country.

Harold H. Harris, indicates that the Chemistry Textbooks in Print - Online! project, that he started two years ago, has provided a useful and popular service to chemical educators through the Internet. It is by far the most-used World Wide Web service on campus, and was utilized by over 1400 off-campus users from all over the world during January, 1996.

Since the September, 1995 issue, the project has provided the information published by the *Journal of Chemical Education* in its "Book Buyers Guide". This month, the project is merging into a new Internet presence for the Journal, which will include a significant amount of the publication's editorial content as well as an expanded Chemistry Textbooks project. Already, the Project has incorporated information about journals of interest to chemical educators and an "Editor's Choice" recommended list of current publications. Plans include expansion to reference materials for chemical education and perhaps software. The archive now includes hyperlinks from its listings to Web pages provided by many of the publishers, so that educators can quickly go from a survey of available books to detailed information about individual items listed.

The project provides employment for undergraduate chemistry majors, who do the research necessary to update the information in the archive, and edit the files that are made available to users. The merger with the *Journal of Chemical Education* means that the amount of support for students will significantly increase, and that funding will no longer depend on contributions from publishers of textbooks.

Professor Harris says, "Everyone seems to think this service is a good idea. Small and large publishers enjoy an efficient and economical additional way of reaching potential customers, teachers and professors like having the ability to quickly determine the books available

for adoption for courses - even advanced and low-enrollment offerings for which there has typically been little advertising. Our students learn about computer networks and the World Wide Web, and work at their own convenience. I anticipate that our success will be copied in other areas of science and engineering education."

Wesley R. Harris attended a workshop on Aluminum Chemistry, Toxicity and Speciation this past year (when) and as a result coordinated a review on "Aluminum Speciation and Complexation" in the *Journal of Toxicology and Environmental Health*. He is also writing a review article for *Coordination Chemistry Reviews*. One of Dr. Harris' graduate students, Sohrab Abdollahi finished last summer and they recently published an article on the thesis research co-authored by former faculty colleague Dr. James p. Riehl, who is chairman of the chemistry department at Michigan Technological University. Dr. Harris will be attending the International Conference on Coordination Chemistry at the University of British Columbia, Vancouver, Canada, this summer.

David W. Larsen's research involves the environmental chemistry-testing of a process for the thermal destruction of hazardous materials.

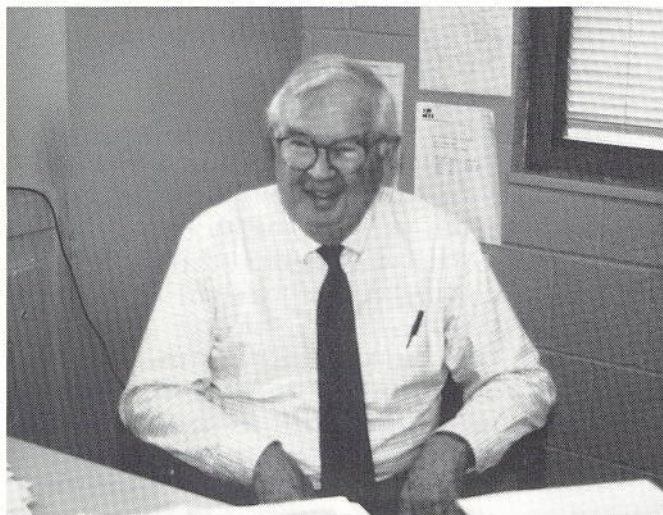
Testing of a thermal destruction method, named the ChemChar Process, for the treatment of a range of hazardous substances is under way. The process was developed and patented jointly by Professor Larsen and Professor Stanley Manahan on the Columbia campus. In cooperation with an engineering company in Sunnyvale, CA, the project has received support from Department of Energy to conduct a sub-pilot scale study of the process in treating surrogate "mixed" wastes, those containing both radioactive and hazardous chemical components.

Treatment is accomplished by mixing the waste with granular char, a form of activated carbon, and subjecting the waste/char mixture to a thermal treatment called gasification. Oxygen is used as the oxidant and a high-temperature "thermal reactive zone" is created within the porous char bed. The high temperature zone moves through the bed and in the process, the organics are converted to a clean-burning, combustible gas. The gas product, which is a form of synthesis gas, is a mixture of carbon monoxide, carbon dioxide, and hydrogen. The process operates in the countercurrent mode, in which the reactive zone moves in the direction counter to that of the gas flow. Little of the char is consumed in the process, so that the atmosphere is reducing so that no dioxins or furans are formed.

The process reactor must be capable of withstanding the high temperatures attained in the thermal zone, which are between 1500 and 2000 degrees C. It has been designed and is being fabricated in California. Completion is projected to be during the middle of March. The reactor is 4 inches in diameter and will operate in the

continuous-feed mode, so that careful continuous monitoring and control will be required in its operation.

Destruction efficiency and retention within the reactor of the hazardous substances will be carefully monitored. In parallel with the actual testing, thermodynamic and kinetic calculations are being done to model the process.



Dr. Robert W. Murray

Robert W. Murray, graduated his last Ph. D. student (Hong Gu) in Jan., 1996. Hong is now a postdoc at Mallinckrodt Medical. In his work with the Pulp and Paper Research Institute of Canada his group has developed several new and promising systems for pulp bleaching. Their NIH work continues to go well. They have shown that oxidants from an ozone-alkene reaction can convert several polycyclic aromatic hydrocarbons to their corresponding arene oxide derivatives while the hydrocarbons are supported on fly ash (courtesy of Dr. David Garin and Union Electric Co.) in our environmental chemistry reactor. The significance is that the arene oxide functionality is a necessary factor in the mutagenicity associated with many of these hydrocarbons.

James J. O'Brien, has been working hard on his intracavity laser spectroscopy research and also in the teaching of instrumental analysis. He presented two papers at two conferences held at Kona Hawaii and attended a Free Radicals conference in Victoria, BC Canada late last year. Postdoctoral Fellow Kuldip Singh left to take an analytical chemistry position with the St. Louis Water Company where his boss is Alan Sapia, B.S., 1970 (Ph.D. St. Louis University). Dean Peterman who obtained a Ph.D. at the U of Cincinnati joined Dr. O'Brien as a postdoctoral fellow. He also has a new graduate student, Balacz Kalmar, our first recruit to the Ph.D. program from Hungary. Dr. O'Brien published two papers this past year, one with Kuldip Singh and the other with former postdoctoral fellow Magnus Lipp. His research work

continues with a project that involves obtaining absorption coefficients for methane at condition appropriate for interpreting the reflected sunlight spectra from the outer planets - now using a Ti:sapphire laser rather than a dye laser intracavity laser system to make the measurements. His other project involves using various techniques (including intracavity laser spectroscopy, optical emission spectroscopy, residual gas analysis) to study the gas phase species involved in the deposition of diamond like carbon films. Just started a collaborative project with a company in Buffalo that involve use of similar techniques and ellipsometry to investigate gas phase species involved in the deposition of diamondlike nanocomposite materials. These films consists of mutually stabilizing mixtures of diamondlike carbon and silicon dioxide and metals such as titanium can be added as dopants during the deposition process. The properties of these materials are better than diamondlike carbon and lots of uses are anticipated for such materials once they can be grown successfully on various substrates. His laboratory will be moving to the Center for Molecular electronics Building this summer. He is excited about the new lab but not looking forward to the actual move and having to set up the lab again.

Nigam P. Rath has been trying to keep up with the data collections, structure solution and refinements since the new CCD (Charged Coupled Device) diffractometer was installed in November 1995. The long waiting-lists for structure determination is a thing of the past. With the installation of the most advanced technology in x-ray diffraction, the charge coupled device area detector system, our department's x-ray diffraction facility is one of the best facilities in the world. The laboratory is scheduled to be moved to the new Center for Molecular Electronics building the Fall of 96. Dr. Rath would be delighted to give a tour of the facility. He would like to invite anyone visiting the department to stop by the X-ray Diffraction Facility.

Christopher D. Spilling who received tenure last year and was promoted to Associate professor, will spend the 1996-97 academic year on a combined sabbatical/research leave at Cambridge University where, among other things, he will work on a chapter for Organic Reactions in collaboration with his Ph.D. mentor Brian Marples of the University of Loughborough.

Keith J. Stine, continues his research in the area of organic thin films, currently focusing on self-assembled and Langmuir-Blodgett films of cyclodextrins, a project funded through the Office of Naval Research. The project is a collaboration with Professor D'Souza and currently being worked on by a postdoctoral associate, Dr. Abdul Khan, a graduate student, Ms. Donna Andrauskas. Dr. Stine's first Ph.D. student, Dennis Parazak, left in January for a full-time research position at Hewlett-Packard in Corvallis, Oregon, but will be back in April to defend his

thesis. Dr. Stine published 3 papers in 1995, and has 3 additional papers currently in press.

William J. Welsh, maintains an active research program with his students and postdocs. His funded projects include (i) the use of artificial neural networks for pharmaceutical fingerprinting funded by the Food and Drug Administration, (ii) the computer-aided design of anti-cancer drugs funded by the National Institutes of Health, (iii) modeling of high-performance polymers funded by NASA and McDonnell Douglas, and (iv) the computer-aided design of anti-Alzheimer's disease drugs funded by the Missouri Alzheimer's Disease Advisory Board. Prof. Welsh also collaborates on projects with Profs. Chickos, W. Harris, Chris Spilling, and David Garin in the Department of Chemistry. He also is nurturing a new project with a team of computational chemists located in the Ukraine.



Dr. Keith J. Stine

Janet Braddock-Wilking has completed her second year as a Research Assistant Professor and NMR Facility Manager. She has trained a number of students and postdocs on the new Varian Unity Plus 300 MHz spectrometer and the Bruker ARX-500 spectrometer. She attended a course on solid state NMR last summer and will be installing a number of experiments to look at different nuclei by CP-MAS NMR. She is a co-author on several publications from collaborations with other faculty in the department. She has had 5 undergraduate students work with her over the past year, two of which were enrolled in the summer REU program. She continues to carry out independent research and has presented some results at the Organosilicon Symposium held in Gainesville, Florida last March and at the Organometallic Gordon Conference last summer. In addition, a paper has recently been published last fall in the Journal of Organometallic Chemistry describing some of her recent results. She currently has an undergraduate student doing research with her.

Rudolph E. K. Winter The chemistry of naturally occurring substances remains as Dr. Winter's primary research interest. Collaborative efforts with Professors W.

and M-E. Lewis, ethnobotanists from Washington University continue. With graduate student Ali Kasiri, he is investigating biomimetic transformations of aporphine alkaloids as a synthetic entry to the very rare taspine-like natural products.

Dr. Zhi Xu, has his research program well underway. One project involves a study of the linear and nonlinear optical behavior of molecules at air-solid and liquid-solid interfaces. His research group consists of graduate student Mark Elking (B.A., 1994) and a postdoctoral fellow. They have made a breakthrough in solid-liquid interfacial chemistry. They have made the first observation of changes in the molecular orientation at an electrode surface as a function of applied electrochemical potential. During the last year, his group submitted two papers for publication and presented their research progress at the regional ACS meeting last November in Joplin, MO and at the Pittsburgh Conference early in March. Recently, he received a UMSL research award for his proposal "Detection of a single molecule by time gating technique". He is currently preparing for his second research project to study the optical phenomena of organic and inorganic molecules, in collaboration with colleague Dr. Christopher Spilling.

New Faculty

Dr. F. Christopher Pigge will join the faculty in the Fall. Chris is a synthetic organic chemist and currently a postdoctoral fellow at Wayne State University. Interestingly he took the position at Wayne State, in the group of Professor James Rigby, formerly occupied by Dr. Humy Ateeq who received his Ph.D. degree here with Michael Sworin. He obtained his undergraduate education at the College of Wooster in Ohio and his Ph.D. degree at the University of North Carolina with Professor Thomas N. Sorrell. His wife Beth Anne is expecting her first child about the time they will be moving to St. Louis.

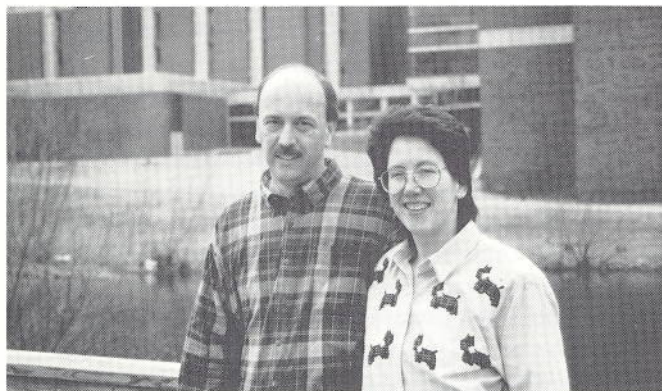
Adjunct Faculty

Daniel Connolly and **Will Ridley**, both from Monsanto continue to teach the biochemistry in the department. **Donna Friedman** (Ph.D., UM-St. Louis 1981) has been teaching quantitative analysis during the summer these past several years and **John Gutweiler** has been carrying a regular teaching load now since the early 1970s. **Dennis Moore** from Mallinckrodt continues to teach general chemistry in the evening and **Robert Orth**, Monsanto continues the evening physical chemistry instruction. **Raghavan Rajagopalan**, Mallinckrodt, who took over from **Bill Neumann** (Ph.D. 1987) two years ago continues teaching organic chemistry in the evening and **Robert Stearns** is beginning his fourth decade teaching introductory chemistry in the evening. **Joseph Dence** is now a regular fixture teaching a range of courses for us,

sometimes day and sometimes evening, and publishing articles and books in mathematics, and new colleague, recent retiree from Monsanto, **Larry Brannigan** is teaching organic chemistry during the day this semester.

The Staff

Fortunately, there have been no staff changes recently. **Betty Eshbaugh** continues to run the department and keeps a close eye on expenditures. **Bob Cabaniss**, former glass blower's health seems to be very good these days after surgery for cancer and we are happy to see that Bob is enjoying retirement. His replacement, Ken Owens, (B.S., 1980) works part time in the department as glassblower and also has been doing full time contract work with ATCOM in St. Louis. Lisa Johnson, secretary, was married to Dan Hoguet this past summer, so is now **Lisa Hoguet**. Dan is a paramedic in St. Louis **Gordon Kirschmann** continues to be a major resource to the NMR facility and other instrumentation maintenance in the department and **Joe Kramer** is now the computer guru on the staff and has been very helpful in setting up and maintaining computers and software in the department. We are delighted to announce that **Donna Palmer**, our stock room manager who takes cares of many other departmental chores is engaged to **Joe Kramer**. **Randa Schneider**, has been very helpful putting this issue together again this year and she is looking forward to visiting her native Lebanon next summer. Finally **Ted**



Donna Palmer and Joe Kramer

Windsor continues to be Ted Windsor and that is the finest compliment anyone could possibly receive.

Postdoctoral Fellows

Jonathan Bould who had been with Dr. Barton for 18 months left in July to return to a similar appointment at the University of Leeds. **Elizabeth Collantes** and **Tong Weida** continue to work with Professor Welsh along with **Svava Osk Jonsdottir** from the Technical University of Denmark in Copenhagen. **Yiwei Ding** left Professor Corey's employ to take an appointment at Monsanto last Fall. **Hong Fang** who received her Ph.D. degree last summer and is working with Dr. Barton will take an appointment in the St. Louis

County Crime Laboratory very soon. **Guoxin He**, from the University of Illinois-Chicago works with Professor Xu and **Megh Singh** and **K. Iyanar** continue to help **Dr. Murray** run his program in organic oxidation chemistry. **Abdul Khan**, Ph.D., 1994 continues to work with Professor Stine along with part time postdoc **Jack Uang**. **Witek Kwiatkowski** left Dr. Brammer to take a similar appointment at Dalhousie University in Halifax, Nova Scotia, Canada. **Yuejin Li** continues with Professor Wesley Harris and **Adewole Okunade** from Nigeria spends time in Dr. Winter's laboratory but hold a primary appointment with Dr. Walter Lewis at Washington University. We mentioned earlier that **Dean Peterman**, Ph.D. Cincinnati, is with Professor O'Brien and that former O'Brien postdoc **Kuldip Singh** is now with the St. Louis County Water Company.

Support

Contributions 1994-95

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. The listing may not be up-to-date since many of you have made contributions quite recently. If we missed out your name, we apologize and hope you understand that this newsletter is written by an amateur who does it in his spare time. The list does not include faculty contributions.

ALUMNI CONTRIBUTIONS

ALUMNI CONTRIBUTIONS

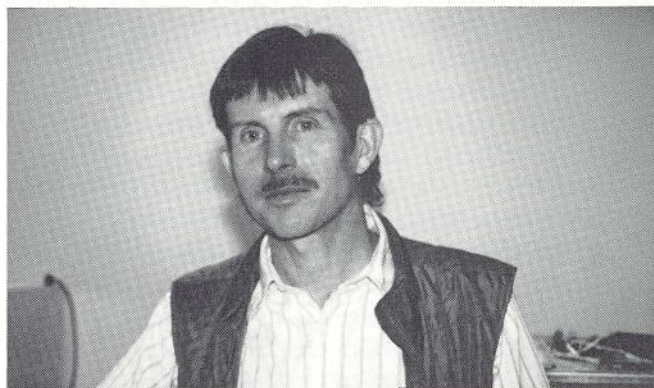
Mr. and Mrs. Michael C. Auinbauh
 Mr. and Mrs. Gerard R. Beasley
 Mr. and Mrs. Joseph P. Bono
 Mr. and Mrs. Kenneth H. Braig
 Mr. and Mrs. Mark E. Braton
 Mr. and Mrs. Joseph W. Bullock
 Mr. and Mrs. Charles M. Calvert
 Mr. and Mrs. Rocky L. Carr
 Ms. Patricia A. Clay
 Mr. and Mrs. James I. Crowley
 Mr. and Mrs. Jeffrey L. Evans
 Mr. and Mrs. Lee Gori
 Drs. Alfred O. and Dorothy C. Greco
 Mr. and Mrs. Steven N. Hacker

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 Mr. Ronald B. Harris
 Mr. Richard E. Hauhart
 Mr. and Mrs. Michael A. Hauser
 Mr. Xinyu Hu
 Dr. and Mrs. Herbert J. Kaiser
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 Mr. and Mrs. John R. Kolb
 Mr. and Mrs. Roger T. Kopp
 Dr. and Mrs. Shailendra Kumar
 Dr. Robert L. Lamberg
 Mr. and Mrs. Gerald C. LaMotte III
 Mr. and Mrs. Mark A. Leiber
 Dr. and Mrs. Minren Lin
 Ms. Karen M. Linck
 Mr. and Mrs. James R. Marik
 Mr. and Mrs. Kerry L. Martin
 Mr. and Mrs. Michael K. Maxwell
 Mr. and Mrs. Heath W. McCann
 Mr. and Mrs. Stephen L. McCarthy
 Dr. Richard G. Mrad
 Dr. and Mrs. Harry W. Orf
 Mr. and Mrs. Lawrence E. Payette
 Mr. John A. Phipps
 Mr. Michael A. and Dr. Janet D. Place
 Mr. and Mrs. Gregory W. Przygoda
 Mr. and Mrs. Phillip Reynhout
 Mr. and Mrs. James Riggio
 Mr. Bruce E. and Dr. Vicki M. Ritts
 Dr. and Mrs. Jeffrey A. Roneker
 Mr. and Mrs. John Ruggeri
 Mr. Donald D. Ruhl
 Dr. Suzanne E. Saum
 Drs. Xue M. Gu and Judy Shih
 Dr. and Mrs. Jeffrey W. Siria
 Mr. Daniel P. Stueck
 Ms. Deborah Tannenbaum
 Mr. and Mrs. John J. Taylor
 Mr. Charles L. Thierheimer Jr.
 Mrs. Cindy Dahl
 Mr. and Mrs. Gregory E. Thudium
 Mr. and Mrs. Dan C. Tucker
 Mr. Angelo W. Vangel Jr.
 Mr. and Mrs. Dale G. Vineyard
 Mr. Carl T. Von Till
 Mr. and Mrs. Gregory R. Webb
 Dr. and Mrs. Dennis W. Wester
 Mr. James R. Wheatley Jr.
 Mr. and Mrs. Keith S. Zeisel

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 Hoechst Celanese Foundation, Inc.
 Johnson & Johnson Family of Companies Co.
 Mallinckrodt Chemical, Inc.
 McDonnell Douglas Foundation
 Monsanto Company
 Monsanto Fund
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 UM-St. Louis Alumni Association
 3M Corporation



Dr. James J. O'Brien

The Robert W. Murray Lectureship

We are launching an appeal for contributions to the fund which we hope will grow to be large enough to endow the first Lectureship in the department. This is the *Robert W. Murray Lectureship*. We have observed the success of the *Kennedy Lectureship in Chemistry* at Washington University and also more recently the success of the *Probst Lectures* at SIU-Edwardsville. Dr. Murray will probably retire two years from now so we think that this is the most appropriate time to begin to establish the fund. Dr. Murray joined the faculty in 1968 after a most successful research career at Bell Labs. He had already developed a major reputation in ozone and singlet oxygen chemistry when he arrived but at UM-St. Louis his career has truly excelled. He served as chair of the department from 1975-1980 and was appointed Curators Professor of chemistry in 1981.

You will be hearing from us soon on this subject. The idea is to raise at least \$50,000. Thus we will be 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.

Departmental Awards

Undergraduate

The award for the *Outstanding Student in Introductory Chemistry* went to Gretchen R. Hoel. She received a certificate and a Handbook of Chemistry and Physics from the Chemical Rubber Company. The *American Chemical Society Award for Analytical Chemistry* went to Darrin J. Lauritzen 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 Radu Duta. The award was presented at the annual Awards Night during the ACS St. Louis Section's Chemical Progress Week.. Michael D. Groaning received the *Alan F. Berndt Outstanding Senior Award*. Radu Duta received the *Eric G. Brunngaber Fellowship for 1995-96* academic year and Wade Benny received the *Robert L. Lamberg Fellowship*. We neglected to mention last year that the 1994-95 *Lamberg Fellow* was Michael Groaning. The *William and Erma Cooke Scholarship for 1995-96* went to Deborah Wyman. The 1995 *Undergraduate Chemistry Awards sponsored by the Monsanto Company* were awarded to the following: Wade Benny, Radu Duta, Rhea Hunt, Achilles Karakas, Lisa Meyerkord, Matthew Clark, Wesley Gerber, II, Mark Jackson, Peter Kim, and Gary Nichols.

Graduate

The 1994-95 *Mallinckrodt Fellowship* went to Isabel Vasconcelos. The *Alumni Summer Graduate Fellowship* went to Yu Lin and Shenping Tian. *Graduate School Summer Fellowships* were awarded to Yihua Liao, Raafat Shaltout, and Isabel Vasconcelos. The *Outstanding M.S. Student* award went to Catherine Thomasson.

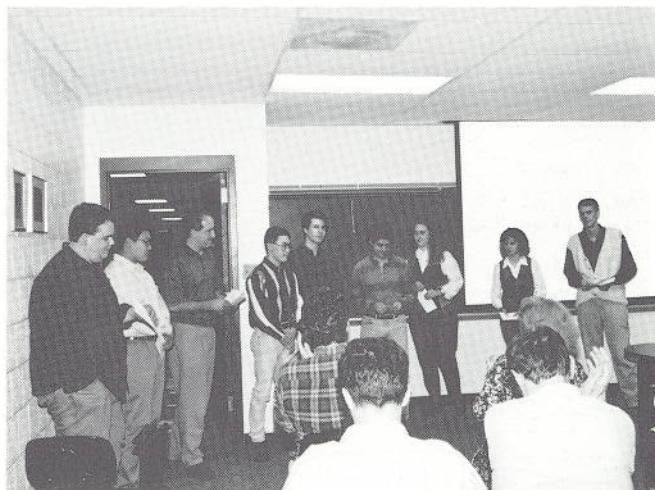
Award to Honor Jack Coombs

After much discussion about how to do it, we have established the *Outstanding Graduate Teaching Assistant Award*, dedicated to the memory of Jack I. Coombs. Jack served as the first manager of the chemistry stockroom and was a father-figure to many of the faculty members as well as the students. He served from 1965 until 1977 and passed away in 1981. The award is funded through contributions, principally from Harold Messler and Ted Windsor. The 1995-96 award went to Robert Scotland. His

name is inscribed on a plaque which hangs in the stockroom in full view. The plaque reads "UM-St. Louis Department of Chemistry, Outstanding Graduate Teaching Assistant Award, Dedicated to the Memory of Jack L. Coombs. Much credit is due to Donna Palmer for helping establish the award and handling various logistical details. Robert is a second year graduate student in Dr. Anderson's lab and won the award for his work as the head GTA in chemistry 11.

Alumni

The Eighth *Annual Distinguished Alumni Lecture* was presented by **Dr. Janet Braddock-Wilking** (BA 1985). Her title was "Synthesis and Reduction Chemistry of 1,3-Diaryltriazene Complexes of Aluminum". Janet is Research Assistant Professor of Chemistry in the department and Manager of the NMR Facility. She graduated from UM-St. Louis in 1985, received a Ph.D. degree from Washington University with Peter Gaspar and did postdoctoral research with Andrew Barron at Harvard before returning to St. Louis to take a second postdoctoral position at Mallinckrodt Medical. She joined UM-St. Louis in 1993. Janet is married to Bruce Wilking, professor of Physics. They have two sons, Alex 2 and Kevin who was born last Fall.



*Students Receiving Undergraduate Chemistry Awards
Sponsored by Monsanto*



UM-St. Louis Chemistry Alumni Fund

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

Designation for funds:

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 1996

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:

