



Department of Chemistry

Volume 11

# UMSL CHEMIST

University of Missouri-St. Louis

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## Chairman's Message

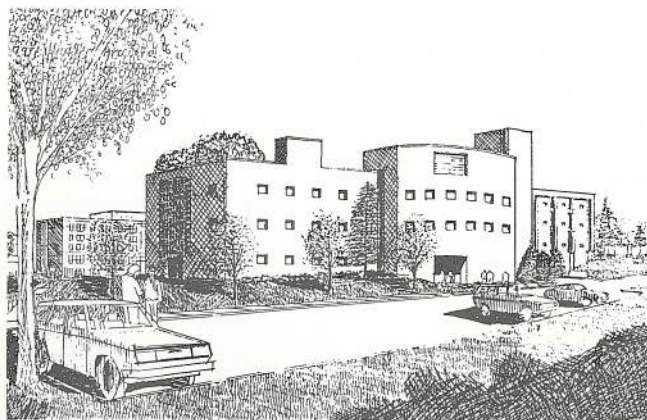
This is the eleventh year in which the UMSL CHEMIST has been produced in the new format. The response to it has been excellent and we hope you continue to find it interesting. Any suggestions for further improvement are most welcome.

Since 1992 was an election year we had high hopes that a new administration in Jefferson City would treat the University more kindly. We await evidence from the Carnahan administration that we finally do have an "Education Governor". The only changes in budget we have seen this past year have been from regrettable increases in student fees and in reallocation of university resources. This has allowed for the continuation of development of the Center of Eminence project, albeit slowly, and we continue to be able to point to successes. Last year was a very good year in the department and this year looks to be even better. Although we regret losing the formal presence of Professors Armbruster and Miller, they are still in the department. Dr. Armbruster carries a very important and heavy teaching load, including introductory and organic chemistry, and Dr. Miller has been completing work on her High School Teaching training grant from the Coordinating Board for Higher Education.

The campus continues to change. The Computer Center Building is now open and the formal dedication is scheduled for March 26. The final plans for the Center for Molecular Electronics Building have been approved. It will be constructed on the north side of the west wing of Benton Hall and it will be accessible from the second and third floors of Benton Hall. A separate section below describes the Center and the building. Congressman William Clay was instrumental in securing funds for the project and Chancellor Touhill, in recognition of his efforts, presented him with the Chancellor's Medallion at a reception in his honor last fall. Plans for the greenhouse which will be part of the Anheuser-Busch Ecology and Conservation Research Complex are essentially finalized. It will include all the rooms in the west wing of the first floor of Benton Hall, and will be an important part of the

DON'T FORGET THE ALUMNI RECEPTION. IT WILL BE HELD ON FRIDAY APRIL 23, FROM 7 TO 10 PM, IN THE Alumni House, 7956 Natural Bridge Road (across the street from Woods Hall). PLEASE CALL RANDA SCHNEIDER AT 553-5311 TO INDICATE WHETHER YOU WILL BE ABLE TO ATTEND. WE LOOK FORWARD TO SEEING YOU.

Center for Tropical Ecology. The Biology Department has raised, privately, \$950K of the required \$1.4m funding. The greenhouse itself will be located adjacent to the south side of the west wing of Benton Hall and will be accessible from Benton Hall. The opening of the MetroLink stations on the campus is expected in August this year and that will be a boost to the campus. The only concern is that concerning the fate of Washington Park Cemetery through which the tracks will run. If the dispute is not resolved, the opening of the route from the campus to the airport will be delayed.



Architect's sketch of the Center for Molecular Electronics building looking southeast across West Drive.

Undergraduate enrollment in the department continues to be very healthy as does the number of graduates. In fact enrollment in chemistry courses has closely paralleled the national trend. If it were not for the discontinuation of a program involving the contracting of courses for the Jewish Hospital School of Nursing, and the UMSL School of Nursing announcing that they intend to drop organic chemistry as a requirement for the BSN degree, our enrollment would have increased. In the academic year 1991-92 we graduated 24 BA/BS students, 4 MS, and 7 Ph.Ds. The enrollment in the sophomore organic chemistry courses is at a several-year high and undergraduate research continues to be a very important feature of our program. Last summer we had about 19 students in the NSF REU/Monsanto Summer Research Program and during the academic year we have had an average of 14 undergraduates doing research. It would appear that the increase in undergraduate research has had an effect on the number of students going on to graduate school. Of the undergraduates who graduated in the calendar year 1992, more than one third went on to graduate school.

Department research productivity reached an all-time high this past year. The faculty published 46 refereed papers, 12 book chapters, one book, and 2 book reviews. Also 43 abstracts of papers were presented at conferences around the world. During the 1991-92 academic year faculty members raised more than \$655,000 in external research funding. This level of research productivity is the highest in our history and this academic year the numbers will be even greater. Of course the most important successes of our program are the successes of our students. This year, in spite of the depressed employment market, our students are finding good positions in industry and in other areas and it has been very encouraging to see that our graduates are in high demand. We look forward to continued successes from you, our graduates, and we hope you will keep us informed about them.

As I write this, the department has on order a Bruker ARX-500 NMR spectrometer and we are recruiting for an NMR specialist. Although it has been eight years since we acquired the 300 MHz spectrometer, access to a 500 MHz instrument is now essentially the norm in a research university. We are also in the process of remodelling the NMR laboratory and will soon remodel the X-ray laboratory. The atomic absorption spectrometer we were to receive through the grant awarded by the NSF to Dr. O'Brien is now installed and functioning in the instrumental analysis course and for research.

The Center for Molecular Electronics has initiated a Colloquium Series and the inaugural lecture was presented by Tom Jones on January 29. Following the lecture Tom was honored at a reception at the chancellor's residence at which he was presented with a gift as a tribute to his outstanding service to the University. About sixty people attended the lecture and the reception.

Our alumni relations and related activities continue to receive excellent support from the campus Division of University Relations. Many of you know Kathy Osborn, who was in charge of Alumni and Constituent Relations for several years. Most recently Kathy had been Assistant Vice Chancellor of University Relations but last fall she was appointed by Chancellor Touhill to fill the vacant position of Vice Chancellor for University Relations. Kathy assures us that she will continue to be as helpful as she has been in the past. Laurie Wilhite, Coordinator of Alumni Relations is now primarily responsible for all activities relating to alumni.

In closing this not-so-brief series of remarks, I emphasize that we look forward to hearing from those of you from whom we have not heard recently and we hope to see you at the Annual Alumni Reception which will be held on April 23 in the Alumni Center. Of course we also want to hear from those of you who regularly report on your professional and personal progress. We hope you will impress upon your friends and neighbors what an excellent deal UM-St. Louis is, especially for chemists at the undergraduate and graduate levels. We are willing to be of assistance to those of you who are looking for jobs or job changes and if you are aware of any openings, please let us know about them. Finally, we wish you all the best in your careers and personal lives.

Sincerely,

Lawrence Barton  
Professor and Chairman

## Alumni Information

### 1966-67

**Donald M. Kaesser**, B.S., sent a letter to be read at the reception held in honor of Dr. C. Armbruster. "Dr. Armbruster was my first contact with a truly well educated and gifted person. His intelligence, creativity and sensitivity to the human condition was demonstrated in every interaction that I ever had with him. He was an important part of not only my undergraduate education in chemistry but also in my forming a view of what an educated person was. I value the time that I spent at UMSL and with Dr. Armbruster. I wish that I could be there this evening to say so in person". Don is a licensed psychologist with Central Iowa Psychological Services in West Des Moines.

### 1968-69

**Joseph Bono**, B.A., is Supervisory Chemist, Special Testing and Research, at the Laboratory of the Drug Enforcement Administration in McLean, Virginia. Joe does NMR and recently acquired a 500 MHz spectrometer with an Oxford Magnet at a cost of 3/4 million dollars. He and his wife Barb, who works with a local HMO, have three children, Gina who is a music major at the University of West Virginia, and younger sons Matthew and Daniel.

**Gary S. Jacob**, B.S., about whom we wrote last year, is a member of the Editorial Board of *Glycobiology* a journal published by Oxford University Press. We ran into Gary at the Washington, DC, ACS meeting.

**Lesley E. Tucker**, B.S., practices internal medicine and gastroenterology at Missouri Baptist Hospital in Washington, MO. Les is a Fellow of the American College of Physicians and also a Fellow of the American College of Gastroenterologists.

### 1969-70

**Harold Messler**, B.S., is a member of the Board of Directors of the St. Louis Section of the American Chemical Society. In fact he is becoming one of the old-timers in the group. Harold is Chief Criminalist in the St. Louis Metropolitan Police. As an alumnus he is scheduled to go with a group of alumni to Jefferson City for Legislative Recognition Day. That is when alumni go to meet with legislators to express concerns about the University and to enlist support for the campus.

### 1970-71

**Sanford Asher**, B.S., is Professor of Chemistry at the University of Pittsburgh where he says he spends his time in teaching, research, administration, and craziness. He is now the Technical Director of a new Materials Research Center which was just funded by the AFOSR at \$5m for the period 10/91-9/93. Sandy is the chairman of the 1993 Starter Grant Committee of the Society of Analytical Chemists of Pittsburgh.

### 1971-72

**Robert Lamberg**, B.S., was on campus recently to be honored as one of the major contributors to the campus. Bob supports a Fellowship in the department which bears his name. He is a physician with an M.D. from Washington University and has an ophthalmology practice in Clayton.

## 1972-73

**Ken Henderson**, B.S., recently moved from Ethyl Corporation, Petroleum Additives Division in St. Louis, to Castrol Inc. in Piscataway, NJ.

## 1973-74

**Ann Francis**, B.S., has moved to Phoenix, Arizona, where she works as a market research manager for US West the western equivalent of Southwestern Bell. Ann received an M.B.A. degree from the University of Wisconsin-Madison.

**Bill Goldkamp**, B.A., works at Jacobs Engineering in St. Charles. Bill, who received his engineering degree at UM-Columbia, visited the department last Fall.

**A. Gregory Wall**, B.A., (M.S., 1981) is chairman of the General Topics group for the St. Louis Section of the American Chemical Society. Greg, who received his Ph.D. degree from SUNY-Albany with our former colleague Eric Block, works in technical service with Sigma Chemical Company.

## 1974-75

**William Z. McCarthy**, B. S., (Ph.D. 1984), attended the reception for Dr. Armbruster last April. Bill works with Mallinckrodt Specialty Chemicals Company in St. Louis. He continues to rehab his house in Lafayette Square.

## 1975-76

**Richard Hoyt**, B.S., is still with Mallinckrodt but has moved back to St. Louis after several years in Raleigh, North Carolina.

**Jeffrey B. Wheatley**, B.S., is now with Terrapin Technology, a biotech company in Burlingame CA. He works with enzymes that are used to treat cancer. Jeff was with Rainin, a chromatography company in Berkeley, CA., until a year ago. Last year Jeff published two papers in the *Journal of Chromatography*.



Dr. Donna Friedman, Ph.D., 1980, and Chairman of the St. Louis Section of the ACS last year, and Dr. Barton at the reception following the St. Louis Award Symposium.

## 1976-77

**Lance Hellwig**, B.A., is a research specialist in the Epitaxial Technology Division at MEMC Electronic Materials in St. Peters MO. He and his wife Carol have 4 children, and one grandchild, with another on

the way. Their two daughters Lana and Dana are married and their oldest son David is a ministerial student, and the younger, Eric, is 12. Lance has a MIDI studio at home and enjoys songwriting and producing accompaniment tapes as time permits.

**Steven Sprinkle**, B.A., (M.S., 1985) still teaches chemistry at St. Mary's High School in St. Louis. He is teaching freshman chemistry through St. Louis University's 1-8,1-8 program and moonlights at St. Charles Community College where he teaches general chemistry part-time.

## 1977-78

**Joseph W. Bullock**, B.S., (M.S. 82), graduated from St. Louis University Law School with a J.D. degree in May 92. He continues to utilize his chemical training in his employment as a patent attorney for Haverstock, Garrett and Roberts in St. Louis. Joe passed the Missouri Bar examination this past fall.

**Michael Ennis**, B.S., continues his work as a research chemist at UpJohn in Kalamazoo MI. We noted the paper, "Enzymatic resolution of 2-hydroxymethyl-1,4-benzodioxanes" which appeared in *Tetrahedron Letters* last fall, and another in *J. Org. Chem.* with his Ph.D. advisor David Evans who is now at Harvard. Mike did his Ph.D. thesis work with Evans at Caltech.

**James G. Foley**, B.S., wrote a nice letter to Dr. Armbruster apologizing for not being able to attend the reception held in the latter's honor last year. Jim was with Petrolite for several years but is now an Associate in Environmental Solutions Inc., a small consulting firm. A current project is the perimeter air monitoring for the Times Beach cleanup. Jim is an advanced Karate instructor and also is a flying instructor and doubles as the corporate pilot on weekends.

**Elizabeth J. Keath**, B.A., is Assistant Professor of Biology at St. Louis University. Betsy spent one year in Medical School at UM-Columbia, and one year at Monsanto prior to attending St. Louis University where she received a Ph.D. degree in biochemistry. She then went into molecular biology and did postdoctoral research at Washington University School of Medicine's Division of Infectious Diseases. At St. Louis U., Betsy has a successful research program funded by a N.I.H. FIRST AWARD. Her research group includes 3 doctoral students, 1 masters student and 2 undergraduates. Betsy is married to William Powderling, a UM-St. Louis graduate who is Director of the Clinical Trial Unit at Veterans Hospital in St. Louis. They have a two-year old son.

## 1978-79

**Razia Ahmed**, Ph.D., is Trace Organics Section Supervisor at PDC Laboratories, Inc. in Peoria ILL. Razia was on campus for the Center for Molecular Electronics Colloquium given by Tom Jones in January.

**Michael Maxwell**, B.S., is now with Calgon-Vestal Laboratories in St. Louis. Mike had been with Bristol-Meyers prior to the closing of the St. Louis laboratory.

## 1979-80

**Kevin Criscione**, B.S., holds a M.S. degree in medicinal chemistry from the University of Kansas

and he is now employed by the Department of Medicinal Chemistry at KU.

**Charles L. Thierheimer, Jr.**, B.S., (M.S. 84), is employed by Hewlett-Packard in Eugene OR. He is a R & D Chemist in the Ink-Jet technology area primarily in photolithography and "micro machining" of polyimides by laser ablation. He received his 6th patent award (co-inventor) this past year. Chuck recently travelled to Japan twice to work with vendors and customers. In 1991 he travelled with his wife Cindy to Mexico and Australia. He's become a serious runner with a marathon (Seattle '90) and numerous 10Ks. We quote his letter "As an aside, you may let aspiring UM-St. Louis (I still like UMSL) chemists know that with my degrees I compete favorably with people holding degrees from some of the most prestigious universities on the U.S. There is no reason to think a degree from UM-St. Louis is any less than one from any "name" school. Thanks for the "UMSL Chemist". Very nicely done and a real joy every spring. Please say hello to everyone in the department".



*Dr. Nina Berova, and Professors Fred Richardson and Robert Woody, speakers at the ACS St. Louis Section Award Symposium with Awardee Dr. Riehl.*

#### 1980-81

**Roger Delgado**, B.S., was recently in the department with his wife and son Ricardo. The latter is in the process of selecting graduate school. Roger works for Wyeth-Airs in Corpus Christi Texas.

**Michael A. Hauser**, B.A., (M.S., 1986) assumed a faculty appointment at St. Louis Community College at Meramec in August 1992. Mike had been at Monsanto in St. Louis for 11 years. Mike was married to Lynn, a nurse at Missouri Baptist Hospital, in November 1992.

**Dennis Parazak**, B.S., (M.S. 87), was a Senior Chemist at Petrolite Corporation involved in technical service and application technology for industrial applications using surfactants and polymeric flocculants. He also plays with a band several nights a week. He books, manages and plays the band "Mixxed Company". Dennis recently made a major change and returned to the department to work towards his Ph.D. degree. He is working with Dr Stine and finds it ironic that once an industrial chemistry job kept his rock group going. Now the rock group helps finance his graduate work in chemistry.

**Cynthia K. Woodall**, B.S., was featured in the MacDonnell-Douglas magazine *Innovate* last fall. Cindy, who works in production engineering for the company, presented the paper *Resin Transfer Molding for Missile Applications* at Composites in Manufacturing '92 in January 1992 in Anaheim, CA.

#### 1981-82

**C. Michael Drain**, B.A., 1982 apparently continues as a postdoc with Jean-Marie Lehn at the Université Louis Pasteur, in Strasbourg. We note that Mike is coauthor of a paper in *Chemical Communications*, in Feb. 1993, on supramolecular cage chemistry.

**Mary K. Hayes**, B.A., still works at Aristech in Pittsburgh, PA.

**Sue Jansen**, B.S., (Ph.D. 1985), who is Assistant Professor of Chemistry at Temple University, finally married her long-time friend Jim Varnum. Jim received a biology degree from UM-St. Louis in 1981. We describe elsewhere the Distinguished Alumni Lecture Sue presented on May 4, 1992.

**Gregg Lumetta**, B.S., (Ph.D. 1987) was promoted to Senior Research Scientist at Battelle Pacific Northwest Laboratory in Richland WA.

**Steve Lawrence**, B.A., (Ph.D. 89), moved to a faculty position at Saginaw State University in Saginaw, Michigan. Steve had previously been at Rockhurst College in Kansas City. Steve has been collaborating in research with Sue Jansen (see above) at Temple University.

**Karl Seper**, B.S., continues his research at Occidental Chemical Corporation in Grand Island, New York. He was Vice Chairperson for the 4th Annual Organic Chemistry Symposium, held on June 4, 1992, which brought top organic chemists to a meeting sponsored by the Western New York Section of the ACS. Karl has a Ph.D. degree from SUNY-Albany.

#### 1982-83

**Dee Lange**, B.S., (Ph.D. 90) is working for SPARTA a defense contractor in California. She moved there after spending a sabbatical leave. Dee, who was on the faculty at Central Missouri State University, is the first chemist hired at the Test Flight Facility. She was hired as a Research Chemist but was expected to be a Project Director within six months.

**David Main**, B.A., is a Senior Engineer/Scientist at McDonnell-Douglas Corp. in Huntington Beach, CA. He has been working as an environmental specialist for the past 3 years managing the Space System Company's air pollution compliance program. Southern California has the worst air quality in America, which makes David's job both challenging and interesting. We quote "Sorry to see Dr. Armbruster is retiring. Unlike most chemistry majors I disliked organic chemistry. Organic reactions was the only course standing between me and my diploma and I took it in my last semester. Somehow Dr. Armbruster managed to drag me through it".

**Christopher Gore**, B.S., lives in New Jersey and he and his wife work for National Starch and Chemical. He is project supervisor in process development. He has started taking classes toward his doctorate degree at Rutgers. Chris was in our M.S. program prior to his job transfer to New Jersey.

**Dawn Shiang**, B.S., (Ph.D. 88), and **Bill Shiang**, B.S. 84, (Ph.D. 89), are the proud parents a baby boy (Will) born on December 18, 1992. Dawn and Bill are research chemists at Dow Chemical Company in Midland MI. and live in a beautiful lakeside home in Sanford MI.

#### 1983-84

**Judy Shih**, B.A., is working for Baxter Diagnostics in Miami, FL, as a Scientist. Judy holds a Ph.D. degree in biochemistry from UM-Columbia, and did postdoctoral work at the University of Kansas.

#### 1984-85

**Janet (Braddock) Wilking**, B.A., who holds a Ph.D. degree from Washington University is working at Mallinckrodt, St. Louis. She is the proud mother of a baby boy (Alexander Robert) born on January 29, 1993. Janet is married to Professor Bruce Wilking of our Physics Department.

**Floris Homan**, B.S., (Ph.D., 1989), works for Tollos Pharmaceutical Inc. in San Diego, CA.

#### 1985-86

**Michelle M. (D'Harlingue) Macke**, M.S., works at Miles Incorporated in Kansas City, MO as a Senior Chemist. Michelle operates a 300 MHz NMR spectrometer. She also develops quantitative methods on FTIR and NIR spectrometers for lab use and on-line in the plants.

#### 1986-87

**Richard Feldenberg**, B.A., is a resident physician in combined Internal Medicine and Pediatrics at the University of Illinois-Peoria St. Francis Medical Center. Rich graduated from the UM-Columbia School of Medicine in May 1992.

**Ravi Kumar**, Ph.D., works at Schumacher Chem. in Carlsbad, CA. Ravi was previously a postdoc at Louisiana State University where he worked in the laboratory of Professor Andy Maverick, formerly of Washington University in St. Louis.

**Christy John**, Ph.D., apart from his clinical and teaching responsibilities at George Washington University, D.C., has been actively pursuing research. He has been working on iodinated benzamides as malignant melanoma imaging agents. His family, which includes wife Vera who is a nuclear medicine technologist, and children Joshua and Rachel, is doing fine.

**Jeffrey Siria**, M.S., has moved back to St. Louis Testing Laboratories. Jeff was with them prior to moving to Environmental Science and Engineering Laboratories in St. Louis three years ago. Jeff is a part-time student in our Ph.D. program and expects to graduate in May.

#### 1987-88

**Barbara Berglund**, B.A., (M.S., 1989) married Fred Joslin, formerly a postdoc with Professor Corey, last year. Very recently they became proud parents of a baby boy, George. We understand that mother and child are doing very well.

**Bill Lesko**, B.A., is the Inorganic Laboratory Manager, at Twin Cities Testing, Inc. in St. Louis. Bill is a part-

time student in our M.S. degree program and has been doing some research with Dr. Winter.

**Ko-Chung Lin**, Ph.D., is now with Biogen Inc. in Boston as a research chemist. He moved from the Monsanto Corporate Research Department last year to work for another former Monsanto Scientist, Dr. Steven Adams.

**Peggy Nevels (McDowell)**, B.S., is an Analytical Research Chemist at Monsanto. When we last spoke she was in the process of applying to the Master's program in chemistry at UM-St. Louis.

**Judy (Taylor) Logsdon**, B.S., is a Chemist II in the Technical Center at Anheuser Busch. She is responsible for water analysis for the brewery. Judy and her husband Ray have a new home in Fenton, Missouri.

#### 1988-89

**Humayan Ateeq**, Ph.D., was still a postdoc at Wayne State University with J. H. Rigby. Humy was coauthor of the paper "Catalytic Chromium(0)-Promoted Higher-Order Cycloaddition Reactions" which appeared in the *Journal of Organic Chemistry* last fall.

**Mary C. (Dudley) Nahm**, B.A., is currently a chemist at St. Louis County Water Company. Mary tests drinking water for EDB, DBCP, aldehydes, and haloacetonitriles, etc. She is also involved in a study to determine aldehyde levels produced by ozonation. She still works part time for TCT-St. Louis doing VOA and dioxin analyses by GC/MS. She has a three year old daughter who keeps her busy.

**Greg Duncan**, B.S., is a graduate student in chemistry at the University of Southern California where he holds a special scholarship. He is studying antiviral compounds with Professor Charles McKenna. Greg continues to collaborate with Dr. Welsh.

**Gary Wester**, B.A., (M.S., 1992) moved to Papaikou, Hawaii, in the spring of 1992 where he took a position with Brewer Environmental Services. Gary had been with Spectrulite Consortium, Inc. in Madison, Illinois, prior to moving to the Pacific. He was awarded a patent on a *Process for Recovery of Spent Echant* for work completed at Spectrulite. We understand he is now working at a Naval Research Laboratory in Honolulu.

#### 1989-90

**Michael Crowley**, B.S., continues work at Warner Jenkinson as a natural products chemist and is enjoying it.

**Michael Kopp**, B.A., is with Camie Campbell Polymers, and is involved with additives and sealants, etc. Mike was in the process of applying to our M.B.A. program last April.

**Minren Lin**, Ph.D., and his wife Qi Qin are the proud parents of a son Peter. Minren, who is a postdoc at Penn State was to present a paper at the Washington ACS meeting last August but his boss Professor Sen gave it since the baby was born at that time. We had hoped to see Minren at the meeting.

#### 1990-91

**Mark L. Cooper**, B.S., has been at Monsanto since graduation working in a mass spectrometry laboratory but we recently heard he had been transferred to the

Formulation Department in the Agricultural Company. Mark recently enrolled in our M.S. degree program.

1991-92

**Dean Frey**, B.S., is now a graduate student in chemistry at Washington University.

**Daquan Gu**, Ph.D., is a postdoctoral fellow at McGill University. He is working in the laboratory of Professor David Harpp.

**Scott Long**, B.S., is now a graduate student in chemistry at the University of Illinois, Champaign-Urbana.

**Chris Mallory**, B.S., works as a Control Laboratory Analyst for Upjohn in Kalamazoo, MI. Chris and his wife Michelle have a two year old daughter, Cindy. A new daughter Monica Elizabeth was born 7/9/92.

**Diane Oliver**, B.S., has been at Monsanto Environmental Health Laboratory for a couple of years and has recently been converted to full time regular employment as a chemist. Diane is in our M.S. degree program.

**Phillip Ordoukhanian**, B.S., is now a graduate student in chemistry at Washington University.

**Kathleen M. T. Riordan**, B.A., works at the St. Louis County Water Co. as a GC operator. She is engaged and will be married in April 93. Kathy was with Environmetrics prior to taking the job with the Water Company. She was a GC-MS operator at Environmetrics.

**Richard J. Sconce**, B.S., has been working in the Mallinckrodt Institute of Radiology at Washington University and was applying for admission to a masters degree program in hospital administration the last time we heard from him.

**David Straatman** is with Industrial Testing Laboratories in St. Louis. Dave had worked there part-time when he was a student here.

**Linda Thompson**, B.A., is working at United Technologies in St. Louis where another of our graduates, Teresa Hardesty (B.A., 1990) has been for a year or so.

1992-93

**Jon C. Holley**, B.A., recently accepted a quality control chemist position with Marchem Corporation.

**E. Thomas Keufler**, B.A., decided to stay at UM-St. Louis and complete a Ph.D. degree in chemistry.

### We just ran into:

**Dennis Anglim**, (B.A., 1973), at the reception for Dr. Armbruster last April. Dennis has a dental practice. He was at the reception with his wife Mart (Colantino) who had the pleasure of taking Chemistry 12, along with Dennis, several years ago from the editor.

**Pauline Bellavance** (Ph.D., 1978) at Tan Tara in the Lake of the Ozarks and also shopping at the Factory Outlet Mall in Osage Beach, Missouri, during Christmas week.

**Henry Beuhler**, (B.S., 1979) ice skating at Steinberg Rink on December 26. Henry works on organofluorine

chemistry for Mallinckrodt Specialty Chemicals Company and holds a M.S. degree in chemistry from St. Louis University.

**Michael Finkes**, (B.S., 1973, M.S. 1977) in the St. Louis Post Dispatch. A photograph of Mike and his wife Linda appeared. Apparently they had won a trip to Hawaii or somewhere similarly disgusting to those of us snow bound in St. Louis.

**Ken Henderson**, (B.S. 1973) at a farewell party given in his honor by Harold Messler (B.S. 1970) and his wife Caroline. Ken and his wife Maryanne were about to leave for Piscataway N.J. where he was to take a position with Castrol Inc.

**Lisa McChesney**, (B.A., 1986) also at the reception for Dr. Armbruster. Lisa is completing her Ph.D. degree in medicinal chemistry the University of Kansas, and we understand that she recently married.

**Fred Mitchell** (B.S., 1973) when he came to deliver some surplus chemicals from the USDA Laboratory in North St. Louis where he supervises an analytical laboratory.

**Andrew Raterman**, (B.S., 1975) also at the reception for Dr. Armbruster. Andy had recently married and his wife was with him but we are embarrassed to admit that we have forgotten her name. Andy works for Gencorp in Marion, Indiana.

**Gerry Sullivan** (B. S., 1983) at the ACS meeting in San Francisco. Gerry is with Abbot Labs in Chicago.

**Jerry Beasley**, B.A., 1985, **John Taylor**, B.A., 1979, and **Steve Villasenor**, B.S., 1975 at the Founders' Day Dinner on September, 26, 1992 at the Marriot Pavillion Hotel. The function honored alumni, major contributors, and faculty members who had been with the University for 25 or more years. Jerry, John, and Steve all are with all with Mallinckrodt Specialty Chemicals Inc.

**Shankar Ranavare**, Ph.D., 1984, at the ACS Meeting in San Francisco. Shankar presented a paper at the meeting. He had driven down from Portland, Oregon, to attend the meeting.

## The Chemistry Club

The Student Affiliate Chapter of the American Chemical Society has become the Chemistry Club by popular demand. The group has been very active in recent years. They now publish a Newsletter monthly which contains articles, announcements etc. Members have been active in presenting papers on their research at the Annual Symposium on undergraduate Research at Argonne National Laboratory, and also at a Special Undergraduate Research Symposium held at UM-Rolla and sponsored by the South-Central Missouri Section of the ACS. An activity of major interest to alumni is the Tutoring Lab. which is administered by the Chemistry Club. Most of the tutoring is done by volunteers but usually one of the tutors on duty receives an hourly stipend. The funds for this activity come from your donations.

## Center for Molecular Electronics

Plans for the Center Building are now complete and the architects' rendition of it is given on page one. It will contain 11,280 assignable square feet of research space. At the moment laboratories for Professors

O'Brien and Stine have been designed along with an X-ray diffraction facility, which will be managed by Professors Brammer and Rath, and a molecular modeling laboratory managed by Professor Welsh. In addition space is assigned to Professors Fraundorf and Feldman of the physics department as well as to an electron microscope facility. The building will have 12 faculty/staff offices, 2 secretary offices and a conference room. It will be accessible from the second and third floors of Benton Hall and it will have an entrance on West Drive just to the north of the existing entrance to Benton Hall on West Drive.



*Dr. M. Thomas Jones being presented with a gift from the University by Deputy to the Chancellor Don Driemeier at the reception following his colloquium in the Center for Molecular Electronics series in January.*

Equipment funds have been assigned to faculty with major research programs in the center including Drs O'Brien, Stine, Welsh and Fraundorf with smaller grants going to Drs Chickos and Handel (Physics). In addition a commitment has been made to purchase a Bruker ARX-500 NMR spectrometer and to provide a substantial match to pending proposals to upgrade equipment in the X-ray facility. The latter currently consists of a Siemens R3m/V diffractometer with low temperature capabilities and to it we expect to add a rotating anode generator integrated with a 4-circle diffractometer. Also polymer characterization facilities and additional monitoring capabilities for a collaborative organometallic chemical vapor deposition study are proposed.

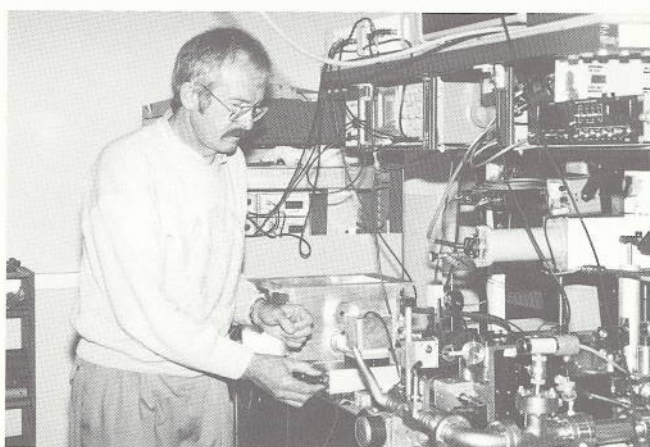
The goal of the Center is to do research in the molecular electronics area and to emphasize interaction and collaboration with industry. In addition a first rate instrumentation facility will be developed which will enhance research in physics and chemistry and it will be made available to St. Louis area industry. In addition we expect to extend the collaborative aspects of the research to colleagues at Washington University and perhaps at the UM- Rolla. Memberships will be available for industrial partners.

Final approval of the building plans by the federal government awaits the completion of an environmental impact study, however several Center activities are underway. An Industrial Advisory Committee is being appointed and a Colloquium Series has been established. The first meeting of the Industrial Advisory Committee took place prior to the inaugural lecture in the Colloquium Series on January 29. Tom Jones was present and gave an overview of the history of the development of the Center and we received advice and encouragement from our

industrial colleagues. This was followed by Tom's lecture on "ESR Studies on the Reduction of Orbital Degeneracy in the Anion Radical of C<sub>60</sub>: A Synthetic Metal Precursor". About 65 people attended the lecture and the reception which is described above.

### Reception in Honor of Dr. Armbruster

The reception was held on April 11, 1992 in the Summit Lounge of the Student Center. It was attended by about 65 former students, faculty and administrators. Several former students and faculty members made remarks reminiscing about the early years at UM-St. Louis when Dr. Armbruster was involved establishing programs on the campus. Chancellor Touhill and then, Associate Vice Chancellor for University Relations, Kathy Osborn made some kind remarks about Dr. Armbruster and the Chemistry Department. Clearly a good time was had by all and some comments are made about some of those present in the preceding paragraphs.



*Visiting International Scholar Professor Frederic Stoeckel, of Universite' Joseph Fourier de Grenoble, France, in Dr. O'Brien's laboratory last summer.*

### Career Day - April 22, 1992

Again this past year we collaborated with the St. Louis Section of the American Chemical Society in organizing the ACS Career Day for High School Students. Once again all the role models were UM-St. Louis chemistry graduates. Jettie Travis, B.S., 1985, spoke on *Chemistry in the Government Laboratory*. Jettie works at the FDA Division of Drug Analysis in St. Louis. Gary Jacob, B.S., 1969, spoke on *Chemistry in Industrial Research Laboratories*. Gary is a Monsanto Fellow and Head of Glycosciences at Monsanto in St. Louis. Linda (MacMillan) Adams, B.S., 1985, spoke on *Chemistry in Marketing Computer Software*. Linda is a Technical Marketing Scientist with Tripos Associates Inc. in St. Louis. James Baker, B.S., 1989, M.S., 1992, spoke on *Chemistry in the University*. Jim is a graduate student in our Ph.D. program. James Murphy, B.S., 1989, spoke on *Chemistry in Biochemical Synthesis Labs*. Jim is a production chemist with Sigma Chemical Company in St. Louis and is also a part-time student in our M.S. degree program. Bruce Ritts B.S., 1979, M.S., 1983, spoke on *Chemistry in a Petroleum-related Company*. Bruce is a research specialist with Petrolite Corporation in St. Louis. In addition the students in the Chemistry Club presented a chemistry magic show. About sixty high school students attended the

function. Although the attendance was low, those present were treated to an excellent program.

## Graduates 1992

### MAY 1992

Jonathan A. Buerck B.A.  
Sanjeev Bhardwaj M.S.  
Mark H. Crain B.A.  
Yong Chen Ph.D.  
Dean Frey B.S.  
Jack D Hammer B.A.  
Minshin Hwang M.S.  
John O. Kloepper Jnr. B.A., B.S.  
Scott Long B.S.  
Philip T. Ordoukhanian B.S.  
Gerald Pancio B.A.  
Alexander J. Pitts B.S.  
Michael Sinclair B.A.  
Linda S. Thompson B.A.  
Gary Wester MS  
Hongping Ye Ph.D.  
Liu Jain Zhao MS

### AUGUST 1992

Stephen J. Kolodziej Ph.D.  
Fentachew G. Seku B.A.  
Mohammed Uppal B.A.

### DEC 1992

James A. Baker M.S.  
Gang Bao Ph.D.  
Mark F. Bono B.A.  
Patricia Chernovitz M.S.  
Salvatore V. Ciaramitaro B.A.  
Kathleen Fallis Ph.D.  
Bradley Hart M.S.  
J. Christopher Holley B.A.  
Sedigh Hosseini M.S.  
Herb Kaiser M.S.  
E. Thomas Kuefler B.A.  
Abdul Rauf Khan M.S.  
Kevin Koeller M.S.  
Marc Lord Ph.D.  
Melinda C. McCann B.S.  
Cecilia Marzabadi M.S.  
Michael Schreiner B.S.  
Kim S. Wein B.A.

## The Faculty

**Gordon K. Anderson's** fifth Ph.D. student, Kathy Fallis, graduated in January 1993. Kathy is now a postdoctoral fellow with F. G. A. Stone at Baylor University. Dr. Anderson continues as Director of Graduate Studies for the department. His productive research program continues successfully. He presented papers in San Francisco and Lausanne in 1992 and has been invited to write a chapter on Pt-C  $\sigma$  bonds for the second edition of *Comprehensive Organometallic Chemistry*. It was his efforts principally that resulted in the funding from the Center for Molecular Electronics for the 500 MHz NMR spectrometer.

**Charles W. Armbruster** continues to teach organic and freshman chemistry in the department. He is

also the College of Arts and Sciences Health Sciences Advisor. The interest in the health sciences is up substantially and thus he writes hundreds of letters of recommendation for prospective physicians etc. He is still one of the most competitive racquetball players on campus and usually is able to get away to the Caribbean during the vacations.



Professors Lee Brammer and Chris Spilling at the reception following the St. Louis Award Symposium.

**Lawrence Barton** published four papers last year on his research in metallaborane chemistry. He also presented seminars at Ohio State, Purdue, and Southeast Missouri State Universities, on his research and also at the Battelle Pacific Northwest Laboratory in Richland WA where he was able to spend time with Dennis Wester (B.S., 1970) and Greg Lumetta (B.S., 1982, Ph.D., 1987). He has just completed the latest *Gmelin* volume on the boron hydrides and recently started the metallaborane chemistry chapter for the upcoming update of *Comprehensive Organometallic Chemistry*, published by Pergamon Press. He will be presenting papers at the ACS meeting in Denver in March and at the Seventh International conference on Boron chemistry in Knoxville, TN this summer.

**Lee Brammer** continues his research in transition metal-hydrogen interactions and the electronic properties of organometallic compounds. This work is funded by ACS-PRF and in 1992 funding was obtained from NATO for an international collaboration involving the SERC Daresbury Lab in the UK. Dr. Brammer was invited to give presentations at the American Crystallographic Association (ACA) Meeting and at the Gordon Conference on Electron Densities, both last summer. He and his group will be giving 3 presentations at the ACA Meeting this coming May.

**James S. Chickos** is currently on sabbatical leave in Europe. He spent the Fall semester in Marseille France at the CNRS *Thermodynamics and Microcalorimetry Research Center* and will leave soon for the University of Reading. He received a grant from the EPA this summer for his research project, "Models for Estimating Vapor Pressure and Related Physical Properties". Jim also continues his productive research collaboration with Professor Tim Keiderling of the University of Illinois-Chicago.

**Joyce Y. Corey** recently received research funding from the National Science Foundation to support the project, "Oligomers and Polymers from Dehydrocoupling of Hydrosilanes". Joyce's research group currently comprises three graduate students



and an undergraduate. She is one of only six U.S. chemists to be invited to speak at the *Xth International Symposium on Organosilicon Chemistry* in August, 1993 in Tokyo, Japan.

**Valerian T. D'Souza** just completed a very productive year of research in which he published papers in the *Journal of the American Chemical Society*, *Journal of the Chemical Society*, *Chemical Communications*, *Perkin Transactions*, and *Tetrahedron Letters*. His work cyclodextrin chemistry was written up in the *New Scientist* and in *Chemistry in Britain* last Fall. He currently enjoys research support from Mallinckrodt Specialty Chemical Company and this was featured in an article in the *St. Louis Business Journal*. A project he is working on for the St. Louis Section of the ACS is a Symposium on Undergraduate Research to be held on the UM-St. Louis campus in April of this year.

**David L. Garin** continues his interest in science policy. He recently visited the ACS in Washington to champion their Congressional Science Fellows program and to lobby for an article in *Chemical and Engineering News* about scientists and engineers working with congress. Dr. Garin is the Interim Director of the Center for Science and Technology which is organizing conferences on Green Technologies and Ecological Economics this spring. He produced a series of ten videos, *Missouri Moments in Science*, which are available to educators nationwide.

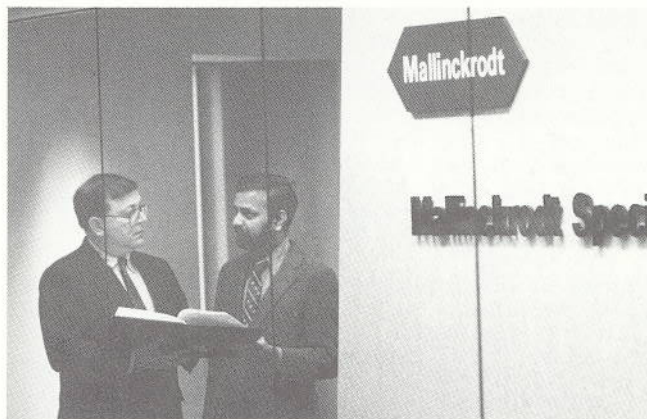


Dr. S. Allen Heininger, Immediate Past President of the ACS, and awardee Dr. Riehl at the St. Louis Award Banquet.

**Harold H. Harris** is Chair-Elect of the St. Louis Section of the ACS and thus will be heavily involved in program planning for the Society. Hal was involved in an effort which resulted in a change in the credit structure for the instrumental analysis course. A survey of similar course curricula at other institutions resulted in a publication in the *Journal of Chemical Education* coauthored by Professor O'Brien. Students who remember doing the computer interface experiment (polarimeter) laboratory in Physical Chemistry 234 may be interested to know that a paper was presented on the subject by Dr. Harris at the ACS Regional Meeting in Lawrence KS in November. Coauthored by Dr. Riehl, the article was published in a symposium volume on "Innovative Experiments in the Undergraduate Analytical, Computational, and Physical chemistry Laboratory" which was subsidized by Fisher Scientific Company.

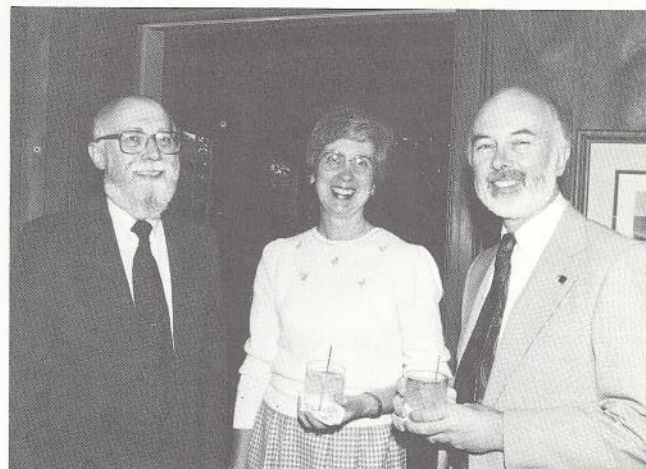
**Wesley R. Harris** recently attended the Gordon Conference on "Metals in Biology" in Ventura,

California, when he presented a poster on his research. He had two Ph. D. students graduate this past year and recently hired two postdocs. He has funding from Mallinckrodt Medical Co. for the study, "Synthesis and Thermodynamic Studies of Ligands for *in vivo* Complexation of Bismuth". He has also been invited to serve on the NIH study section on "Metallobiochemistry".



Dr. D'Souza with Dr. Carl Quicksall, Vice President for Science and Technology at Mallinckrodt Specialty Chemicals Company as they were pictured in the *St. Louis Business Journal*.

**David W. Larsen** has been busy with his research program. He is involved in the development and testing the Chem Char Process for treatment of hazardous waste. He and his colleagues have made important government and industrial contacts, and there is real interest in the process. His other activity has been the construction of a field cycling NMR spectrometer with operational applications to magnetic resonance imaging agent, crude oils and biocompatible materials including hydrogels. Dave recently added two graduate students to his research group.



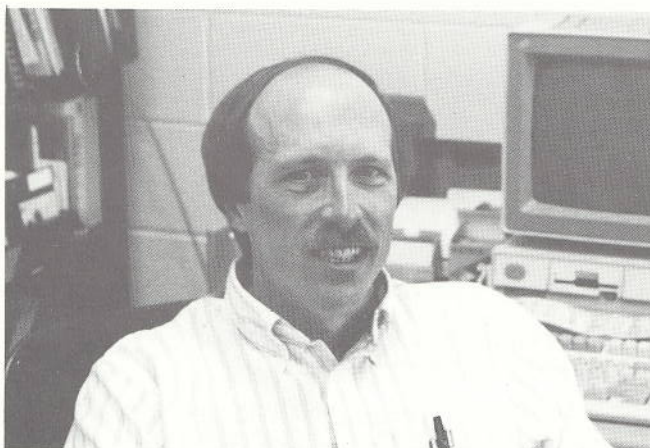
Professor H. and Mary Harris at the St. Louis Award Banquet with SIU-Edwardsville Professor J. Edmund White, Secretary of the St. Louis Section of the ACS.

**Jane A. Miller** is now formally retired from the department but has continued to run a program for Chemistry High School Teachers which utilizes the Chem Source Book, the result of a project developed by a consortium of chemists and funded by the NSF.

Dr Miller had a joint appointment with the School of Education and we were worried that we would lose the important role our faculty plays in the training of chemistry teachers. We are pleased that Professor Harold Harris recently agreed to assume that role in the department.

**Robert W. Murray** continues his very successful research in oxidations in organic chemistry. With Wei Kong, one of his three postdocs, he recently published a paper regarding the ozonolysis of tetramethylethylene. They reported some surprising and heretofore unreported effects of temperature and concentration on the reaction. The results are interpreted to suggest some involvement of dimethyldioxirane and singlet oxygen in the chemistry. Dr. Murray is also spending long hours serving on the University Research Board, a new body initiated by President Russell.

**James J. O'Brien** presented the paper, "Intracavity Laser Spectrographic Techniques Applied to Planetary Gases" at the *Eighth Interdisciplinary Laser Science Conference* in Albuquerque, NM, in September 1992. Dr O'Brien was fortunate to receive funds to bring Dr. Frederick Stoeckel, from the University of Grenoble, France, here last summer. Stoeckel is an expert on intracavity laser spectroscopy and he and Dr. O'Brien continue to collaborate. Dr. O'Brien's research programs funded by NASA and Monsanto continue, and he has just hired two postdocs to assist him with the work.



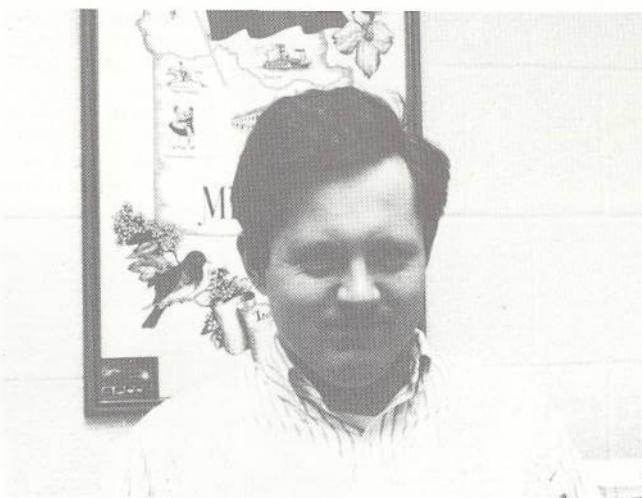
Dr. Wesley R. Harris

**Nigam P. Rath** continues his work on solid state structure determination of organic and organometallic compounds. He also spent some time at the Monsanto Corporate Research - Protein Crystallography Laboratory learning macromolecule crystallization techniques and structure determination. His other activities include helping set up the departmental PC network that will connect all faculty and staff through the VAX system. He will visit facilities with Dr. Brammer soon to evaluate diffractometers to be purchased as part of the Center for Molecular Electronics state-of-the-art diffraction facility.

**James P. Riehl** will be on a research leave next year in Europe when he will spend time both in the Netherlands at the University of Leiden and in Britain at Birkbeck College of the University of London. Dr Riehl was one of two chemistry department and four UM-St. Louis faculty to receive grants in the first round of funding from the UM-Research Board. Dr. Riehl received the St. Louis Award of the St. Louis

Section of the American Chemical Society in April 1992. A symposium was held in his honor. The invited speakers were Professors Robert W. Woody of Colorado State University, Frederick Richardson of the University of Virginia, and Nina Berova of Columbia University. Dr Riehl was also honored at the Banquet at Old Warson Country Club.

**Christopher D. Spilling** is no longer the baby among the faculty. His research group now contains five graduate students, two undergraduates, and a postdoc. He presented papers at the International Conference on Phosphorus Chemistry in Toulouse, France last summer and the Gordon Research Conference on Organic Reactions and Processes. He attended the Midwest Regional ACS meeting in Lawrence, KS, where two of his graduate students and a postdoc presented papers. He presents a seminar at the University of Delaware this spring and will again direct the *Research Experiences for Undergraduates Program* this summer. Chris was one of 2 chemists and four UMSL faculty who received funding from the UM Research Board this year in its initial funding period.



Dr. Keith J. Stine

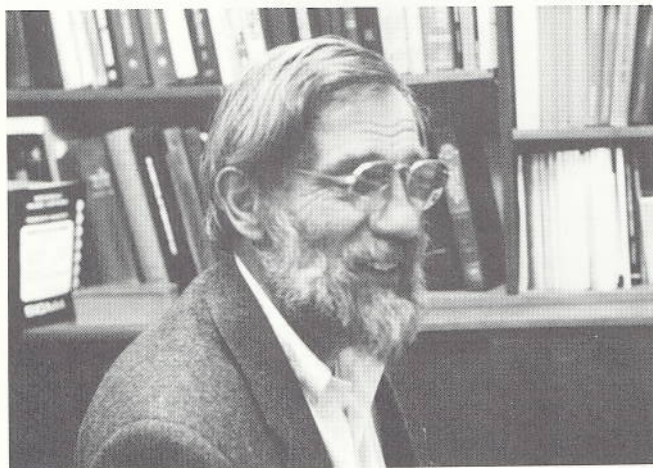
**Keith Stine** has his research program rolling. Up to this semester he was working with undergraduates but he recently picked up a graduate student and is currently recruiting for a postdoc funded by the departmental Monsanto grant. This past year he published a paper in *Langmuir* and a review article in *Ultramicroscopy* and has recently submitted two additional papers. In June he will present a talk on his monolayer research at the ACS Division of Colloid and Surface Chemistry Meeting in Toronto and he will present another paper at the American Physical Society Meeting in March 1993 in Seattle. Dr Stine has initiated a Surface Science Discussion Group for the Local Section of the ACS and he is also serving as Chairman of the ACS Midwest Award this year.

**William J. Welsh** continues his research on the computer-aided molecular design of polymers and bioactive molecules. His research team has received funding from the Food and Drug Administration to design artificial intelligence methods using so-called neural networks for the analysis of drug formulations submitted to the FDA by manufacturers for approval. Dr Welsh has other projects in molecular modeling supported by Tripos Associates, by Foster-Miller Technology and Monsanto.



Randa Schnieder

**Rudolph E. K. Winter** is back full time after completing a sabbatical leave in 1991-92. During that period he spent time writing papers and working on his research. He also visited laboratories and presented seminars in Europe and at Louisiana State University where he visited Professor Klaus Fischer and presented a seminar. Two of Dr. Winter's students received Ph.D degrees this year. Steve Kolodziej is now a postdoc with Professor Garland Marshall at Washington University and Marc Lord is a postdoc with Professor Leo Paquette at Ohio State University.



Dr. Rudolph E. K. Winter

### Adjunct Faculty

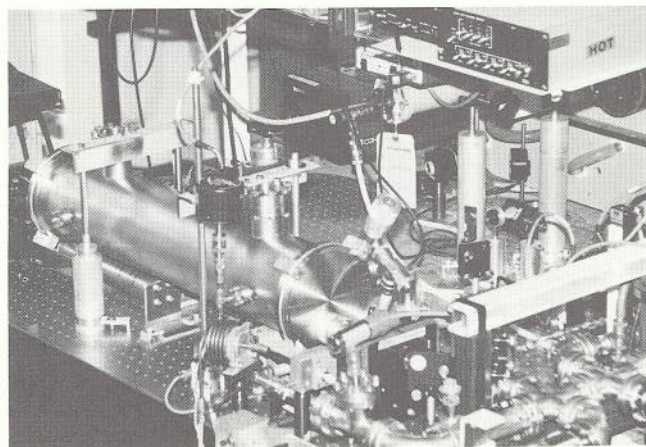
**Daniel Connolly**, and his colleagues at Monsanto appear to have braved the hard times in industry. His biochemistry course here, which he took over from Joe Feder, continues to grow in popularity.

**Donna Friedman**, (Ph.D. 1979) continues to teach quantitative analysis for us in the summers. Donna was Chair of the St. Louis Section of the American Chemical Society last year.

**John Gutweiler**, is now truly one of the old-timers in the department. His adjunct appointment in the department began in 1972. He 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 also teaches.

**Dennis Moore**, who teaches general chemistry, received his undergraduate degree from Southeast Missouri State University and holds a Ph.D. degree from Washington University. He is with Mallinckrodt Medical Company in St. Louis.



*Intracavity laser cryogenic absorption apparatus used in measuring methane overtone spectra for NASA's Planetary Atmosphere's Program in Dr. O'Brien's lab.*

**William Neumann**, (Ph.D. 1987) is currently teaching the largest organic chemistry section, 78 students in Chem 261, we have had here in a decade. Bill is very popular with the students but apparently is not an easy grader.

**Robert Orth**, has taught the physical chemistry courses in the evening this past year. He is a mass spectrometry specialist in the Environmental Sciences Center at Monsanto.

**William Ridley**, continues to split the second semester of the biochemistry course with Dan Connolly and also to teach the biochemistry course for the School of Optometry.

**Robert Stearns**, began teaching here in January 1966. For nearly all of the years he taught our evening chemistry 11 and 12 courses. He retired in 1991 and has enjoyed travelling, the leisure life and teaching ever since.

### The Staff

**Betty Eshbaugh**, Administrative Secretary, is in sunny Southern California as I type this material. She is currently visiting Dimple Judd who graduated in Biology from UM-St. Louis and was employed by that department for several years. Betty's favorite hobby, apart from travelling, is square dancing.

**Bob Cabaniss**, Scientific Glassblower, is now a part time employee. Bob comes in twice week and still keeps us on our toes.

**Ted Windsor**, Senior Electronics Technician, is as busy as ever doing the myriad of jobs he has always done for the department.

**Gordon Kerschmann**, Electronics Technician, continues to take more responsibility for the NMR spectrometers and has been involved in the planning

for the new spectrometer. We are, at the moment, in the process of ordering equipment so that he can take over much of the maintenance for the XL-300 that normally would require a service visit from Varian.

**Joe Kramer**, Electronics Technician, spends much of his time upgrading computers in the department as well as running the mass spectrometry laboratory.

**Randa Schneider**, Secretary, was just promoted to Word Processor III. Randa is learning several new word processing, structure drawing and plotting programs for her new role in the department.

**Donna Palmer**, Stockroom Manager, continues to run a very tight ship in the stockroom. She supervises a staff of about six student assistants and the general feeling is that the stockroom has never been better organized nor has it ever looked as good as it does these days.

### Postdoctoral Fellows

**Vincent Blazis** continues with Dr. Spilling. He presented a paper at the Midwest Regional Meeting in Lawrence, Kansas.

**Yuan-Win Ge** joined Dr. Wes Harris last fall. She received a Ph.D. degree with Paul sharp at UMColumbia, and did postdoc work at the UMC Center for Radiopharmaceutical Research. With Dr. Harris she is working on bismuth complexes.

**Ashraf Islam** who was with Dr. Wesley Harris has a temporary teaching appointment in the Chemistry Department at St. Louis University.

**K. Iyanar** works with Dr. Murray on the project funded by the Pulp and Paper Research Institute of Canada, on the search for non-chlorine bleaching agents for wood pulp.

**Fred Joslin**, left Joyce Corey's group recently. Fred is married to Barbara Berglund, B.A., 1988. We understand they are considering opening a business.

**Kimberly Kilgore**, worked in Tom Jones' lab and is now taking care of her children and working on projects for the St. Louis Section of the American Chemical Society.

**Wei Kong** is about to complete her research with Dr. Murray.

**Fola Ladipo** continues to work with Dr. Anderson. He presented a paper at the ACS Midwest regional meeting at the University of Kansas on dimeric palladium complexes, and they have just submitted the work to *Organometallics*.

**Shu Wen Li** is working on the synthesis of thiolate ligands with Professor Wes Harris. He was most recently at St. Louis University and prior to that he was in the Department of Biochemistry at the University of Southern Alabama. Dr. Li spent 17 years at the Shanghai Institute Materia Medica in the Department of Medicinal Chemistry.

**Magnus Lipp**, a native of Germany, joined Dr. O'Brien in March from the University of Delaware where he received a Ph.D. degree in physics. He completed his thesis in August 1992 which was entitled "Electronic Structure Measurements on Potassium Iodide at High Pressures using Non-linear Spectroscopy".

**Megh Singh** is now a senior postdoc with Dr. Murray. Their research has been very productive both in terms of refereed publications and patents.

**Dileep K. Srivastava** formally left the department in the Fall to take an appointment with Luyties Pharmacol in St. Louis but he continues to collaborate with Dr. Barton. During the two and a half years they were working together, their work resulted in at least six publications on metallaborane and organometallic chemistry.

**Sam Tersigni**, who was with Dr. Welsh until last year, continues to work at Ethyl Corporation Petroleum Additives Division and was helpful recently in putting Professor Stine in touch with colleagues with whom he is now collaborating.

**Tong Weida**, continues with Dr. D'Souza. He is married to Hong Fang, a graduate student with Dr. Barton, and they are expecting their first child in June.

**Dong Zhao** has worked in Dr. Brammer's group since February 1992. His work involves the synthesis and structural studies of organometallic compounds with novel transition metal-hydrogen interactions.

### Support

The department maintains several accounts which are the result of contributions by our alumni and other friends of the department. These include the Alumni Gift Account which we use to fund Freshman Scholarships, Summer Graduate Fellowships, alumni functions, printing, mailing etc., the Brunngraber and related accounts which contains funds for undergraduate research fellowships, and the Award Account which funds the Alan F. Berndt Senior Outstanding Senior Award, the Monsanto Aid to Education Funds and provides expenses for the other undergraduate awards, student travel to meetings and other similar expenditures for which we have no alternative funding.

We depend on you for such support. We are also very concerned that you support us in other ways. As voters you can help improve the level of funding for higher education in Missouri. As colleagues in industry you have assisted us in improving our standing with corporate management and as members of the community you can help improve our image there by being successful and letting your neighbors know where you received your degree(s). Many of you have steered surplus and other equipment in our direction; others have encouraged colleagues to return for graduate work here or to send their children here. We appreciate all of this and look forward to closer interactions with you in the future. As our program develops and our reputation grows your degrees become more valuable than ever so it is in all our interests to help the institution.

If you decide to make a contribution, please do so by using the tear off sheet at the end. If you wish your contribution to be used in one of the areas described above, please indicate that on the form. Even if you are unable to make a contribution please complete the "Information Update". Information about your successes is **extremely** important to us.

### Contributions 1991-92

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.

### ALUMNI CONTRIBUTIONS

Dr. and Mrs. Phillip V. Asaro  
 Dr. and Mrs. Sanford A. Asher  
 Gerard R. Beasley  
 Mr. and Mrs. Thomas C. Bedard  
 Phyllis R. Bennet  
 Mr. and Mrs. Joseph P. Bono  
 Mr. and Mrs. Rocky L. Carr  
 Michael M. Crowley  
 Jack M. Dougherty  
 Dr. Louis R. Feldenberg  
 Mr. and Mrs. Michael J. Finkes  
 Drs Donna G. and  
 Robert .M. Friedman  
 Elizabeth D. Galie  
 Ronald L. Goehler  
 Drs. Dorothy C. and  
 Alfred O. Greco  
 Mr. and Mrs. James J. Grib  
 Mr. and Mrs. Stephen P. Harris  
 Richard E. Hauhart  
 Ms. Debra L. Hauser  
 Mr. and Mrs. Lance G. Hellwig  
 Dr. and Mrs. Daniel R. Henton  
 Dr. and Mrs. Donald G. Hesse  
 Dr. Christy S. and Vera John  
 Dr. and Mrs. Shailendra Kumar  
 Mr. and Mrs. Gerald C. LaMotte III  
 Dr. and Mrs. Minren Lin  
 Mrs Judith (Taylor) and  
 Mr Raymond E. Logsdon Jr.  
 Mr. and Mrs. Stephen L. McCarthy  
 Mr. and Mrs. Harold R. Messler  
 Mr. and Mrs. Craig M. Mierkowski  
 Mr. and Mrs. Michael H. Mohl  
 Dr. Richard G. Mrad  
 Mr. and Mrs. Joseph O. Muo  
 Mary C. Nahm  
 Dr. and Mrs. Harry W. Orf  
 Mr. and Mrs. Mark H. Owens  
 Mr. and Mrs. Lawrence E. Payette  
 Dr. Janet D. and Mr. Michael A. Place  
 Mr. and Mrs. Gregory W. Przygoda  
 Mrs Anne (Mayhan) and Mr. Phillip Reynhout  
 Kathleen M. Riordan  
 Mr. and Mrs. Bruce E. Ritts  
 Drs. William R. and

Dawn L. Shiang  
 Mr. Charles L. Thierheimer Jr. and  
 Ms. Cindy L. Dahl  
 Mr. and Mrs. Dan C. Tucker  
 Dr. and Mrs. Leslie E. Tucker  
 Dr. and Mrs. David L. Vreeland  
 Mr. and Mrs. Mark D. Wilfong

### ALUMNI ANONYMOUS

### NON ALUMNI

Lois Brunngraber  
 Dr. and Mrs. Wesley R. Harris  
 Mr. Rodney R. and  
 Dr. Danielle Knight  
 Mary McGuire  
 Dr Madelin and Mr Elmer Price  
 Craig D. Reid

### COMPANY/ORGANIZATION/FOUNDATION

Anheuser-Busch Foundation  
 UM-St. Louis Alumni Association  
 Dow U.S.A.  
 Hewlett-Packard Company Foundation  
 IBM Corporation  
 Mallinckrodt Specialty Chemicals Company  
 Monsanto Company  
 Monsanto Fund  
 Ralston Purina Company

## Departmental Awards

Our departmental awards presentation at the last seminar of the academic year, held in conjunction with the *Distinguished Alumni Lecture*, is now a well established tradition. Last year it was held on May 4, and it was presented by Dr. Susan Jansen, B.S., 1982, Ph.D. 1985. The title of the lecture was, "Stability Factors in Solid Catalysts". As we describe elsewhere, Sue is on the faculty at Temple University. The awards given during 1992-1993 are given below.

### Undergraduate

The award for the *Outstanding Student in Introductory Chemistry* was John Jauss. He 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 David Stratman. David received a certificate and a one-year subscription to *Analytical Chemistry*. The *American Chemical Society - St. Louis Section's Outstanding Junior Award* went to Anna Lindeberg. The award was presented at the annual Awards Night during the ACS St. Louis Section's Chemical Progress Week. Michelle Van Hee, who is doing her research with Dr. D'Souza, received the *Eric G. Brunngraber Fellowship* for the academic year. The *Alan F. Berndt Outstanding Senior Award* and the *American Institute of Chemists Chemistry Senior Award* went to Jean Huhmann. Jean is now a graduate student with Dr. Corey. Each year we award books and materials scholarships to ten juniors or seniors. This past year these

*Undergraduate Chemistry Aid-to-Education Awards* sponsored by the Monsanto Company went to Scott Johnson, Edward Kuefler, Matt Mahoney, Estatira Razavi, Jean Schmidt, John Kretzer, Anna Lindeberg, Melinda McCann, Lori Rodriguez and Michelle Van Hee. The *Minority Science Fellowship*, which is funded by Mr. Ronald Harris, went to Kendall Lewis and the *Lamberg Research Fellowship* went to Jean Schmidt, who works in Dr. Welsh's research group. The second annual *William and Erma Cooke Scholarship* was awarded to Karen Jansen who is doing research with Dr. Jim O'Brien. This year we awarded three Freshman Scholarships using Alumni account funds. Scholarships in the amount of \$500.00 per year were to top freshman applicants who indicated chemistry as their major. The successful students were Melissa A. Camp, Lisa M. Meyerkord, and Nader Z. Rabie.

### Graduate

The 1991-92 Mallinckrodt Fellowship went to Kevin Koeller. Kevin works with Professor Spilling. *Alumni Summer Graduate Fellowships* went to Yu Lin and Abdul Rauf Khan who work with Professors Welsh and

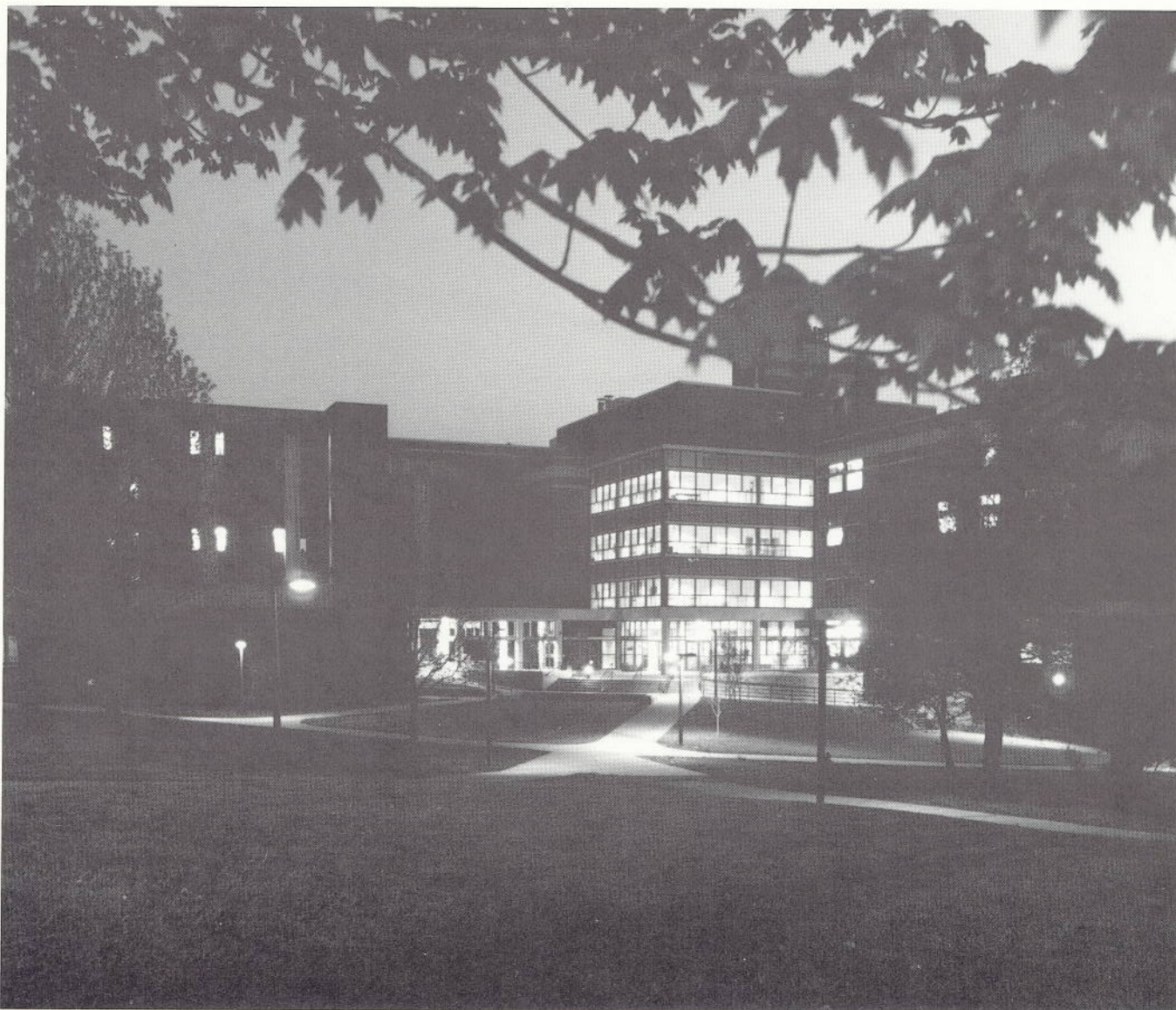
D'Souza respectively. *Graduate School Summer Fellowships* went to Patricia Chernovitz and Marc Lord. Pat works with Professor Riehl and Marc completed his degree with Professor Winter and is now a postdoc at Ohio State University. The *Outstanding M.S. Student Award* went to Mark Rahe.

This year we also gave three awards for excellence in teaching by graduate students. The awardees were Sohrab Abdohalli, who is doing his thesis research with Professors W. Harris and Riehl, Jean Huhmann, who works with Professor Corey, and Paul Webb, who works with Professor D'Souza. All three received a commendation and a credit to be used in the bookstore.

### Alumni

The fifth annual *Distinguished Alumni Lecture* was presented by Dr. Susan Jansen, BS, 1982, Ph.D. 1986.

Editor-Lawrence Barton



*Main Entrance of Science Complex*

