

ALUMNI NEWS

A publication for alumni and friends of the Chemistry Department

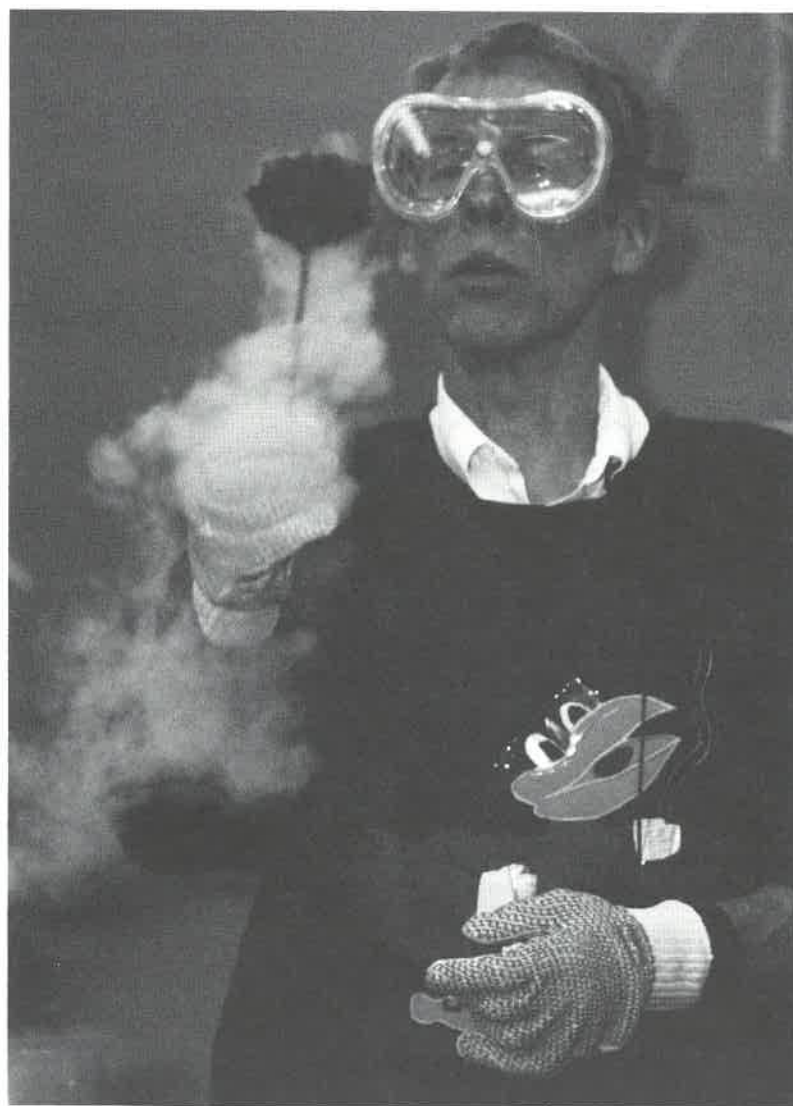
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The University of Kansas

June 1996

IT'S WAY COOL!

**KU's ACS Section Wins National Phoenix Award
for Carnival of Chemistry!**



Chemistry Faculty 1996-97

David R. Benson, Jr., Assistant Professor, Ph.D., 1990, University of California-Los Angeles. Organic chemistry: bio-organic and bioinorganic chemistry, de novo protein design, semi-synthetic proteins, peptide conformational properties.

Andrew S. Borovik, Assistant Professor, Ph.D., 1986, University of North Carolina-Chapel Hill. Inorganic chemistry: molecular design of inorganic complexes; bioinorganic chemistry and supramolecular inorganic chemistry.

Robert M. Bowman, Assistant Professor, Ph.D., 1988, Columbia. Physical chemistry: femtosecond time-resolved measurements of charge carrier dynamics in semiconductor nanocluster systems including colloidal solutions, thin films, polymers and sol-gel glasses; intramolecular energy flow in isolated molecules which undergo unimolecular reactions such as photodissociation, isomerization and proton transfer; reaction dynamics in solution; nonlinear optical measurements.

Kristin Bowman-James, Professor and Chair, Ph.D., 1974, Temple. Inorganic chemistry: biomimetic and supramolecular chemistry, design and synthesis of macrocyclic ligands capable of incorporating two or more metal ions as models for multi-metallic proteins; the design of macrocyclic systems capable of selective recognition of anions of environmental and biological interest.

Albert Burgstahler, Professor, Ph.D., 1953, Harvard. Organic chemistry: synthesis and chemistry of natural products; stereochemistry and chiroptical aspects of conjugated dienes and enones; new and improved undergraduate laboratory experiments; environmental ramifications of fluoride.

Daryle H. Busch, Roy A. Roberts Distinguished Professor, Ph.D., 1954, University of Illinois. Inorganic chemistry: transition metal coordination chemistry, bioinorganic chemistry focused on dioxygen, its reduction products and their interaction with metal complexes, supramolecular chemistry, especially new materials derived from advanced molecular topologies.

Robert G. Carlson, Professor, Ph.D., 1963, MIT. Organic chemistry: organic synthesis, natural products, highly strained ring systems, photochemistry and bioanalytical chemistry.

Shih-I Chu, Watkins Distinguished Professor and Director of the Kansas Institute for Theoretical and Computational Science, Ph.D., 1974, Harvard. Physical chemistry: quantum structure and scattering, multiphoton and nonlinear optical processes, nonlinear dynamics and chaos, many-body theories, nature of chemical bonds in strong laser fields, atomic and molecular astrophysics.

Robert C. Dunn, Assistant Professor, Ph.D., 1992, University of California-San Diego. Analytical chemistry: optical spectroscopy/microscopy, fiber optics, optical sensors, x-ray microscopy.

Thomas A. Engler, Professor and Director of the Kansas Advanced Synthesis Laboratory, Ph.D., 1981, The Ohio State University. Organic chemistry: organic synthesis, development of new methodology, asymmetric synthesis, biologically active molecules, unusual reaction mechanisms and reactive intermediates, strained aromatic compounds.

Grover W. Everett, Jr., Chancellors Club Teaching Professor, Ph.D., 1966, Harvard. Inorganic chemistry: synthesis, structure, and stereochemistry of transition-metal compounds; bacterial ionophores; supramolecular complexes.

Richard S. Givens, Professor and Assistant Provost, Ph.D., 1966, University of Wisconsin-Madison. Organic chemistry: mechanistic organic photochemistry, applications of photochemistry, chemiluminescence, bioanalytical chemistry.

Paul R. Hanson, Assistant Professor, Ph.D., 1993, University of Minnesota. Organic chemistry: organic synthesis, novel synthesis methods utilizing organometallic reagents, synthesis of biologically significant molecules.

Marlin D. Harmony, Professor, Ph.D., 1961, University of California-Berkeley. Physical chemistry: molecular structure and spectroscopy with emphasis on FT-microwave spectral studies in supersonic free jets.

Joseph A. Heppert, Associate Professor, Ph.D., 1982, University of Wisconsin-Madison. Inorganic chemistry: catalysis, polymers, stereospecific reactions, hydrogen bonding, liquid crystals, inorganic/organic hybrid materials.

Peter M. Hierl, Professor, Ph.D., 1967, Rice University. Physical chemistry: rates and mechanisms of gas-phase ion-molecule reactions, molecular beams, mass spectrometry, ion-molecule reactions.

Carey K. Johnson, Associate Professor, Ph.D., 1981, Iowa State. Physical chemistry: laser spectroscopy, chemical and biophysical dynamics probed by picosecond time-resolved laser Raman and absorption spectroscopy, ultrafast internal motion in photoactive proteins.

Krzysztof Kuczera, Assistant Professor, Ph.D., 1985, Polish Academy of Science, Warsaw. Physical and theoretical chemistry: computational chemistry, molecular dynamics simulations, statistical mechanics, quantum chemistry.

Theodore Kuwana, Regents Distinguished Professor and Director of K*STAR / NSF EPSCoR, Ph.D., 1959, University of Kansas. Analytical chemistry: studies of ultra-high surface area carbon microfibers, LC detectors, enzyme-based and microbial cell biosensors, and design of flow injection systems and supporting instrumentation.

Brian B. Laird, Assistant Professor, Ph.D., 1987, University of California-Berkeley. Physical chemistry: first-order phase transition, interfaces, amorphous systems, general liquid state theory, in homogeneous fluids, realization and transport of excitations in condensed matter.

John A. Landgrebe, Professor, Ph.D., 1962, University of Illinois. Organic chemistry: reaction mechanisms and synthetic potential of new reactions involving reactive intermediates in solution.

Cynthia K. Larive, Assistant Professor, Ph.D., 1992, University of California-Riverside. Analytical chemistry: peptide aggregation and conformational analysis, diffusion measurements as a probe of chemical equilibria, metal complexation and aggregation of humic substances.

Alfred J. Lata, Lecturer, M.A., 1957, Western Reserve. Chemical education: use of computers in chemical education.

Craig E. Lunte, Associate Professor, Ph.D., 1984, Purdue. Analytical chemistry: monitoring living systems, micro-separation techniques, electrochemistry, electrochemical detection of liquid chromatography and capillary electrophoresis, drug metabolism, pharmacokinetics, anticancer drugs.

K. Barbara Schowen, Professor, Ph.D., 1964, MIT. Organic chemistry: bio-organic reaction mechanisms, enzymic and proton-transfer catalysis, solvent effects, solvent isotope effects.

Richard L. Schowen, Summerfield Professor of Chemistry and Biochemistry, Ph.D., 1962, MIT. Organic chemistry: reaction mechanisms, bio-organic chemistry, catalysis, isotope effects.

George S. Wilson, Higuchi Distinguished Professor of Chemistry and Pharmaceutical Chemistry, Ph.D., 1965, University of Illinois. Analytical chemistry: structural effects on cytochrome electron transfer, redox biochemistry, implantable biosensors, flow injection immunochemistry.

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SURF THE WEB? TRY OUR WEB SITE!

<http://www.chem.ukans.edu/chem/welcome.html>

WE ARE ONLY AN E-MAIL AWAY!

Use the first initial and last name with the Malott server address to reach any Department faculty member; for example, to contact the Department Chair.....

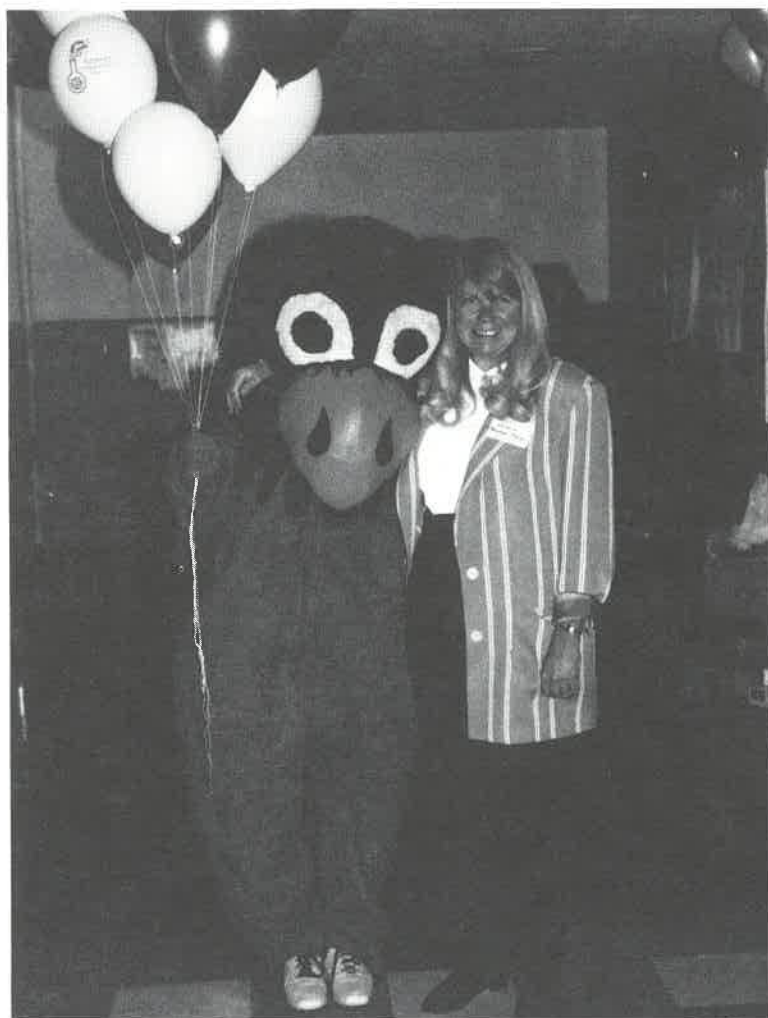
kbowmanjames@caco3.chem.ukans.edu

Notes from the Chair

Dear Alumni and Friends:

It is a great pleasure to write this report at the end of my first year as Chair of the Department. The year has flown by so rapidly, and so much has happened that I am not sure the space allotted will be sufficient. Nonetheless, I will make an attempt to relay to you some of the excitement that I experienced during this last year with respect to Departmental and University growth and change.

Of course, I was not the only new person on the block this year. We have a new chancellor, Dr. Robert Hemenway, who took his post last June. Dr. Hemenway, an English professor, arrived from the University of Kentucky in Lexington. He is indeed an approachable chancellor, and it was clear from the outset that he wanted to know about all of the University starting from the departmental level. That being the case, in early July he visited my office and those of several other chemistry faculty and asked how chemistry was doing. I showed him the building, and it was clear that he was concerned as we all are about the state of our undergraduate teaching labs. We were not the only department singled out, however, and in the subsequent weeks he visited other departments on a regular basis. In the early fall, Chancellor Hemenway put in place a task force which gathered data for an extensive reorganization of the University infrastructure. Many people spent many hours delving into all aspects of the operation of KU in order to bring us into the 21st century, as the chancellor puts it. Admissions have become an even higher priority than before. Specially targeted groups include minorities and National Merit Scholars. While there is trepidation among some because of the many changes being made, it is certainly a fact that the chancellor has taken the



Baby Jay and Kristin Bowman-James at this year's Chemistry Carnival

bull by the horns and, in my estimation, will win this battle.

Now to some of the exciting news about the Department. First and foremost, this summer we will be adding two faculty members—one organic and one inorganic—to our family. These are two new faculty lines, not created by retirements, but made possible through funding from the NSF EPSCoR programs that have provided considerable support the last four years and through the efforts of Daryle Busch, Joe Heppert and Ted Kuwana. Paul Hanson, a synthetic organic chemist, will be joining us directly from his postdoctoral position with Barry Troost at Stanford. Andy Borovik will arrive from Kansas State University, where he has just completed his third year as assistant professor. Kate Lowdon,

Andy's wife, will become an assistant professor in entomology here at KU, and we are thrilled to have both of them join our ranks. With the arrival of Paul and Andy, the department will have eight junior (assistant professor-level) faculty! With this large percentage of aggressive and energetic junior faculty, the research activity excitement level has soared to previously unheard of heights.

A number of new initiatives were put in place this year, many involving students. It is important that student morale be kept as high as possible, which is sometimes not easy given the pressures of graduate students' lives. For the first time this last fall, we chose six of the GTAs with the best student teaching evaluations to head discussion sections. This was a tremendous success, and attendance skyrocketed in these sessions. Despite the increased pressure of having to bone up on all of the problems, the GTAs really enjoyed the opportunity to actually "teach" rather than "baby-sit" a lab. We also received a \$2500 gift from Procter and Gamble, which I used to initiate "student travel awards" for which graduate students attending meetings and workshops can apply. Another initiative was to make more efforts at interdepartmental interactions with our sister departments of medicinal chemistry and pharmaceutical chemistry. That being the goal, we expanded our entering graduate students' picnic to include both departments. The students seemed to enjoy it and it gave them an opportunity to discuss chemistry with a wider variety of people. Also for the first time since I have been at KU, we have changed the Honors Banquet format to an Honors Reception. This was a mid-afternoon event held at the Adams Alumni Center, with a cash bar and hors d'oeuvres. The less formal atmosphere allowed for more mingling, and gave students, parents and faculty more of a chance to chat.

With respect to courses, next fall we will offer a full lecture/lab course in honors general chemistry, for the first time. This is a very exciting opportunity to attract students with high scholastic aptitude, and perhaps to recruit more chemistry majors. Marlin Harmony is slated to teach this course. Also at the general chemistry level, we will offer two separate sections of CHEM 184 in order to have smaller classes. (Last fall, 850 students were initially enrolled in that course.) While the classes are still large, we are hoping in the future to broaden our offerings, possibly making a course for students who have had high school chemistry and a separate course for those who have not. Another new offering is an environmental chemistry course, which Cindy Larive has designed. This will be an exciting new endeavor for us, and will mean closer interactions with the environmental studies program headed by Val H. Smith (B.A., Chemistry, 1973).

I hope that this brief summary will convey to you some of the new things that are happening in the Chemistry Department. One question that I often get is "Well, how do you like being chair?" For some reason, people always look a little concerned when I answer "Great! I love it!" Perhaps it is because no one is supposed to like administration and all of the bother that goes with it. I would like to point out that, in fact, without the support of a very loyal staff, the job of administration would become exceedingly onerous. Because of the excellent support that I get from our staff and faculty, we have been able to make some real innovations this year. I hope next year will be as productive, if not more so.

In closing I would like especially to commend Carol Bray, our administrative officer. Carol has essentially single-handedly put this newsletter together, in addition to many other documents which are required by someone or other in higher administration. She has helped my organizational skills tremendously (although it is probably not apparent to her.) I owe her many thanks for her patience in training the rookie Chair.

Sincerely,

Kristin Bowman-James

Small equals big!

Not surprisingly, large donations or awards to the Chemistry Department like the NMR spectrometer donated to Cindy Larive by Monsanto or the full GC/MS system awarded to George Wilson by Hewlett Packard get a lot of attention. With the many wonderful teaching and research goals accomplished through them, it is understandable that we get excited. However, we would like to pay tribute to the *other* heroes and heroines, those who consistently give smaller gifts. These loyal donors give what they can, and they give consistently, even if their gifts don't receive the public attention that matches their care and concern for the Chemistry Department. Often for them, a smaller gift may also represent a big part of their budget. Certainly, their love of the Chemistry Department and their loyalty to our mission are appreciated.

During academic year 1995-96, small donations, \$150 or less, accounted for 10 percent of the total income to the Chemistry Department endowment. These donations—several boosted by matching gifts from corporations/foundations and interest gained on investment—helped the department with recruiting costs for two outstanding young faculty members; provided funds for forty-four invited speakers and three endowed lectures; supplemented funds provided by NSF for our summer Research Experiences for Undergraduates program; helped make our first successful Graduate Research Opportunities Symposium possible; and provided funds for several of the awards presented to our outstanding graduate and undergraduate students at this year's Honors Reception, among others. *Now, that's a lot!*

To our graduates and friends who made contributions this year, thank you for showing your support for the Chemistry Department and the University of Kansas and the quality of the educational experience it continues to provide. The most important thing is that everyone is involved, at whatever level you can afford, because as you can see, every gift is making a difference!

Chemistry priority needs

There are priority needs for the Chemistry Department outlined below that we hope you will consider when sending a gift to us. However, on the following page, the form for giving to the Department has a space where you can designate other specific uses for your gift, as well. We hope you will take this opportunity to support the Department. Such generosity will help ensure high quality education and opportunities for future generations of *CHEMHAWKS* on campus.

Chemistry Department Development Fund—to support faculty, students, and areas of greatest need in the Department on a case-by-case basis without restriction; to provide scholarships, fellowships, professional development, lectures, exhibits, research support, outreach initiatives, and equipment.

Chemistry Research Fund—to expand opportunities for research, to support areas of funded research not provided for by the restrictions of the grant funding agencies, to support travel, to sponsor workshops, to attend national and international professional conferences, to allow acquisition of new research skills to support faculty research initiatives.

Chemistry Fellowship Fund—to support graduate student stipends or fellowships or to recognize exceptional graduate teaching assistants, to award undergraduate students scholarships which enable them to work on faculty research projects during their educational program.

Scientific Equipment Fund—to improve scientific equipment for classrooms and laboratories, to update computer hardware and software capabilities for computer-assisted courses.

Remember—your contribution makes a BIG difference!

For further information contact...

KUEA Development Director, Terrie Knoll Johnson, at (913) 832-7340
or Kristin Bowman-James, Chemistry Department Chair, at (913) 864-4670

I support KU Chemistry Department excellence!

Every gift will be used in its entirety, as designated by the donor, to benefit the Chemistry Department, University of Kansas, and is tax-deductible to the extent allowed by law.

My gift of \$_____ is enclosed as a check _____ / chargeable to my credit account _____ (details below**)

Please make checks payable to KU Endowment Association, with a memo of "for Chemistry Department" and send with this form to: Terri Knoll Johnson, KU Endowment Association, P.O. Box 928, Lawrence, KS 66044-0928

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____ Chemistry Research Fund
____ Chemistry Fellowship Fund
____ Scientific Equipment Fund

Specific Funds:

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____ Walter and Roy Cross Memorial Fund
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Employer: _____
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Please also give credit to my spouse:

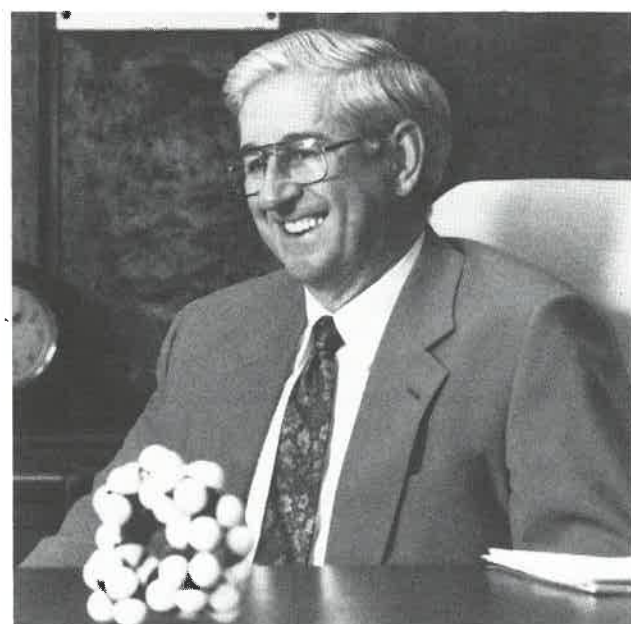
(spouse's name, birth name, KU class & year, if appropriate)

KU ACS president in 1998!

Both candidates for president of the American Chemical Society in 1998 have strong KU ties! Paul H.L. Walter received his doctorate from KU in 1960 and Daryle H. Busch is KU's Roy A. Roberts distinguished professor of chemistry. In addition, both are inorganic chemists—Paul completed his research under the tutelage of emeritus chemistry professor Jake Kleinberg!



Dr. Paul H.L. Walter



Dr. Daryle H. Busch

Undergraduate program news

It's going strong—Our undergraduate program remains strong graduating 69 B.A. and 33 B.S. chemistry majors in the last three years, with 165 declared majors—101 B.A. and 64 B.S.—currently in the program. Several



Dr. Barbara Schowen, Undergraduate Program Coordinator

changes have occurred in the undergraduate program in recent years.

Two new emphasis options—This year the Department was successful in adding two new emphasis options to the undergraduate degree programs—environmental chemistry and biological chemistry. The envi-

ronmental option provides the opportunity for interested students to focus their study of chemistry on environmental issues and to gain understanding into how chemistry may be applied to the solution of environmental problems. The curriculum substitutes four environmentally-related courses for four courses in the standard B.S. program. The biological chemistry option provides the opportunity for interested students to focus on the molecular basis of biological science. It is an ideal program for students contemplating medical school, M.D./Ph.D. programs, or biochemical/molecular biology research careers. The curriculum substitutes four biologically-related courses for four courses in the standard B.S. program. Both programs satisfy current College B.S. degree requirements as well as standards set by the American Chemical Society for certification. B.A. degrees with the environmental or biological chemistry options are also offered and require five courses in addition to the normal chemistry B.A. requirements.

Environmental chemistry course added—Cindy Larive initiated a successful effort to create a new environmental chemistry course this year. This new course is a three credit hour, 600-level elective course designed for majors and interested science

students in related fields such as environmental science. CHEM 690, which will be offered for the first time in Spring 1997, will cover topics of interest in environmental chemistry including acid rain, ozone depletion, global warming, toxic organics, pollution of natural waters and heavy metal contamination, with a focus on the fundamental chemistry that underlies each of these problems.

New undergraduate computer laboratory—An exciting new learning opportunity will be available in Malott this fall. The Chemistry and Physics Departments have agreed to share physical resources and pool College of Liberal Arts and Sciences (CLAS) funds allocated this spring to develop a joint computer laboratory for our undergraduate students. Although still in the planning stage, the laboratory will be comprised of twenty-two Pentium PCs networked to Ken Ratzlaff's Instrumentation Design Laboratory Eureka server. MathCad, ChemWindows, Alchemy III, DataFit, Microcal Origin, ChemiCalc, and Microsoft Office Pro are some of the software programs being ordered for installation. This project creates a stimulating, new environment for undergraduate students and faculty and provides a great opportunity for Chemistry and Physics to collaborate on undergraduate education.

Expanding internet access—The use of the internet for information transfer and retrieval has become a critical skill for both students and instructors. Because on-line instructional home pages provide rapid, remote access to course information, instructional materials, and instructional programs, Joe Heppert and Ken Ratzlaff will use funds from an Office of Academic Affairs Enhance-



Undergraduate Rob Dufield works with an atomic absorption spectrophotometer in the new third floor instructional instrumentation laboratory.

ment of the Freshman-Sophomore Experience Award to establish the infrastructure required to expand instructional resources into this arena. This spring, Heppert pioneered

the transfer of instructional materials and course information into cyberspace for CHEM 125. Current plans call for expansion of his efforts into the freshman CHEM184/188 general chemistry sequence and the CHEM 624/626 organic sequence this fall.

Changes in instrumental analysis laboratory—In the last year, the Department and the University have provided funds to remodel space for a CHEM 636 instructional instrumentation facility. The new, third floor Instructional Instrumentation Laboratory (IIL) is immediately adjacent to another laboratory equipped for sample preparation and handling—in total providing ca. 1,750 sq.ft. of space dedicated to analytical analysis.

First priority for use of the IIL laboratory will be



Graduate student Yolanda Fintschenko with the IIL's new Hewlett Packard full GC/MS system.

undergraduate teaching—providing students with a meaningful experience in analytical problem-solving. Equipment currently installed in the IIL includes: FT-IR, pulse polarograph, diode array spectrophotometer, gas chromatograph, liquid chromatograph, capillary electrophoresis, fluorescence, ion chromatograph, scanning uv-vis spectrophotometer, computer-controlled flow injection analysis systems (2), glucose clinical analyzer, carbon rod furnace atomic absorption spectrophotometer, atomic absorption/emission spectrophotometer and two pentium 120 computers with printer. A proposal to Hewlett Packard by George Wilson for the addition of a full GC/MS system was funded in late March and the equipment was installed in May. Bids are currently being taken for a new spectrofluorometer.

Funds for the purchase of equipment in this lab

were provided by the NSF-ILI Program, Hewlett-Packard, and Merck Sharp & Dohme, as well as KU. Their continuing support for our teaching efforts is greatly appreciated!

Capstone course—In 1991, the Department's Undergraduate Affairs Committee saw a need for a forum exclusively for chemistry majors and created a capstone course – CHEM 696 *Junior/Senior Seminar*. This seminar is intended to: (1) provide opportunities to learn more about the profession and current topics not covered in the classroom, (2) to discuss issues (ethical, environmental, etc.) of importance, (3) to write short technical papers, (4) to research various topics of interest, (5) to attend seminars, (6) to hear guest lecturers, (7) to gain experience in literature searching, and (8) to give oral presentations. There are also expected to be social benefits in becoming acquainted and interacting with others in chemistry.

Stronger math prerequisites—Several changes have taken place in the last several years in CHEM 184 *Foundations of Chemistry I*. In 1993, the General Chemistry Committee felt that a good working knowledge of high-school algebra was essential for success in CHEM 184, and decided to change the mathematics prerequisite. Under the old prerequisite of eligibility for MATH 101 *Algebra* or MATH 104 *Precalculus*, students with inadequate high-school mathematics

preparation were able to enroll in this course. These students often had a difficult time, and many dropped the course. Under the new prerequisite, eligibility for Math 115 *Calculus I*, students enrolling in CHEM 184 are better prepared in algebra. This change, effective Fall 1995, has freed discussion section time (formerly devoted to reviewing algebra and problem-solving skills) for the explanation of chemical topics.

GTAs lead discussion sections—For the first time in Fall 1995, the Department utilized our top graduate teaching assistants to lead CHEM 184 discussion sections. Our TAs really enjoyed the opportunity and attendance at discussion sections increased from 1% of students attending 15 or more sessions, to 24% attending 15 or more sessions. We considered the experiment a success and continued the practice into CHEM 184 and CHEM 188 during

the spring semester.

Revised freshman honors course—Beginning Fall 1996, the Department is reviving CHEM 185 *Foundations of Chemistry I, Honors*, which was last offered in Fall 1991. This revised course will provide a more thorough treatment of the concepts and topics of general chemistry. Eligibility requires a satisfactory score on a qualifying examination administered by the Department, and at least one of the following: (a) acceptance into the KU Honors Program, (b) an AP score in chemistry of 3 or higher, or (c) a mathematics ACT score of 28 or higher. In the new CHEM 185, lectures are independent of CHEM 184, although currently the laboratory portion of the course remains the same. It is expected that the laboratory portion of the course will also be independent of CHEM 184 in the next few years. We expect 50-60 students to qualify for the course this fall.

Reduced lecture size—Also beginning Fall 1996, the Department will offer two sections of CHEM 184 in an attempt to reduce the large lecture size. In addition to the morning section of ca. 500 students, we are planning to offer an afternoon section of ca. 300 students. Eventually, the Department hopes to hire a full-time demonstrator, who will be responsible for the design, preparation, and execution of instructional demonstrations for this and other undergraduate courses.

Ongoing opportunities for research/teaching—Each year, outstanding chemistry undergraduates participate in research and work as teaching assistants in laboratory courses. They feel that these experiences definitely enhance their degrees. Here are a few of their comments:

Teaching has solidified my knowledge of general chemistry, but more importantly, it has given me the opportunity to assume a leadership role in which I act as a mentor for my peers. The leadership and speaking skills of my teaching experience will likely become invaluable to me.—*Daniel Ricke*

Research gives me an idea of exactly what I'm studying for and what a chemist really does—the challenge and frustration, the rewards of understanding, the feeling of accomplishment. Teaching is definitely a unique challenge. Being able to teach something is the height of understanding. I know that teaching is what I want to do with my degree.—*Nick Pivonka*

Through my internship at Wyckoff Chemical, I was able to see what "real chemists" do. I also got to apply some of the things I learned in class. My experience teaching CHEM 184 lab this semester has been one of the most enjoyable things that I have done at KU.—*Katie Stiles*

Research has greatly helped to shape my thinking process and has taught me different approaches to problem-solving. Teaching has further strengthened my chemistry background. On top of this, organization, dependence of students, responsibilities and communication skills, have developed from this experience.—*Robert Dufield*

Department News

New research projects begin at the Center for Bioanalytical Research

CBAR is funding two new focus groups and one New Initiative in Bioanalysis research project during the 1995-96 academic year. Members of the new focus group **Protein Characterization** include Christian Schoneich and John Stobaugh (Pharmaceutical Chemistry) and Bob Carlson. Projects to be conducted through this group are: (1) Development of techniques for the analysis of membrane-spanning peptides. (2) Reagents for laser-induced fluorescence, electrochemical detection in capillary electrophoresis, and microbore HPLC analysis of amines and peptides. (3) The development of surface-modified capillaries for protein/peptide separations and the control of electro-osmotic flow.

Members of the **Microsampling and Sensors** focus group are George Wilson, Craig Lunte, Ken Ratzlaff, Ted Kuwana and Peter Hesketh (University of Illinois-Chicago). The focus group will conduct the following projects: (1) Design and fabrication of a micromachined micropump and analytical manifolds, and development of a microscale immunoassay system. (2) Fabrication of microdialysis fibers of smaller dimensions. (3) Design and fabrication of micropotentiostat/telemetry systems. (4) *In vivo* sensor development.

Assistant professor of chemistry Robert Dunn submitted a project which will be funded for one year through the New Initiative in Bioanalysis program. Dunn's project is in near-field scanning optical microscopy.

Welcome Bob Dunn!

Last fall, the Chemistry Department welcomed our newest analytical division faculty member, Robert C. Dunn,

as an assistant professor. Dunn recently was an Associated Western University Postdoctoral Fellow at Battelle Pacific Northwest Laboratory, Richland, Washington. He received his Ph.D. in physical chemistry from the University of Cal-



Dr. Robert C. Dunn

ifornia — San Diego in 1992.

Professor Dunn's research interests involve the application of novel optical techniques to the study of bio-analytical and biophysical problems. One current area of interest is that of near-field scanning optical microscopy. Another active area of research in Bob's lab deals with the development of fiber-optic-based chemical sensors.

Givens elected AAAS Fellow



Dr. Richard S. Givens

Each year the American Association for the Advancement of Science Council elects members whose "efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished." The honor of being elected a Fellow of AAAS began in

1874 and is acknowledged with a certificate and a rosette. This year, 279 scientists from around the world were selected; over 16,000 scientists have been honored since 1874.

This year, Richard S. Givens was honored for research in organic photochemistry, including new photoextrusion reactions, new functional group photoreactions, photorelease of nucleotides and the mechanism and application of H₂O₂/oxalate chemiluminescence. The award was presented at the AAAS Annual Meeting's Fellows Forum in Baltimore on February 10, 1996.

Fifth international workshop on bioanalysis

The Fifth Workshop on Bioanalysis was held June 5-8, 1996, in the newly renovated Kansas Union. The objective of this workshop was to bring together bioanalytical chemists from academia, industry, and government laboratories in an informal atmosphere for the discussion of the latest developments in the field. These meetings have been conducted at KU on alternate years since 1987.

This year, the formal lectures were organized around the latest technological developments, while the discussion sessions centered on specific bioanalytical problems faced by the pharmaceutical, biotechnological and biomedical communities. Part of the discussion focused on the question of technology transfer.

Principal scientific themes included the following: protein characterization, developments in spectroscopic methods for bioanalysis, dynamic measurements of

living systems, combinatorial chemistry, and chiral separations.

NIH FIRST award goes to Benson

David R. Benson, in his third year on the chemistry faculty, was recently awarded five years of research funding from the National Institutes of Health for a research proposal entitled *Approaches to Designed Metalloproteins*. The award, known as the First Independent Research Support and Transition (FIRST) award, is targeted to young faculty members who are in the process of beginning their independent research careers. The objective, as described by NIH, is "to provide a sufficient period of research support for newly independent biomedical investigators to initiate their own research and demonstrate the merit of their own research ideas." Dr. Benson is happy to be able to finally support his students on research assistantships, and word has it that the students are equally pleased. The award kicked in on May 1, 1996. Dr. Benson received his bachelor of science degree from Pennsylvania State University and the doctorate degree from the University of California, Los Angeles.



Dr. David R. Benson, Jr.

Givens named assistant provost

Last fall, Chancellor Robert Hemenway appointed a task force on administration and re-engineering to review the University's organizational structure and make recommendations for change. The task force conducted focus groups across campus, sent out 5,000 invitations for comment, and held hundreds of hours of interviews with faculty, staff, and students before making recommendations to the chancellor in December.

In early January, the chancellor announced plans for implementation of a provost structure, with the provost being both the executive vice chancellor and the chief academic officer of the Lawrence campus. A nationwide search is expected to result in a new provost appointment and full implementation of the new organizational structure by July 1.

Chemistry Department professor, Richard S. Givens, who currently holds the position of associate vice chancellor for academic affairs, has been appointed as assistant provost in the University's new administrative structure.

Wilson develops blood-sugar monitoring device

An electrochemical sensor for monitoring blood-sugar levels in patients with Type I insulin dependent diabetes was discussed by George S. Wilson in a presentation to an analytical symposium at the 1995 International Chemical Congress of the Pacific Basin Societies in Ho-

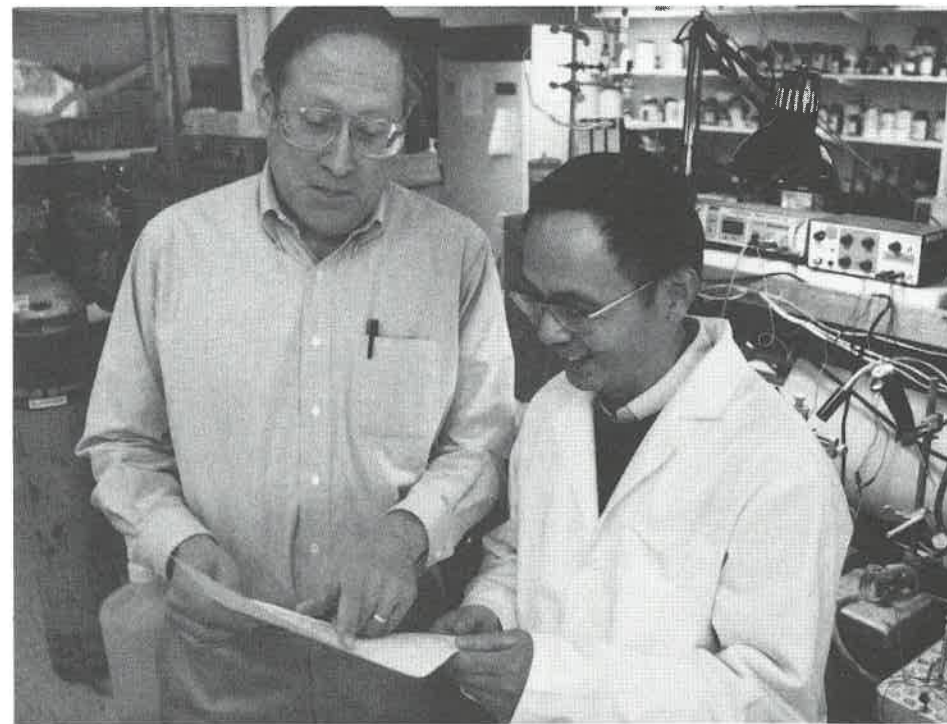


Photo courtesy of Mike Yoder/Lawrence Journal -World

Dr. George Wilson and research associate Dr. Yibai Hu discuss sensor output.

lolulu last December (see C&EN, January 8, 1996).

Research shows that intensive management of insulin-dependent diabetes can reduce complications by 30-70 percent. This sensor, which continuously monitors blood sugar levels, is about three times the thickness of a human hair and implanted under the skin, then attached to a pocket-size monitor that calculates blood-sugar levels every 30 seconds. An alarm sounds when the blood sugar level is low, alerting the patient that insulin is needed.

The monitoring system is the result of Wilson's 10-year collaboration with Gerard Reach, Hotel-Dieu Hospital—Paris, and Jean-Claude Klein, a bioengineer at the School of Mines of Paris. National Applied Science of Portland, Oregon, holds rights to market the system.

Nobel winner has KU Chemistry connection!

Former KU Chemistry professor, F. Sherwood Rowland, won a Nobel prize in chemistry this year for his

research on ozone depletion. Rowland, currently a professor at the University of California—Irvine, shares the prize with Mario Molina of MIT and Paul Crutzen, a Dutch citizen working at the Max Planck Institut fur Chemie, Mainz, Germany.

Browsing through Department archives revealed the photograph on the next page and some historical information about Rowland's tenure at KU (1956-64).

The headline of the Kansan, July 13, 1956, was *AEC Research to begin at KU* and the article went on to tell of a new program in radiochemistry and announce the appointment of F.S. Rowland as assistant professor. Rowland filled a faculty vacancy created by the death of Dr. Robert Taft.

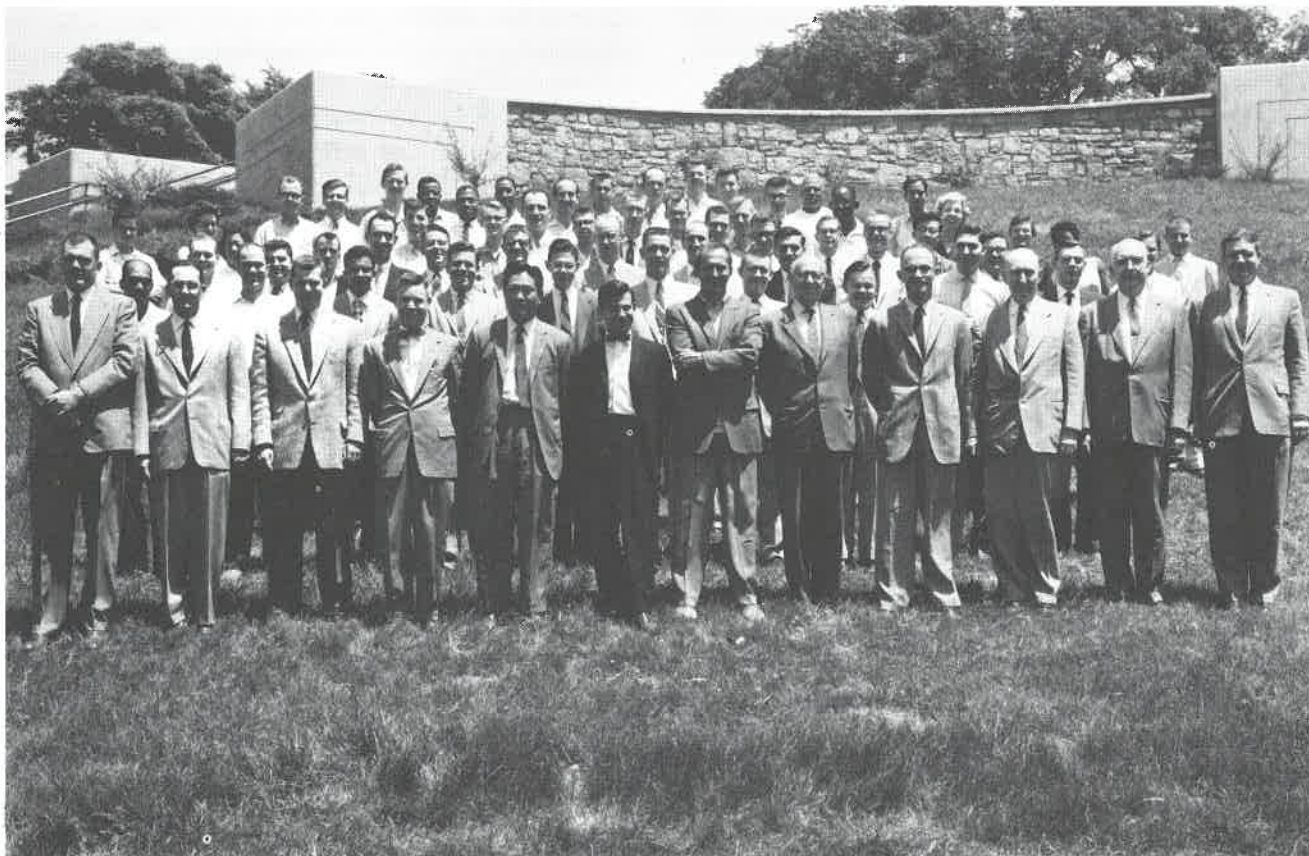
Rowland received the doctorate degree in radiochemistry from the University of Chicago in 1952, under the tutelage of Dr. Willard F. Libby, who was awarded the Nobel prize in 1960 for his work in carbon dating. The Kansan article reported that Dr. Rowland, who had been an instructor at Princeton University for four years, had been working in the field of the reactions of energetic recoil atoms since 1949. Rowland's contract with AEC called for a study of ... "the phenomena and mechanisms

by which energetic atoms undergo chemical reaction, and the potentialities of recoil reaction for producing useful tracer molecules."

KU chemistry professor J. K. Lee also came here from MIT that fall as Rowland's full-time research associate. Dr. Lee remained here as an analytical chemistry professor and associate chair of chemistry until he retired in 1980. Lee returned to Hong Kong to assist in managing the Lee family enterprise until his untimely death in 1990.

Department yearbooks show that Rowland was promoted to associate professor in 1958 and to professor in 1962. A Lawrence Journal-World article dated August 22, 1961, notes that Rowland, by now an internationally known authority in radiochemistry, was one of two U.S. chemists attending the International Atomic Energy Symposium in Vienna, presenting a paper entitled *A program of research in radiochemistry and radiation chemistry based on a small nuclear reactor*.

Rowland left KU and became founding chair of chemistry at the University of California—Irvine in 1964.



May 1958

Faculty (front row left to right): Rowland, Gilles, Vanderwerf, Argersinger, Iwamoto, Bearman, Adams, Davidson, Reynolds, Brewster, Griswold, McEwen. [We are unable to identify the students included in this photo.]

Rowland's Ph.D. CHEMHAWKS—Where are they now?

- Vincent C. Anselmo** (Ph.D., 1961)—Dissertation: *Hot Atom Chemistry of Phosphorus in its Oxy-Anions*. Retired, Austin, Texas.
- Bodo Diehn** (Ph.D., 1964)—Dissertation: *The Reactions of Recoil Carbon Atoms in the Acetamide System*. Candidate for the State Legislature, Scottsdale, Arizona.
- John K. Garland** (Ph.D., 1963)—Dissertation: *Recoil Tritium Reactions with Cyclic C₆ Hydrocarbons*. Professor, Washington State University, Pullman, Washington.
- Larry A. Haskin** (Ph.D., 1960)—Dissertation: *Analysis for Uranium by Neutron Activation and Reactions of Energetic Recoil Tritium in Solvent Mixtures*. Professor, Washington University, St. Louis, Missouri.
- Lawrence R. Hathaway** (Ph.D., 1963)—Dissertation: *Oxidation States of Radiogenic Leads in Uranium Minerals*. Senior Scientist, Kansas Geological Survey, Lawrence, Kansas.
- Jack G. Kay** (Ph.D., 1960)—Dissertation: *Studies in the Hot Atom Chemistry of Lead-212 and Tritium and a Tracer Study of the Ninhydrin Oxidation Mechanism*. Professor, Drexel University, Philadelphia, Pennsylvania.
- Edward (Kyung-Chai) Lee** (Ph.D., 1963)—Dissertation: *Recoil Tritium Reactions with Cyclobutane*. Deceased.
- Burdon C. Musgrave** (Ph.D., 1960)—Dissertation: *Recoil-Tritium Reactions with Organic Molecules in the Gas Phase*. Unknown, one of our lost CHEMHAWKS.
- Charles W. Owens** (Ph.D., 1963)—Dissertation: *The Oxidation States of Cl³⁶ in Neutron-Irradiated Minerals and the Exchange of S³³ between Elemental Sulfur and Sulfur Monochloride*. Vice President for Academic Affairs, University of New Hampshire, Durham, New Hampshire.
- Yi-Noo Tang** (Ph.D., 1964)—Dissertation: *Recoil Tritium Reactions with Chlorocarbons*. Professor, Texas A&M, College Station, Texas.
- John W. Root** (Ph.D., 1964)—Dissertation: *Recoil Tritium Reactions with Alkanes*. President, Mt. Baker Scientific Computing, Bellingham, Washington.
- R. Milford White** (Ph.D., 1960)—Dissertation: *Recoil-Tritium Reactions with Some Solid Organic Acids*. Deceased.

Crocodile Everett or Grover does the Outback!

As I write this, my wife, Carolyn, and I are at the University of Wollongong, in Australia, on sabbatical leave from KU. As you may know, the sabbatical policy at KU allows faculty to be away every seventh year. This is our fourth leave from KU and our third in Australia. During the semester break in December, we spent a month enroute to Australia, visiting islands in the South Pacific that we had not seen on our previous trips. We stayed in pensions while exploring both high volcanic islands and low coral

Grover W. Everett, Jr.



Recipient
of the
1996
H. Bernerd Fink
Distinguished
Teaching Award

atolls. We did a lot of snorkeling, and on one occasion we swam among sharks as large as 2.5 meters. We have always been impressed with the genuine friendliness of the Pacific Islanders and their relaxed pace of life.

Wollongong is on the east coast of Australia about 80 km south of Sydney. I spend much of my time here in the library. Carolyn has been involved in volunteer work at the hands-on Science Center on campus, and I have served as a consultant for them regarding chemistry demonstrations. In April, when the temperature in tropical Queensland drops to a tolerable level, we will move to Townsville, where I will do some hands-on research at James Cook University. This will be a continuation of a long-standing collaboration with the inorganic chemists at JCU.

Life in Australia is very pleasant. It is never really cold anywhere, but snow can be found in the Snowy Mountains west of here. During our stay in Wollongong, temperatures have ranged from 20°C to 30°C for the most part. The ocean is a refreshing 20°C, and the surf is sometimes strong. On weekends, we often watch the surf life-saving clubs compete with one another in a variety of surf-

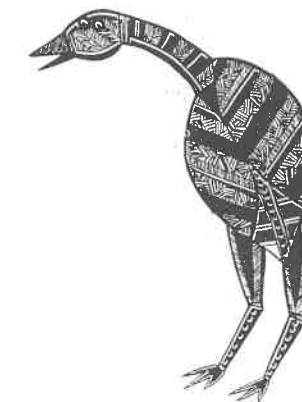
rescue techniques. We take walks in the evening to observe the multicolored parrots, cockatoos, and other birds around campus. Kookaburras wake us each morning. We live in a fully-furnished faculty apartment directly on campus, only five minutes' walk from the chemistry building and library. The beach is only 3 km away, and a 550 meter mountain rises up almost from our backyard. An extensive botanical garden is just across the street. We have no car, so we rely on our second-hand bicycles and the city bus to get around town. On several occasions, we have rented a car to travel inland or down the coast. We can take a train and arrive in Sydney in just over an hour. Australia is completely on the metric system, and everything moves on the left: cars, bicycles, pedestrians, and trains (on a two-track railroad). In the swimming pool, everyone keeps to the left side of the lane (clockwise circling), and even the cyclones (hurricanes) here rotate clockwise.



Artwork by Rodriguez

It was very quiet here for the first two months of our stay, since few students attend summer school. Near the end of February (analogous to the end of August in the northern hemisphere), the students returned for the fall semester. Wollongong is rated among the top 10 Australian universities. The chemistry department has 19 faculty members, about 35 graduate students, and 15 postdocs. An undergraduate degree in chemistry in Australia requires only three years, because students concentrate on chemistry, math, and physics. Honors students take a fourth year in order to do research, and these students often go to graduate school. Graduate students have no formal courses to take and are expected to complete a Ph.D. degree in less than four years.

It is interesting to compare American and Australian life-styles. Australia will elect a new Prime Minister



Artwork by Rodriguez

It is interesting to compare American and Australian life-styles. Australia will elect a new Prime Minister

ter in March, and the campaign has been as heated as an American presidential election. We hear very little news from the United States. Most of the movies here and many of the television programs are American. Several American fast food chains are here. The chemists have morning tea at 10:30 a.m., and some also have afternoon tea. Australians address one another by first names, regardless of status. On weekends there is an emphasis on outdoor family activities which include sports, barbecues, hiking, biking, and relaxing at the beach. Stores close at 4:00 p.m. on Saturdays. We have learned to use some unfamiliar words, and we find that some of our common words have different meanings here. In general, when Australians discover we are Americans (which is as soon as we speak), they go all out to help us. We definitely would return if we have the chance! —*Grover Everett.*

Frost-Mason named CLAS dean

After an exhaustive national search process, Sally Frost-Mason was named the 10th dean of the College of Liberal Arts and Sciences in April. The appointment was effective immediately, making her the first woman to be dean of CLAS.

The college is the largest school in the University and handles a \$40 million budget with more than 12,000 students. Frost-Mason has been acting dean since James Muyskens left in 1995 for a position with the Georgia Board of Regents.

Recruiting weekend declared success

From more than 300 graduate school applications, seventeen top, prospective students were invited to attend the Department's first Graduate Research Opportunities Symposium, which took place March 8-9, 1996.

Comments like "the weekend was a great experience," "I thoroughly enjoyed the graduate research opportunities symposium," "very helpful visit," "thought the weekend was a success," and "the availability of faculty and graduate students was superb," were a good indication that the Graduate Recruiting Committee, comprised of Brian Laird (chair), Dave Benson, Craig Lunte, Joe Heppert, and graduate student representative Dana Luterman had coordinated an outstanding event. The whirlwind weekend of activities included an overview of our

graduate program, graduate student poster sessions, divisional research presentations, discussions of interdisciplinary research opportunities, and individual interviews with faculty. Those activities were interspersed with facilities, campus and city tours, along with luncheons, dinners and other social events.



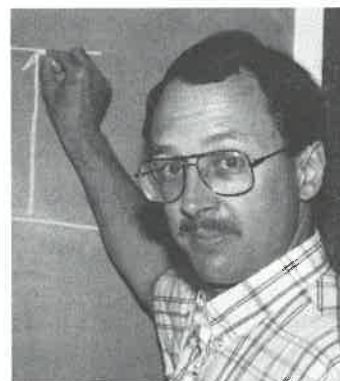
Prospective students, current graduate students and faculty enjoyed a taco bar dinner and research poster session at the Kansas Union during this year's Graduate Research Opportunities Symposium.

One prospective student described the weekend as "GREAT!!!" and we certainly agree. In total, ten of the prospects accepted offers and will begin graduate studies here this fall.

One of the most important tools in recruiting is our network of alumni contacts. If you know of any graduate or undergraduate students interested in pursuing chemistry and who might be interested in attending KU, please contact Brian Laird TEL: (913) 864-4632 or EMAIL: Laird@pilsner.chem.ukans.edu

Summer research fellow

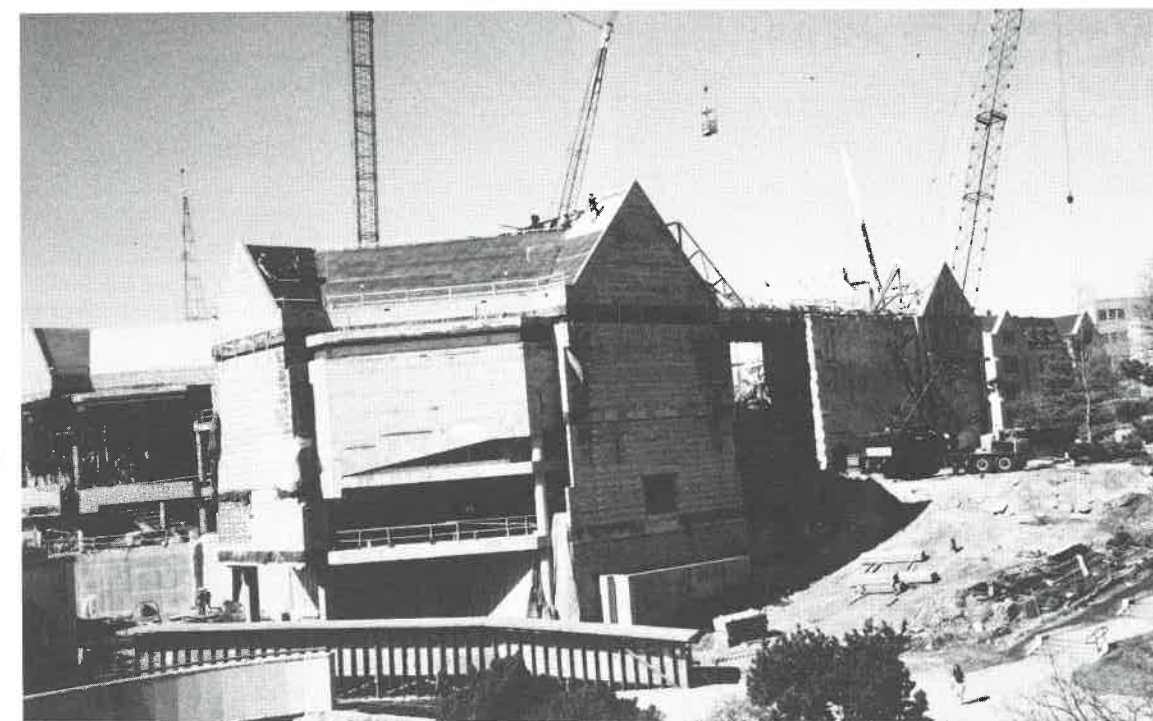
Physical chemist Carey K. Johnson was the recipient of an Associated Western Universities Faculty Fellowship for summer research at Battelle, Pacific Northwest National Laboratory. Carey plans to work on laser spectroscopic studies of interfaces and femtosecond spectroscopy of aqueous systems.



Dr. Carey Johnson

It just keeps growing and growing...

Running behind schedule, the NEW Hoch (Budig Hall) is expected to be ready for classes by Fall 1997.



Biosciences building dedicated

The Pharmaceutical Chemistry Department relocated from the third floor of Malott Hall to a new home on west campus this spring. The Dolph Simons Biosciences Research Laboratories, devoted to cancer research, was dedicated on May 6.

The two-story, 49,000-gross-square-foot laboratory, completed in November 1995, is part of the Higuchi Biosciences Center. HBC comprises Centers of Excellence for biomedical research, bioanalytical research and drug delivery research. The new building is linked to McCollum Research Laboratories and contains 22 laboratories, as well as offices, meeting rooms, interaction areas and a 106-seat auditorium.

The building's design conforms with industrial laboratory layouts rather than those typical of universities—labs flank central service corridors on both floors. The building cost \$8.95 million. Part of that sum came in the form of a \$4.9 million grant from the National Cancer Institute, awarded in 1991. KU contributed \$2 million, and private donations will pay for the rest.

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NRC senior research associate

National Research Council research associateship awardee Peter Hierl worked at Phillips Laboratory (formerly the Air Force Geophysics Laboratory) at Hanscom Air Force Base, Massachusetts, while on leave from KU in 1995. His research objective while at Phillips was measurement of the rate coefficients of gas-phase ion-molecule reactions of atmospheric interest under isothermal conditions and throughout a greatly extended temperature range. Peter completed the construction of a new high temperature flowing afterglow apparatus designed to achieve an unprecedented maximum temperature of 1800 K, and used this instrument to obtain data on six reactions over the temperature range 300-1600 K (experimental problems precluded operation at higher temperatures). Preliminary data over a less extensive temperature range were obtained for another dozen reactions.



Dr. Peter Hierl

crease public awareness of the importance of chemistry in our everyday lives. This year the awards were given in August at the national meeting of the ACS in Chicago. Kathy Heppert, local NCW coordinator, went to Chicago to accept the award and to present a poster exhibiting the highlights of the KU open house.

KU ACS section wins Phoenix Award for Chemistry Week best open house!

It was Fun!

It was Educational!

It was Award Winning!

With great pride, the local University of Kansas Section of the American Chemical Society (ACS) accepted the Phoenix Award for Best Open House held in celebration of National Chemistry Week (NCW) 1995. The Phoenix awards are presented each year by the ACS to honor local sections for creative and successful events which in-



Kathy Heppert, coordinator of the award winning Carnival of Chemistry and assistant director of KU's new Math and Science Center.

The award ceremony was quite a gala event. The main entertainment for the evening was a live production of *Chem TV*. *Chem TV* is a flashy, musical, multimedia, live performance, funded by the Dow Chemical Company, and aimed at increasing interest and awareness of Chemistry. The evening finale included refreshments and a live

orchestra. The award presentations were conducted by tuxedo-clad emcees who read the nominations and announced, "and the winner for Best Open House is, the envelope please,....the University of Kansas and the University of Southern Indiana!". Kansas was cited for involving over 75 volunteers, attracting more than 800 participants and

orchestra. The award presentations were conducted by tuxedo-clad emcees who read the nominations and announced, "and the winner for Best Open House is, the envelope please,....the University of Kansas and the University of Southern Indiana!". Kansas was cited for involving over 75 volunteers, attracting more than 800 participants and



Ellen Collier, 5, and her mother Carol Patterson, enjoy the flames and explosions during the chemistry show at Malott Hall.

providing creative hands-on events for children including fishing for chemicals, in which kids got to catch small prizes labeled with information about their chemical composition.

Even without national recognition, the local section felt that our open house was something really special for both KU and the Lawrence community. We knew all along our staff and our volunteers had "award winning" ideas, enthusiasm, and dedication! But please do stop by the display case in Malott Hall and admire the glass award plaque. You can also enjoy the many pictures taken of families having fun with Chemistry and the "best" open house.—Kathy Heppert.



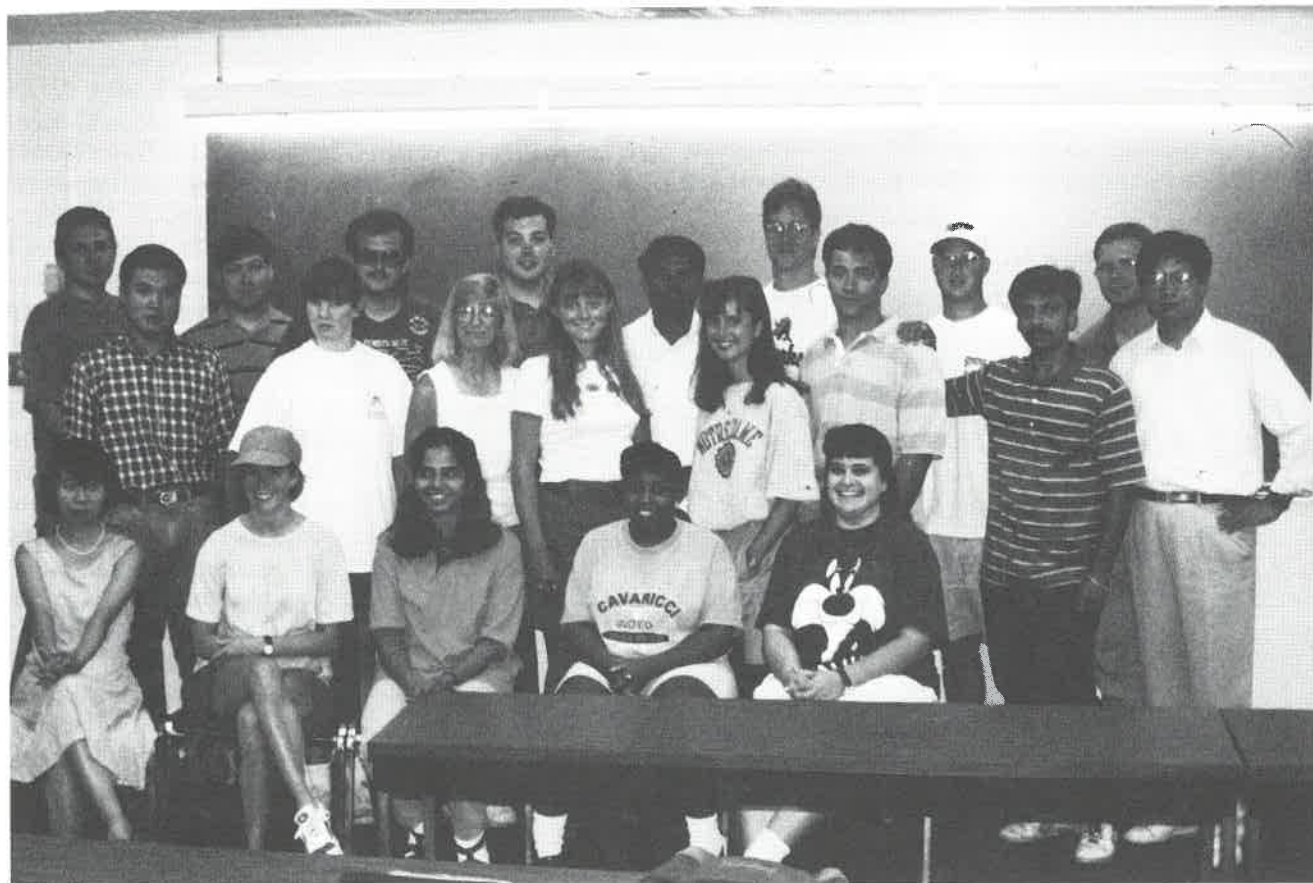
New Math and Science Center at KU

This summer if you are in Malott Hall you may see some very young looking students and you may smell cooking potatoes! What's going on? It's probably high school students in the KU Math and Science Center exploring chemistry.

The KU Math and Science Center is an exciting new academic enrichment program in its first year of funding by the U.S. Department of Education. It is sponsored by the School of Education and is located in Bailey Hall. The program director is Dr. Ngondi Kamatuka and the assistant director is Kathy Heppert. The center benefits high school students from low income households or students who are the first generation in their family to attend college. Ninth through twelfth graders are recruited from fourteen public school in Lawrence Topeka, Kansas City and Eudora.

The students experience workshops once a month during the academic year and for six weeks during the summer on the KU campus. KU research facilities, local businesses and the great outdoors provide an extensive laboratory for learning and skill development. Students participate in hands-on laboratory experiences in a variety of subjects related to math and science. Tutoring, educational field trips, guest speakers, career exploration, computers and personal development are all important components in the program. Math and science faculty from the KU school of education assist in developing a rewarding curriculum that will motivate students and lead them to success in pursuing their goals.

The program could not exist without the cooperation and support of the various research departments on campus. This summer students will study the vitamin C content in potatoes and the water quality of Clinton Lake using resources and facilities provided by the Chemistry Department. Physics, geology, microbiology, computer science and health, physical education and recreation have also been enthusiastic partners in assisting the Math and Science Center in its first summer program. It is a great experience for these young people to see research in action, and to benefit from the valuable talent that we have here at KU.—Kathy Heppert



Incoming graduate class — Fall 1995

Left to right, front row: Xi Chu, Annie Lee, Vrushali Tembe, Tiffany Derrick, and Cynthia Schiebe. Left to right, middle row: Liang Zhang, Debra Pierson, Susan Nelson, Ann Lankford, Anne McCasland, Jess Sturgeon, Pankaj Desai, and Quansheng Qian. Left to right, back row: Stanislav Svojanovsky, Tim Hubin, Mark Mason, Kevin Ruff, Nalin Hathurusinghe, Christopher Hollars, Chad Talley, and Mark Schieferecke.

University-national laboratory cooperative research works!

R.J. Thorn, visiting professor, 1967, has recently published the book: *Chemical Equilibria Bases for Oxide and Organic Semiconductors* (John Wiley and Sons). The ideas contained in this book were first discussed in a seminar at the University of Kansas in 1993.

Superconductivity was discovered in 1911 and has been the subject of more than 14,000 published articles in the scientific literature since 1987 and of two Nobel prizes since 1957. Despite all this attention, quantitative rationalizations of its signatures have not been attained. This book written with a chemist's perspective rather than with a physicist's perspective, the basis of all previously published books, presents these rationalizations.

Over a period of many years, Paul Gilles (emeritus KU chemistry professor) and R.J. Thorn (Argonne National Laboratory) have engaged in cooperative programs in research that among other activities have involved the co-direction of the theses studies of R.J. Ackerman, K.D. Carlson, and E.D. Carter, and postdoctoral research by E.R. Plante. This program was cited by the Division of Educa-

tion Affairs of the AEC as an example of university-national laboratory cooperative research.

KASL lab to open soon for business

Tom Engler, chemistry professor, is the new director of the Kansas Advanced Synthesis Laboratory (KASL). KASL was established in Malott Hall this spring. KASL's purpose is the synthesis of molecules as a not-for-profit venture. "Our mission," Engler says, "is education and service."

The KASL concept includes three major objectives. KASL will provide complex molecules at cost to researchers who are unable to make the molecules in their own labs or who do not have the laboratory facilities or capabilities. This laboratory will also help researchers who may not have funds to purchase molecules from for-profit labs or who may wish to save the time that they would spend making these molecules.

This laboratory will provide a tutorial learning experience for graduate research assistants. "Many students do not have the opportunity to learn advanced techniques and methods for making complex molecules. At

KASL, they will have this opportunity and will produce a useful product," says Engler.



Dr. Thomas A. Engler

Another part of KASL's educational mission is the Chemistry Department's new summer laboratory course—CHEM 767 *Advanced Laboratory Techniques for the Preparation and Purification of Compounds*. This course will provide unique instruction in advanced techniques in synthetic chemistry to students from KU, Kansas State, and Wichita State University.

The third KASL mission is to provide special laboratory facilities for chemists in Kansas. Engler plans to "provide a laboratory that various researchers may need occasionally, but not routinely." The laboratory will provide a platform for these researchers to prepare, or have prepared, materials they need for experiments. Researchers will then be able to study these materials and use the information to design new experiments or materials.

Seed money from the National Science Foundation (NSF), the Kansas Technology Enterprise Corporation (KTEC), and KU was used to purchase laboratory equipment and chemicals and will supply stipends for graduate assistants. NSF contributed \$256K and KTEC contributed another \$200K. KU's contribution covers the salary of the director and a program assistant. "The long-term plan," says Engler, "is to generate enough business to recoup our costs and keep going." KASL has already delivered products to clients. "We have orders for over a dozen different molecules and have completed about half," says Engler.

The KASL project includes funds to establish a computer network that will enable researchers on three campuses to use the same state-of-the-art molecular design software and communicate with each other. "Col-

laboration," says Engler, "is the common theme in research today. To be competitive, Kansas' researchers need sophisticated and expensive instrumentation, access to new substances for study, and the facilities to prepare those substances. Our laboratory is designed to provide that infrastructure."

Shifts in public attitudes toward science will affect government funding for research

Joe Danek, the executive director of the EPSCoR Foundation, had a sobering message for those attending this year's statewide conference for the Experimental Program to Stimulate Competitive Research (EPSCoR): Americans, both the public and those in government, are changing their attitudes toward science and technology.

People once saw science and technology as a way to bolster the loss of confidence and trust people felt for government and international relations, said Danek. Defense, once the major focus of government research spending, now drives far fewer grant-supported projects. A national budget crisis, he said, makes many want to reduce or drop supported research.

"The public is not as willing to invest in science,"



Mike Wojcicki, KTEC; Barbara Pascke, Board of Regents; Kris Krishtalka, KU Natural History Museum director; Joe Danek, the EPSCoR Foundation director; and Ted Kuwana, K*STAR project director.

Danek told almost 100 participants at the third annual conference held in Topeka in February. "We are facing our limits." Many of those attending the conference *Linkages, Partnerships, and Strategic Technologies* teach and do research in the fields of science, engineering and math, once

strong areas for government research.

Most faculty at the conference have been or are involved in one of Kansas' many EPSCoR-related projects. These science, math and engineering projects incorporate EPSCoR-related projects because their research involves faculty at other Kansas universities or even faculty in the same or other departments at their own university and state and industry support KU Chemistry faculty.

Several EPSCoR-supported faculty are in KU's Department of Chemistry. These senior and junior researchers and their colleagues in chemistry-related areas have a significant stake in the EPSCoR program. These projects were funded through the K*STAR/NSF portion of the EPSCoR program, which is directed by Ted Kuwana.

For example, lead principal investigator (PI) Carey K. Johnson is working with Robert Bowman and biochemist Tom Squier on the Kansas Ultrafast Spectroscopy Program. The Kansas Institute for Theoretical and Computational Science is led by Shih-I Chu, and includes efforts from biochemist Krzysztof Kuczera. The institute's interdisciplinary nature has sparked a number of joint research proposals and has built a network of collaborators.

Daryle Busch is the lead PI for the Kansas Advanced Synthesis Laboratory, which is directed by Tom Engler. As a not-for-profit venture, KASL synthesizes molecules at cost for researchers. It also enhances graduate education while providing services to researchers statewide.

Several other projects include collaborative efforts with WSU and KSU. These projects promote and strengthen the collaborative research approach the NSF seeks to encourage. Shih-I Chu is the lead PI on a new three-university project, the Kansas Center for Advanced Scientific Computing that also includes faculty from physics and mathematics. George Wilson is the lead PI on the collaborative project Signal Transduction in Biology: Analytical Methodology, which includes KU's professor emeritus Ralph Adams and Cynthia Larive, and Sue Lunte and Teruna Siahaan from pharmaceutical chemistry.

Daryle Busch also is the lead PI on the Kansas Program for Molecular Design, Synthesis and Applications of Macromolecular Materials and Supramolecular Systems and the program on Design Function and Dynamics of

Supermolecular Materials. Chemistry faculty David Benson, Robert Bowman, Tom Engler, Joe Heppert, Kristin Bowman-James, and Richard Givens, and Jeff Aube and Gunda Georg from medicinal chemistry are working with Busch on one or both of these projects.

"The world isn't what it used to be," Danek reminded his audience. "Being a faculty member isn't what it used to be, even as recently as five years ago when the EPSCoR program started."

Danek said the strong EPSCoR system being built in Kansas will help faculty and industry stay competitive for federal research dollars. "I see good research capability during the next 10 years because of the strong education, research and technology components in Kansas' EPSCoR program."



Susan McAfee (in the white shirt) at Jack Rose's retirement reception last year. Rose is at the center of the front row, with Jack Landgrebe on the far right and Paul Gilles on the far left.

Kuwana notes that credit for the success of Kansas' EPSCoR program must be shared. "All of us in the EPSCoR program have tremendous gratitude for the support we have received from the state, its legislators and administration, the universities and from the Kansas Technology Enterprise Corporation, which has invested heavily in this program."

Susan McAfee named business manager

The Chemistry Department has been my home away from home since August 1978 when I started working in the business office. I have worked as a clerk typist,

storekeeper, office specialist and accounting specialist. In June 1995, I became the business manager after Jack Rose retired.



Cindy Larive's group pictured with the new NMR. From left to right: Shawn Mansfield, Dimuthu Jayawickrama, Sheila Rogers (Monsanto research fellowship recipient) and Dr. Laszlo Orfi.

I graduated from KU in December 1994, with a degree in organizational communication. It was great to walk down the hill in May. That walk was especially memorable because I was in line behind our new Chair, Kristin Bowman-James.

My husband Mike and I have been remodeling our house in Lawrence so we can place it on the market. We have purchased ten acres southeast of Lawrence and plan to build a new home.

My children have all moved away from home. The youngest one was three when I started working for the Department, he is now twenty-one. Mike and I have four grandchildren. One lives in Florida and the others in Kansas City.

I have learned a lot about the Chemistry Department and the University since I have been here. I'm especially grateful to Jack Rose who was always supportive of my work and allowed me to grow with each position I held. It is my intention to use my knowledge to keep the tradition of a strong Department alive into the next century.

I have two capable assistants in the Business Office—Rick Huettenmuller has worked for the Department for 2-1/2 years and Beth Knapik started work in August 1995. The next time you are in Lawrence, stop by the office for a visit.—Susan McAfee

Monsanto donates NMR spectrometer

Cindy Larive's research program benefited this year by the generous donation of a 360 MHz Bruker AM NMR spectrometer by the Monsanto Company. An NSF supplement and matching contribution by the University permitted Cindy to add pulsed field gradient capabilities to the instrument. The Larive group uses pulsed field gradient NMR experiments to measure diffusion coefficients which are related to molecular size. The NMR spectrometer will also be used by the Larive group to detect the aggregation of β -amyloid peptide analogs and in the measurement of metal ion complexation and aggregation of humic substances.

Third annual KAN-SYN workshop

The Third Annual KAN-SYN/EPSCoR Workshop was held in Lawrence on June 5-7, 1995. Over 70 attendees participated in the three-day workshop. Participants included members of the KAN-SYN group from Kansas State, KU and Wichita State along with several invited guests. The program included a symposium series by Professor Lou Allinger, invited lectures from three guest lecturers, and progress reports from the KAN-SYN research groups. Interspersed were two social events, a barbecue outing at Professor Kristin Bowman-James' residence and a dinner at Fifi's Banquet Connection.

The principal speaker, Professor Lou Allinger from the department of chemistry at the University of Georgia, presented a three-part symposium on molecular mechanics calculations. Allinger referred to *ab initio* calculations; this exact method for making molecular mechanics calculations provides us with a good and relatively cheaper tool for "telling us what we do not understand about chemistry." The first lecture, *Molecular Mechanics: Introduction, Methods and Objectives*, outlined his objectives which included calculating bond lengths to within 0.01Å, bond angles to within 1°, and conformational energies to within 0.3 kcal/mole. Also included was a discussion of the changes in the MM2 forcefield which led to the

improved program MM3. His second lecture, *Molecular Mechanics/Ab Initio Calculations/Experiment*, centered on comparison of *ab initio* and MM3 calculations with experiment. He concluded the series with a lecture on *Molecular Mechanics in Current Research*.



Daryle Busch, KAN-SYN program leader, visits with workshop guest lecturer Lou Allinger

Three KAN-SYN guest lecturers whose specialties were in applications of molecular mechanics calculations were: Rob Hancock of Texas A&M, who spoke on *Molecular Mechanics in Ligand Design*, Ben Hay of Batelle Northwest Laboratories, who discussed *Structural Requirements for Preorganization in Crown Ether Macrocycles*, and Susan Jackels of Wake Forest, a former postdoc of Daryle Busch. Her lectures was entitled *I. A Simple Molecular Mechanics Model for Predicting Structures of Oxo-Techneium(V) Complexes Related to Radiopharmaceuticals. II. A Molecular Mechanics Study of Helical Hexaazamacrocyclic Complexes*. Interspersed with these six lectures were the ten presentations of the individual KAN-SYN participants.

Plans for the next symposium to be held at Wichita State University, along with the plans for reconfiguring the program in preparation for the renewal proposal that must be submitted in the fall, were topics of the business luncheon on the second day. This year's conference concluded at noon on Thursday with the third presentation by Professor Allinger. Allinger parted with an outline of his group's goal which is to employ molecular mechanics calculations to gain understanding of the physical origins of our long-held notions of electronegativity, hyperconjugation, anomeric and Bohlmann effects.

Endowed lectures

The Chemistry Department presented three endowed lectures during the 1995-96 academic year. The first lecture, the ninth annual Ray Q. Brewster Lecture, was given by Kenneth J. Klabunde, university distinguished professor at Kansas State. His lecture on March 4, 1996, was entitled *Nanocrystals as stoichiometric chemical reagents with unique surface chemistry*.

On March 11, 1996, Professor Fred W. McLafferty of Cornell University gave the 31st annual Henry Werner Lecture. Dr. McLafferty's lecture was entitled *Tandem mass spectrometry of large molecules*.

Dr. Dudley R. Herschbach, Baird professor of science and Nobel laureate in chemistry at Harvard University gave the Arthur William Davidson Lecture on April 10, 1996. His lecture was entitled *Taming and trapping reactive molecules*.

Busch named Byrd Award Recipient

More than 40 past and present graduate students of Roy A. Roberts distinguished professor of chemistry, Daryle Busch, wrote letters in support of his successful nomination for this year's Louise Byrd Graduate Educator Award.

The Louise Byrd Graduate Educator Award was established in 1984 to honor the memory of Louise Byrd, long-time secretary of KU's Graduate School and of the Graduate Council. Byrd was noted for her deep concern for the welfare of graduate students and her willingness to go far beyond the bounds of necessity in assisting graduate students in the pursuit of their academic goals. In her memory, each year, a faculty member who evinces these qualities of concern for graduate students as scholars and individuals has been honored at the Hooding Ceremony.

Daryle's name and the names of past recipients are affixed to a plaque in the Memorial Student Union.

Focus on undergraduate education extends to faculty outside KU

The KU Chemistry Department has one of two NSF funded MACRO-ROA programs in the country. Our program, which is in its ninth year, supports summer research for college teachers from four-year colleges. The scope of our program *Summer Research Experience in Bio-analytical and Environmental Chemistry* was expanded in 1996 to include research projects in the environmental area in addition to bioanalytical chemistry. KU Faculty from the Department of Chemistry: Robert Carlson, Richard Givens, Marlin Harmony, Carey Johnson, Ted Kuwana, Cindy Larive, Craig Lunte, Richard Schowen and George Wilson; from the Center for Bioanalytical Research: Susan Lunte and Daniel Fisher, and from the Kansas Biological Survey: Don Huggins, have served as mentors in this



Front row, left to right: Demis O'Malley, Robert Zey, Ted Kuwana, Michael Barbush, Dilip Paul, Fred Walters, Steve Bernasek, Rhodora Snow, Cindy Larive, Ed Shearer. Back row, left to right: Rick Kelly, Paul Weber, Graham Ellis, Allan van Asselt, Stan Bernstein, George Wilson, Rick White, Allen Scism.

multidisciplinary program. Ted Kuwana serves as the PI and Cindy Larive as the Co-PI of the KU program.

For many faculty at undergraduate colleges and universities, limited access to a wide array of research instrumentation and heavy teaching loads are obstacles to the development of research programs involving undergraduates. For the undergraduate college faculty member, the KU MACRO-ROA program provides the reinforcement and stimulation experienced during their graduate training. The research problems selected by the KU faculty give the visiting faculty the opportunity to learn new research skills and are designed so that the research problem or some modification of it can be taken back to their home institution. KU mass spectrometry and NMR facilities are made available to the MACRO-ROA alumni on a need basis to support their undergraduate research efforts.

The summer of 1995 brought four new faculty to campus for 10 weeks of research and rejuvenation; Divina Miranda, Southern University of New Orleans; Glenn Petrie, Central Missouri State University; Betty Hill Stewart, Austin College; and Fred Walters, University of Southwestern Louisiana. This program also has a continuation phase which each year supports continued collaboration between three previous participants and their KU faculty mentor. In 1995, Rick Kelly, Merrimack College, Dilip Paul, Pittsburg State University and Paul Weber, Briar Cliff College participated in our continuation program.

Our program now has a total of 42 alumni, many of whom traveled back to KU during October for a re-

union. As in previous years, the highlight of this year's reunion was hearing from our alumni about their research programs and curriculum innovations. We were also stimulated by presentations by Dr. Elizabeth Kean, University of Nebraska, Lincoln on *Change from Below: Systemic Reform in K-12 Education* and Dr. Steve Bernasek, NSF and Princeton University, on *Funding Opportunities at the National Science Foundation*. We look forward to meeting five new MACRO-ROA faculty this summer and a continued research collaboration with five alumni of our program.

EPSCoR program concludes

EPSCoR program mentors chemistry professors George S. Wilson, Ralph N. Adams, and pharmacology and toxicology professor Elias K. Michaelis conducted a graduation ceremony of sorts on December 1, 1995, at an EPSCoR symposium entitled *Signal Transduction in Biology: Analytical Methodology*. The symposium was conducted in the new Simons Biosciences Research Laboratories auditorium on KU's west campus.

Wilson, who directed this program, said the idea behind the three-year effort was to make Kansas faculty more competitive for federal research funds in neuroscience. He reported that the program had successfully gathered neurobiologists and analytical chemists together to discuss issues in the field and brought half a million dollars in federal funds into the state of Kansas; thus in the words of the NSF, program members have "graduated."

Two outside speakers gave presentations at the December symposium. Kimon J. Angelides with the department of biological sciences at the University of Durham, United Kingdom, and R. Mark Wightman of the department of chemistry at the University of North Carolina—Chapel Hill. Program participants also gave presentations of their research.

Wilson said KU participants in the program included chemistry professors Cynthia Larive, Robert Dunn, and Craig Lunte, pharmaceutical chemistry professors Teruna Siahaan and Susan M. Lunte, and those who served as the program mentors. He noted that in

addition Ram Signal from the department of chemistry at Wichita State University and David A. Rintoul from the department of biological sciences at Kansas State University participated in the effort. The grant also helped support an additional staff member at KU's NMR Laboratory and purchase scientific equipment.

The class of 1996

This year the Chemistry Department graduated thirty-two undergraduate students—twenty-four received bachelor of arts degrees and eight received bachelor of science degrees, with several receiving recognition for their academic accomplishments. Three graduates completed the CLAS honors program and four graduated with distinction. This class included a Summerfield Scholar and Watkins-Berger Scholar.

41st honors reception

This year, the 41st Annual Awards Presentation and Honors Reception took place on May 4, 1996, at 3:00 p.m. at the Adams Alumni Center. This year there was a new reception format which allowed for more mingling of students, parents, friends, faculty and staff. Hors d'oeuvres were served and there was also a cash bar. Feedback on the new format was generally positive, so we will have a similar event next year.

We were extremely fortunate this year to have as Department alum Larry A. Haskin (Ph.D., 1960) as guest speaker. Haskin is currently Ralph E. Morrow distinguished university professor of earth and planetary sciences at the

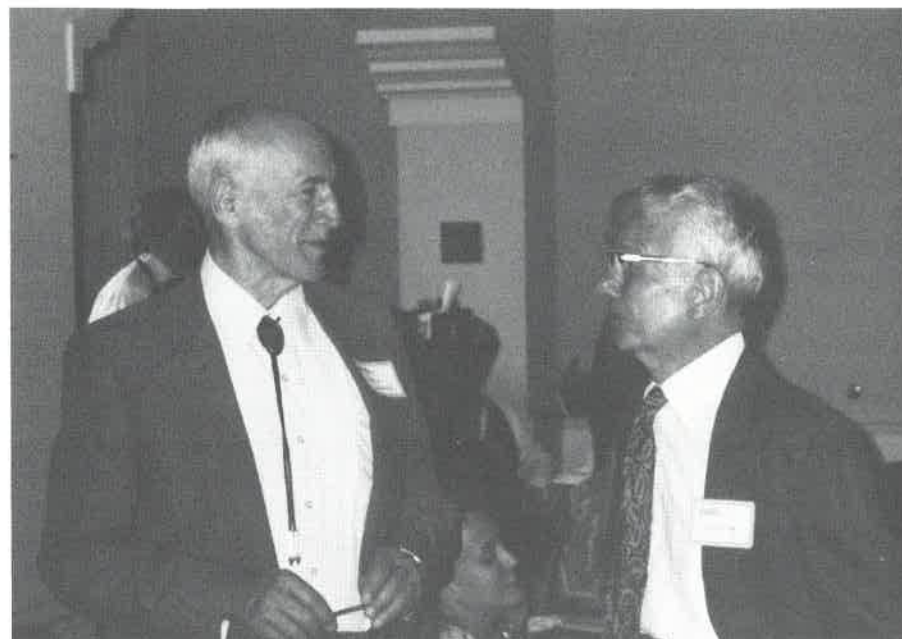


Kleinberg award recipient Joseph Robertson and Cindy Larive enjoyed this year's awards presentation ceremony.

University of Washington—St. Louis and was a student of this year's Nobel prize winner, Professor F. Sherwood Rowland. Professor Haskin's career shines with its own light, however. He enthralled the audience with a trip into the past with reminiscences of his time at KU, what it was like to be in Sherry's lab, and the development of his own interests and career after he left KU. While in Sherry's lab, Dr. Haskin became quite interested in rocks, beginning with our native limestone. This early interest eventually led to his being recognized internationally as one of the foremost authorities on extraterrestrial rocks, including the rocks from the moon gathered during the Apollo Mission.

His parting thoughts were especially directed toward all of the newly trained chemists in the audience: "Actually, I won the grandest prize of all through my training in chemistry. That prize is opportunity—opportunity to understand things in a special way, to get to know our environment, how our world works, and to use that knowledge in amazingly interesting ways. See if you can win that prize, too, and if you can, guard it well, and take full advantage of it!"

The list of this year's awardees and their accomplishments is quite impressive and begins on the following page.



Guest speaker Larry A. Haskin visits with emeritus chemistry professor Jake Kleinberg at this year's Honors Reception.

41st Chemistry Honors Reception

Honors to 1995-96 Students

Undergraduate Student Awards

The Mack Barlow Book Awards	
General Chemistry	Gene G. Holland, Brian D. Milligan, Mariel O. Uhunmwango, Alfred J. Casillan
Organic Chemistry	
One semester course	Sinae Pitts
Two semester course	Charles R. Green, William R. Shelton, Krista A. Engelmann, Brooke J. Pointer
Analytical Chemistry	Joseph W. Robertson
Physical Chemistry Award	Nicole M. Vasco
The Owen W. Maloney Scholarship	Kodjo Apedjinou
The Fassnacht Scholarship	Drew P. Manica
The Leonard V. Sorg Scholarships	Catherine L. Cronin, Brian D. Milligan
The Clark E. Bricker Scholarship	Charles R. Green
The Jacob Kleinberg Award	Joseph W. Robertson
Special Honors for Outstanding Achievement in Chemistry to Graduating Seniors	
pursuing a Career in Medicine	Daniel C. Ricke, Kathleen C. Stiles, Penelope C. Wright, Anne Marie Owens
American Institute of Chemists Award	Alayna M. Miller
Alpha Chi Sigma Awards	Steven A. Burns, Mark C. Stover
The Susan and Stephen Snyder Chemistry Award	Sweeyong Goh

Graduate Student Awards

The H.P. Cady Award	Xi Chu, Nalin Hathurusinghe, Tim Hubin
The Frank B. Dains Outstanding First-Year Teaching Assistant	Annie Lee
The Ray Q. Brewster Award	Shawn Mansfield, Kathy Prater
The Paul and Helen Gilles Award in Physical Science	D. Philip Colombo, Jr.
The Higuchi Doctoral Progress Award	Maria Buchalova
The J.K. Lee Award	Yan Wang
The Reynold Iwamoto Award	Karina Kwok, Wenying Chai
The Phillips/Argersinger/Lee Summer Research Fellowships	Dimuthu Jayawickrama, Erica J. Larson, Kathy Prater

Graduate Degrees Granted

June 1, 1995 – May 30, 1996

Doctorate

Diana Aga	Mentor: G.S. Wilson
Dissertation: <i>Analytical Applications of Immunoassays in Environmental and Agricultural Chemistry: Study of the Fate and Transport of Herbicides</i> . Diana is a postdoc with U.S. Geological Survey.	
Malonne Davies	Mentor: C.E. Lunte
Dissertation: <i>Microdialysis Sampling for In Vivo Hepatic Metabolism Studies</i> . Malonne is working for BAS-Kansas on KU's west campus.	
Kamal Egodage (honors)	Mentor: G.S. Wilson
Dissertation: <i>Designing Antibodies for Defined Epitopes: Immunoassays as Structural and Analytical Probes</i> . Kamal received the Argersinger Prize for Outstanding Doctoral Dissertation and is currently working with Val Stella, Center for Drug Delivery Research, KU Higuchi Biosciences Center.	
Gouri Jas (honors)	Mentor: C.K. Johnson
Dissertation: <i>Picosecond Time Resolved Fourier Transform Raman, Continuous Wave Fourier Transform Raman, and Excited Singlet State ab initio Normal Mode Analysis: Application to Aromatic Compounds and Chromophoric Proteins</i> . Gouri is a Kansas Heart Association Postdoctoral Fellow with Krzysztof Kuczera, Department of Biochemistry, KU.	
Jinyang Hong (honors)	Mentor: R.L. Schowen
Dissertation: <i>Regulation, Catalysis and Ligand Binding in Enzyme Action: Pyruvate Decarboxylase and Pepsin</i> . Jinyang is a postdoc with Christian Schoeneich, Pharmaceutical Chemistry, KU.	

Sarah Mounter

Mentor: C.K. Johnson

Dissertation: *Laser Spectroscopic Studies of the K Intermediate in Bacteriorhodopsin at Room Temperature and Low Temperature*. Sarah works at KU's Biochemical Research Services Laboratory.

Chan-Ho Park (honors)

Mentor: R.S. Givens

Dissertation: *The Synthesis and Photochemistry of Acetophenone Phototriggers for Nucleotides and Amino Acids*. Chan-Ho returned to Korea and is a new senior scientist at Hansol Institute of Science and Technology.

Sangryoul Park (honors)

Mentor: C.E. Lunte

Dissertation: *Electrochemical Detection for Capillary Electrophoresis*. Park will remain in the Department through the summer, while searching for a position in Korea.

Julie Stenken (honors)

Mentor: C.E. Lunte

Dissertation: *Identification and Modeling of Parameters that Influence Microdialysis Sampling in In Vitro and In Vivo*. Julie is a postdoc at the KU Medical Center, Kansas City.

Shaoxian Sun (honors)

Mentor: R.L. Schowen

Dissertation: *The Linkage of Catalysis and Regulation in the Action of Pyruvate Decarboxylases from Saccharomyces Cerevisiae from Zymomonas Mobilis*. Shaoxian is a postdoc with Michael Toney, Department of Biochemistry, Albert Einstein College of Medicine, Bronx, NY.

Jingyan Wang (honors)

Mentor: Shih-I Chu

Dissertation: *Theoretical Studies of Atomic and Molecular Processes in Intense and Superintense Laser Fields*.

Master of Science

Jeffrey Barnes (honors)

Mentor: R.S. Givens

Thesis: *Desyl and Its Derivatives as Photoprotecting Groups for Biologically Active Compounds*. Jeff received the CLAS Outstanding Master's Thesis Award.

V.L. Kolesnichenko

Mentor: J. Heppert

Thesis: *Synthesis, Structural, and Spectroscopic Characterization of New Tungsten(VI) Salicylate Complexes*. Vlad is now a technician with Dr. Lou Meserle at the University of Iowa—Iowa City.

Qifang Li

Mentor R.L. Schowen

Thesis: *Analogs of Actinomycin D Synthesis, DNA Binding and Water Solubility*. Qifang is working with Gary Grunewald, Medicinal Chemistry, KU.

Garegin A. Papoian (honors)

Mentor: K. Bowman-James

Thesis: *Theoretical and Experimental Investigation of Macrocycles as Receptors for Cations and Anions*. Garegin is pursuing a Ph.D. with Roald Hoffman, theoretical chemistry, Cornell University, New York.

Other Awards

Jeffrey Barnes (M.S.)

Maria Buchalova (Ph.D. candidate)

Kamal Egodage (Ph.D.)

Karina Kwok (Ph.D. candidate)

Drew P. Manica (senior)

Karen Martin (junior)

Sandra Rogers Barnes (graduate student)

Sheila Rogers (graduate student)

Misty Spann (freshman)

Steven Burns, Ryan Farrar, Andrew Wiksten, Alayna Miller, Kathleen Stiles

CLAS Graduate Division Outstanding Master's Thesis Award

DAAD (German Academic Exchange Service) Fellowship

Argersinger Prize for Outstanding Doctoral Dissertation

Kansas Health Foundation Fellowship

KU Undergraduate Research Award

KU Undergraduate Research Award

KU Black Faculty and Staff Council, Scholar

KU Black Faculty and Staff Council, Scholar

KU Black Faculty and Staff Council, Scholar

With Distinction

We're looking for missing CHEMHAWKS!!

When we recently updated our alumni database, we discovered that about 240 former chemistry graduates are lost! Please look over this list and see if you recognize anyone among the missing. If you have news about these former students: their addresses, name changes, employer name and address or death notices, please let us know. We'd love to retrieve them from the land of the lost!

1910-1919

Henry J. Broderson, MA '11
Lillian E. Fowler, MS '11
Harry A. Geauque, MS '15
I.W. Humphrey, MS '13
Merle M. Moore, MA '12

1920-1929

Thomas M. Beck, BA '28
Samuel C. Johnson, BS '22
Kathryn M. Wolfe, BA '24

1930-1939

Cecil Galloup, MS '33
James D. Ingle, PhD '38
Orland A. Krober, MA '38
Wesley D. Schroeder, PhD '41

1940-1949

Elizabeth F. Ammerman, BA '45
William G. Bowman, BA '49
John B. Campbell, BS '47
John B. Crews, BA '48
Erwin N. Hiebert, MA '43
Logan V. Miller, BS '49
Helen Fockler Patton, MS '49
Leo W. Patton, MA '49
Orvin L. Stevenson, BA '47
Edward E. Tillman, BS '47
Settimo Trapani, Jr., BA '49
Joseph O. Ward., BA '49
Alba Mazzitelli Watson, MS '49

1950-1959

Gordon J. Barlow, BA '59
Joseph W. Boyd III, BS '50
Walter E. Conrad, PhD '51
John R. Davis, BA '55
Paul Davis, MS '57
Zoe B. Gavrilis, MS '58
Joseph Green, MS '52
Derald R. Kahler, BS '51
Sally Le (Barta) Bocuf, BA '57
Edward E. McGill, BS '51
Burdon C. Musgrave, BA '57
Thomas E. Peters, BA '56
James A. Reeder, BS '50
Kenneth D. Riegel, BA '57
Eva H. Rother, BS '50
John P. Simion, BA '58
Roland R. Spiegelhalter, MA, '50
Robert A. West, BA, '50
Hong-Chien Yuan, PhD, '57

1960-1969

Mohamed Abdel-Rahman, PhD '62
Charles E. Aiman, PhD '62
Ronald G. Almquist, BS '69
Raymond P. Anderson, BS '61
Rodolfo Ardon, PhD '69
Christine L. Bailey, BA '67
Abe Berger, PhD '60
Henry F. Bisbee, BA '67
Frank Boone, Jr., BA '62

Gail L. Bower, BA '67
Gary A. Buehrer, BA '60
Robert J. Ceurvels, BA '62
Albert K. Chan, BS '69
Mo Wah Chan, BS '68
K.L. Chellappa, PhD '69
Brian J. Clark, BA '63
Virgil W. Cope, PhD '68
Yassin Ali A. Gaber, BA '68
Loren K. Gibbson, PhD '64
W.J. Gissendanner, Jr., BA '62
Marvin Jacobson Hankin, MS '68
George L.K. Hoh, PhD '61
Robert J. Irwin, BA '68
Dennis E. Jackman, BS '65
John R. Jeffrey, PhD '64
Peter F. Jones, BA '60
Joe Nei-Pang Kao, PhD '68
Leo Kim, PhD '67

Franklin H. Kittrell, BA '69
John P. Kuebrich, PhD '68
Sing-Yeung Lam, MS '67
William A. Lathan, BS '68
James A. Manning, PhD '64
Robert A. McDaniel, PhD '62
Loren R. Munson, MS '64
William E. Neeley, BA '63
Robert F. Nelson, PhD '67
Ghazi F.M. Moori, BA '67
Kathleen Odonnell, PhD '69
Verlyn M. Peterson, BA '67
Jared L. Piety, BA '61
Glenn E. Price, Jr., BS '69
William M. Riggs, PhD '67
Rhonda Riling, MS '70
David R. Slaby, MA '70
Leo K. Smith, BA '64
William Bowen Smith, BA '66
Robert E. Sticker, PhD '65
Josefina A. Tecson, MS '64
Glenn A. Tilghman, BA '69
Alexandros K. Tsohis, PhD '63
Larry S. Umphlet, BS '69
Kenneth R. Whitt, BS '66
Louis G. Wienecke, Jr., BA '63
Patricia S. Zogleman, BA '64

1970-1979

Charles L. Anderson, BA '72
Maria L. Baca, MS '73
Elisabeth J. Berger, BA '75
Arturo A. Berti, BA '73
Raymond D. Bishop, Jr., PhD '72
Michael T. Brady, MS '71
Marlon Castillo Belloso, BS '79
Kuang-Ling Chen, PhD '70
Wen-Chen C. Chen, MS '75
Ying-Tar Chen, PhD '70
Chao-Fu Cheng, PhD '76
Savitch Chivalak, MS '73
Harold G. Cohen, MS '73
Randall K. Cullen, BA '71
Francisco Damasio, MS '78
Juan Damasio, BA '75

Sonjia (Elzey) Davison, MS '70
Carlos A. Diaz, BA '75
Dennis A. Drake, PhD '71
Stephen J. Fleming, BA '76
Andrew M. Friede, BA '77
Scott D. Glazer, BA '74
George R. Gray, MS '79
Robert D. Hague, BA '70
Mohamed F.A. Hegazi, PhD '77
J. Roberts Helwig, PhD '79
Janet C. Kongs Hickman, BS '74
Steven H. Hoke, PhD '79
Breck A. Hooker, BS '77
Paul E. Hund, BA '71
Hossein Iranmanesh, MS '74
Meononi I. Ize-Iyamu, BA '71
Richard J. Jones, BS '71
Koomully M. Karunakaran, PhD '74
John P. Kelley, BA '73
William R. Kerr, BA '73
Alan G. Kerschen, BS '74
Richard M. King, PhD '72
Charles J. Laskowski, Jr., BS '75
Connie E. Leifer, BA '71
Kwan K. Leung, BA '74
Jar-Shyong Lin, PhD '70
Paul R. Lund, MS '73
Su Chuan Mah, MS '75
Wilbur S. Mardis, PhD '74

David C. McCartney, BS '72
William J. McKay, BS '70
Jaime O. Mejia, MS '72
Donald P. Miller, BA '72
Richard J. Moler, BA '75
William J. Moriconi, BGS '74
William R. Mussatto, MS '73
Nandkishor C. Naik, MS '71
Steven T. O'Neal, BA '70
Lorraine A. Ostermann, BS '74
Arnaldo A. Parra Cabrices, MS '73
Erich Rapp, MS '71
Vaughn Phillip Roper, BA '73
Lohn C. Russell, BA '77
Anthony P. Schmitt, PhD '70
Gary B. Scheier, MS '73
Pey C. Shen, MS '76
Yenshiang Shih, MS '76
Jose F. Sifontes, BA '73
Steven R. Smith, BA '75
Eileen Smits, MS '70
Sompong Sombati, BA '73
John R. Stephens, BS '72
Arlene W. Sternson, MS '72
Harold W. Stites III, BA '72
Donald R. Stuart, BS '73
Eun-Mo Sung, PhD '78
Robert W. Taylor, BA '71
Robert J. Thetewey, BA '71
Daniel C. Tse, BS '74
John T. Walsh, BA '70
Maw-Song Wang, PhD '73
Annie Elizabeth Williams, MS '72
Dale E. Williamson, PhD '74
Kit L. Wong, MS '78

Lawrence F. Wong, BS '73
Charles Wood, BA '75
Pablo G. Zuniga, MS '79

1980-1989

Ricardo E. Abisambra, BA '87
Abdolreza Ashyaa, BGS '81
Jong In Choe, PhD '82
Tushar G. Dixit, MS '86
San Tuong Do, BS '82
Herminia Gil, MS '88
Jay Gingrich, BS '83
Arnold R. Graham, Jr., BA '85
Nor Azowa Ibrahim, BS '84
Marco Jellinek, BA '85
Kinh-Phuc Thi Kieu, BS '87
John S. Lee, BA '89
Howard G. Mazaiwana, BS '87
Gregory A. Merritt, BA '87
Ismail Bin Mohamad, BS '85
Norehan Mohammed Nasir, BS '85
Lay Tin Ng, BA '89
Steven Setek Park, BS '89
Royal K. Power, PhD, '86
Stacey J. Schulman, BA '84
Roya Sheikholeslami, BS '80
Aquilaes Yibirin, BA '83
So Hun Young, MS '84

1990-1996

Cristian S. Campos, BS '95
Sok Kiat Cheng, BA '93
Imad Mohamed Hammoud, MS '90
Mijung Han, BA '93
Connie A. Heilman, BA '93
Geoffrey A. Holton, BA '95
Michael Johan, BS '91
Martin K. Johnson, BA '94
Yuu N. Lim, BS '95
Maria Cecilia L. Mamuric, BS '90
Tina M. Meadows, BS '92
Walter P. Robertson IV, BA '92
Charles L. Smith, BS '92
Rhonda K. Yantiss, BA '92

Alumni News

1930-1939

Irwin B. Douglas (Ph.D., 1932) writes, "Under separate cover I am sending a reprint of a paper - *Adventures in Organosulfur Chemistry* [*Sulfur Reports*, Vol. 17, pp. 129-155]. This is a summary of my work which began when I was one of Dr. F.B. Dains' students. The biographical description of my interest in organic sulfur compounds begins before I went to KU and continues over the years after I left there in 1932.

I look back on the years at KU as some of the most rewarding in my life. My best wishes go to those who continue the tradition of excellence."

Merritt E. Roberts (B.S., 1929; M.A., 1932; Ph.D., 1937) When I retired 22 years ago, I spent the first 10 years searching my genealogy and published a 540 page book on the subject, printing 300 volumes. All my work since retirement has been volunteer work; such as being a docent at the local Spanish mission, working at the museum and library, and teaching English. I think that Drs. Brewster and Downs were two of the best professors to ever "come down the pike". I hope KU continues to attract this quality.

1940-1949

James C. Mordy (A.B., 1946) is a lawyer/partner with Morrison & Hecker, Kansas City, Missouri. Jim was selected for initiation as a fellow of the American College of Bankruptcy. He was initiated at the annual meeting in Washington, D.C., on April 24.

1950-1959

Donald M. Coyne (B.S., 1951, Ph.D., 1955) I retired in 1993 after four years with Continental Oil, 23 years with Spencer Chemical/Gulf Oil, six years with Research Corporation/Technologies, and three years with Weyerhaeuser. My career began in R&D, but eventually I moved into the business side of R&D, specializing in new business development and technology transfer. It was an exciting career which included our living in Japan, and my working throughout Asia, Europe, and Scandinavia. During my years at KU, 1947-55, my wife, Margaret (B.A., 1953), and I made many friends in the Chemistry and Chemical Engineering Departments. We wish all of them well and would like to hear from them. We are now living in Denver where all three of our adult children and their families reside. Our address and telephone number are: 4872 W. Oxford Ave., Denver, Colorado, 80236; TEL: (303) 730-7526.

Richard M. Hammond (B.S., 1956, M.S., 1960) is corporate secretary/treasurer of Hutson Enterprises, Inc., Cape Girardeau, Missouri.

John L. Margrave (Ph.D., 1950) professor of chemistry at Rice University represented Rice at the inauguration of KU's new chancellor Robert Hemenway. While in Lawrence he presented a seminar on his recent work on

diamond and on dihydrogen coordination. This seminar on a Saturday morning attracted some 30 people! He also hosted the Midwest High Temperature and Solid State Chemistry Conference at Rice in 1995.

Kenneth L. Marsi (Ph.D., 1955) will step down as the chair of the Department of Chemistry and Biochemistry at California State University-Long Beach at the end of this summer. He will continue teaching part-time in a semiretired status. A reception honoring Ken's twenty-one years of service as the department head is planned for September 12 in the beautiful Earl Burns Miller Japanese Garden of the University.

Thomas A. Milne (Ph.D., 1954) has retired from Solar Energy Research Institute in Golden, Colorado. He was quoted in *Science* on morale at SERI.

Jack C. Smetzer (B.S., 1959) is retired and is currently living in Safety Harbor, Florida.

1960-1969

Corwin J. Bredeweg (Ph.D., 1963) After 31 years with Dow Chemical I retired at the end of October 1994. My last title as a researcher was research associate. I have no plans at this time to take another job. My wife and I plan to remain in Midland. We have two daughters who are married and both had babies in 1994.

Jimmie G. Edwards (Postdoc 1967) has assumed the chairmanship of the department of chemistry at the University of Toledo for the second time. He chairs the Gordon Research Conference on High Temperature Chemistry for 1996.

Larry J. Kevan (B.S., 1960) Cullen professor of chemistry, University of Houston. I am still busy with pulsed ESR work on catalytically important metal species in microporous materials as well as light energy storage in constrained environments. I taught honors freshman chemistry this past year for the first time in 17 years and really enjoyed the excellent students. I received the Marie Curie Medal for our research in April 1995. I am also still traveling a lot around the world, most recently to Kazan, Russia. I continue to enjoy sailboat racing in my 39 foot C & C with which we won the 1995 Texas Navy Cup and the 1995 Day Season trophy. My son Scott is in Los Angeles in cinephotography with a good chance of becoming the next Spielberg! Life goes on.

Robert D. Koob, (Ph.D., 1967) is the eighth president of the University of Northern Iowa, Cedar Falls. Koob's first faculty position after completing his degree at KU was at North Dakota State. He moved up the faculty and administrative ladder at North Dakota serving as the university's interim president during the 1987-88 school year while also academic affairs vice president. He moved to California Polytechnic State University in 1990. Koob and his wife of 35 years, Yvonne, have seven children and five grandchildren.

Orville G. Kolterman (B.A., 1969) is vice-president for medical affairs at Amylin Pharmaceuticals, Inc., San Diego, California.

Ralph H. Lee (Ph.D., 1964) is teaching at Oak Park River Forest High School in Oak Park, Illinois. His wife, Charlotte (Ph.D. 1959, biochemistry), is retired.

James M. Leitnaker (Ph.D., 1960) is president of Leitnaker Technical Associates and serves as a consultant at Oak Ridge National Laboratory three days a week.

C.R. (Gus) Manning (Ph.D., 1969) is president of Assay Technology, Inc., Palo Alto, California.

Ivory V. Nelson (Ph.D., with honors, 1963) was named president of Central Washington University in Ellensburg, Washington, in March 1992. Nelson's administrative career began at Southern University, Shreveport, Louisiana, when he served as chair of the Division of Natural Sciences. From 1968-83, Nelson continued to move up the administrative ladder at Prairie View A&M University, then served as executive assistant to the chancellor of the Texas A&M University System from 1983-86. Before his appointment to CWU, Nelson served as chancellor of the Alamo Community College District. CWU is a state-supported regional university with an enrollment of 8,000 students, offering baccalaureate and graduate degrees.

Julius Rebek, Jr. (B.A., 1966) obtained a Ph.D. degree from MIT in 1970. He served as a professor at the University of California-Los Angeles and later at the University of Pittsburgh before returning to MIT in 1989 to

serve as the Camille Dreyfus professor of chemistry. Rebek will join Scripps Research Institute in July as director of the Skaggs Institute for Chemical Biology. He was featured in a May 20, 1996, *Chemical and Engineering News Science/Technology* article entitled *Scripps Research Institute Thrives at Interface of Chemistry and Biology: Harnessing nature's trick of self-assembly leads to molecular cages*.

Karl E. Spear (Ph.D., 1967) is professor of ceramic science at Pennsylvania State University where he continues with diamond research. Karl has been elected chairman of the High Temperature Materials Division of the Electrochemical Society. He received an award from this society for his pioneering work in the coupling of experimentation and thermodynamic and kinetic modeling, which lead to fundamental advances in the utilization of chemical thermodynamic, phase equilibria, and kinetic principles as practical tools for predicting and understanding of high temperature behavior of dynamically reacting heterogeneous systems.

James A. Ruth (B.S., 1968) has been a faculty member at the University of Colorado School of Pharmacy, which has moved from the Boulder campus to the Health Sciences Center in Denver, since 1978. Ruth says, my undergraduate years as a chemistry major at KU remain the most stimulating and exciting time of my life.



This photograph was taken 30 years ago at the 11th Annual Honors Banquet, April 1966. From left to right: Jacob Kleinberg, Ray Q. Brewster, Arthur Davidson, Calvin Vanderwerf, and C.A. Reynolds.

Phillip G. Wahlbeck (Postdoc, 1960) continues at Wichita State and spends the summers at Los Alamos. He attended a meeting of the Materials Research Society in Boston.

Sven Westman (Postdoc, 1962) The undergraduate chemistry lab at Stockholm University moved to a new building last summer, which entailed a lot of work for Sven to get the freshman course underway. A new course text and concomitant reorganization of the teaching also required some effort, but it was rather fun, and the results made it worthwhile. Moving the lab also meant fresh money for equipment, so we now have a top-notch computer room for the students, with Sven busy preparing computer exercises. Singing is also important, so Sven joined the new university choir - which has now spawned a small chamber choir - and continues singing with the Arrhenius quartet and, of course, with Hacksta Kammarkor preparing for a concert tour to Poland in June.

Lauren R. Wilson (Ph.D., 1963) former vice chancellor for academic affairs and professor of chemistry at the University of North Carolina-Ashville, has been appointed to serve as the 16th president of Marietta College, Marietta, Ohio. A native Kansan, Wilson earned his undergraduate degree at Baker University and a Ph.D. degree in chemistry at KU. He joined the chemistry department at Ohio Wesleyan University in 1963 and served as a faculty member and administrator there for 24 years. Wilson also has been a visiting scientist at Oak Ridge National Laboratory, Tennessee.

1970-1979

Dale L. Boger (B.S., 1975) a Kansas native, received a Ph.D. degree in chemistry from Harvard University in 1980 and was a medicinal chemistry professor at KU and then at Purdue University before he joined Scripps in 1991. Boger was featured in a May 20, 1996, *Chemical and Engineering News* Science/Technology article entitled *Scripps Research Institute Thrives at Interface of Chemistry and Biology: Naturally occurring anticancer drugs synthesized from scratch*.

Michelle V. Buchanan (B.S., 1973) is currently a research group leader (Ph.D.) at Lockheed Martin Energy Research in Oak Ridge, Tennessee

Bruce R. Conard (Postdoc, 1972) was appointed vice president and health science advisor of Inco in August. This promotion is a significant departure for him, away from extractive metallurgical research and in charge of Inco's occupational health, environmental and health sciences, and of interfacing with governments around the world on issues related to regulations on metals and metal compounds. He has moved into the corporate office in Toronto, has gone back to university (Michigan and Minnesota) to take medical courses in epidemiology, toxicology, and biostatistics, and has increased his travelling to such places as Santiago (Chile), Brussels, Swansea (Wales), Washington, New York, Edmonton, Salt Lake, Kansas City,

Halifax, Montreal, Ottawa and Sudbury. It's good he likes to learn new things!!

Margaret A. Flanagan (B.S., with honors, 1977; Ph.D. Indiana University, 1983) I left Marion Merrell Dow (Cincinnati) in spring 1994 for a new position in the Proprietary Program at Oncogene Science, Cambridge, Massachusetts. It is a challenging position with quite a bit of travel to our Uniondale, New York, headquarters. My son, Eric Deutsch, likes East Coast life, as does my husband, Brad Fanger. Brad worked for Oncogene as well, but now works for Calbiochem, also in Cambridge. All my best to old friends in the department! mflanagn@oncogene.com

Richard D. Gandour (Postdoc 1973-75) continues as head of the Department of Chemistry at Virginia Polytechnic Institute and State University. His research group continues to make new enzyme inhibitors and microbicides.

Stephen C. Glover (B.S., 1972) is a dentist in Hays, Kansas.

Charles M. Groginsky (Ph.D., 1970) joined AlloSource in Denver, Colorado, in June 1995 as director of technical services, overseeing R&D and processing of bone and tissue from human donors obtained and distributed in the Western two-thirds of the U.S.

Peter J. Hampson (Postdoc, 1970) continues at a small manufacturing and research establishment, Ion Science Ltd., Cambridge, England, which provides to the metallurgical industry solid state electrode sensors formed from beta-alumina for the measurement of component activities in liquid metals.

Clement J. Hanson (B.A., 1972, D.O., 1976; MPH, Johns Hopkins, 1984) is a colonel in the Medical Corps and is chief of the Department of Preventive and Community Medicine at Fitzsimons Army Medical Center, Aurora, Colorado.

Jon K. Jones (B.A., 1978; M.D., UKSM-W, 1983) Full-time emergency physician at Wesley Medical Center, Wichita, Kansas. My family and I have moved back to Wichita from Kansas City and Phoenix. It seems there is a lot of truth to the saying "...there is no place like home." I am board certified in both emergency medicine and internal medicine and became a fellow in the American College of Emergency Physicians in September 1994. Our four children: Kevin 14, Katy 11, Kegan 9, and Kristian 6, are in good health. Kevin is taking flying lessons; both powered and glider here in Wichita and can solo in a glider when he completes his lessons.

Carolyn J. Kubik (B.A., 1973) is director of the division of reproductive endocrinology at the University of Pittsburgh and associate professor of OB-GYN and medical director of the IVF program. Kubik and her husband Steele Filipek, a Princeton graduate, have two children, Tyler, 11 and Zach, 9.

Richard L. McCreery (Ph.D., 1974) Rick continues as professor of chemistry at Ohio State, where he has been since leaving Kansas. Jane writes software for UES, Inc., mainly oriented toward engineering and business man-

agement. Ian (15), Anna (13), and Helen (11) constantly require transportation to various activities, notable competitive sailing (yes, even in Ohio), drama camp, etc. A much younger family spent a sabbatical in 1981 in Southampton, England, associated with the "famous" Martin Fleischman long before cold fusion. Rick's research area is not as spectacular but hopefully more accurate, and emphasizes structure and reactivity relationships at elec-

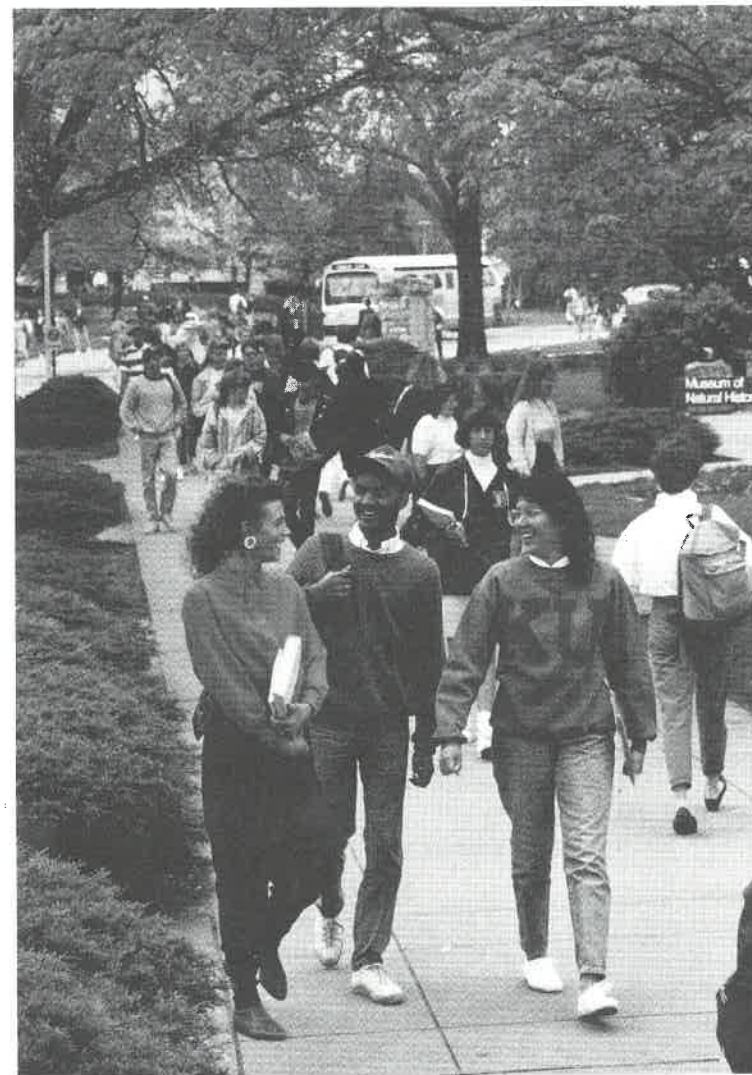


Photo courtesy University Relations

Remember strolling to class along Jayhawk Boulevard?

trode surfaces. A big effort at present is in Raman spectroscopy, mostly of carbon surfaces but also of a variety of "real world" samples (corn starch, biopsy specimens, Cheerios, silicon wafers, vitamin tablets, olive oil, pharmaceuticals, all sorts of strange things.) In Adams' lab, I thought rats were bad enough! The point of all this is the possibility that Raman may be useful as a quick, noninvasive analytical probe. Not as crazy as it sounds. Besides, it's fun!

Paul N. Nordine (Ph.D., 1970) is president of Containerless Processing, Inc., Evanston, Illinois.

George B. Park (Ph.D., 1973) is a technical sales representative with CYTEC Industries, Charlotte, North Carolina.

Donald R. Rademacher (Ph.D., 1973, M.D. U. of Illinois, Chicago) is chief of staff at North Colorado Medical Center, Greeley, and continues his practice of nephrology.

Mark G. Steinmetz (B.S., 1972) was promoted to the rank of full professor at Marquette University, Milwaukee, Wisconsin, effective in August 1996.

Richard L.C. Wu (Ph.D., 1971) and his wife Spring C.C. Wu own K Systems Corporation, Beavercreek, Ohio. They specialize in computer engineering services and engineering and scientific services.

1980-1989

Francis V. Acholla (Ph.D., 1986) is a senior research chemist with Mobil Research and Development Corporation in Princeton, New Jersey. Acholla reports that his wife, Renilde (also a KU graduate with M.A. degrees in education and French) now works as the director of religious education at Our Lady of Hope Parish in Philadelphia. He has three children: Desiree Atieno (12), Rosemary Anyango (11) and Christina Kaze (6). About our June 1995 memorial of Clark Bricker Acholla wrote: "I am one of the many individuals whose lives have been touched and changed by the generosity of Brick. I met Brick in 1981 in Nairobi, Kenya, and we became great friends. Through his inspiration and influence, I came to KU in 1981 and graduated in 1986."

Andy Bennett (Postdoc) is an assistant professor at Simon Fraser University in Vancouver, British Columbia.

Julia (Buechel) Marino (B.A., 1981) I spent ten years with Chemical Abstracts Service, first analyzing chemical literature for structure information for the REGISTRY file and then traveling as an STN trainer, teaching on-line searching. Currently, I support pharmaceutical researchers at Procter and Gamble as an information specialist. My husband and I have recently been blessed with a happy baby boy.

Janet M. Campion (B.S., 1987, M.D., 1994) is a resident in internal medicine at the Kansas University Medical Center and reports that she is working hard and enjoying her residency!

Kent S. Gates (B.S., 1985) is a professor of chemistry and biochemistry at the University of Missouri—Columbia. Kent's work in DNA cleavage chemistry was featured in the February 26, 1996, issue of *C&E News*.

Dama Gopal (Ph.D., 1985), is an associate re-

search fellow at Rhone-Poulenc Rorer in Collegeville, Pennsylvania.

Sandra L. Mecklenberg (B.S., 1985) continues her work as a director's fellow with Dr. Robert Donohoe at the Los Alamos Laboratories, Los Alamos New Mexico.

Drew V. Speer (B.S., 1984) is a senior research chemist in the organic and polymer research department of W.R. Grace & Co.-Conn in Washington, Maryland. His son, Joshua Maxwell Speer, was born February 4, 1995.

Amy Simpson Tait (B.A., 1980; M.D., 1986) I'm a pediatrician with Holtkrock Clinic in Fort Smith, Arkansas, and my husband, Layne, is an anesthesiologist. We have three children, Justin (1-10-89), Heather (10-27-90), and Warren (5-7-95).

1990-present

Phillip Athey (Ph.D., 1990) received the Dow Gulf Coast Scientist Award for his synthetic work on cyclen (1,4,7,10-Tetraazacyclo-dodecane), a key building block in the MRI contrast agents. This award is given to five recipients a year for work that the Dow scientists feel is novel, innovative and hopefully valuable research.

Whitney S. Baker (B.A., 1994) I will be starting a graduate program in the fall in the conservation of library and archives materials at the University of Texas at Austin School of Library and Information Science. This is a three-year program: one year in book conservation, one in paper conservation and a two semester internship elsewhere.

Timothy J. Boyle (Ph.D., 1990) was married in December. He is still with Sandia National Laboratories.

Malonne Davies (Ph.D., 1995) became the technical director at Bioanalytical Systems-Kansas (BAS) in September.

Binodh DeSilva (Ph.D., 1994) accepted a position with Procter and Gamble. She began work at the Company's Norwich, New York, location in late September.

Nancy Eilerts (Ph.D., 1990) is currently working at Phillips Petroleum in their poly(ethylene) catalysis group.

Deepani Gunsekara (M.S., 1994) reports that she is doing well at Simon Fraser University, Vancouver, British Columbia. This semester, she has finished all of her course work, completed her oral comprehensive exam, was awarded a Graduate Research Fellowship, and is making good progress on her Ph.D. research project.

Youhong Huang (Ph.D., 1992) has been offered a permanent position in the Department of Chemistry, Iowa State University, and the Ames National Laboratory, as an Associate Scientist. He moved to Iowa State in December.

Glen F. Kessinger (Ph.D., 1990) is a discussion leader at the Gordon Research Conference on High Temperature Chemistry. He is employed at Westinghouse Idaho Nuclear Co., Idaho Falls, Idaho, where he works on procedures for radioactive cleanup.

Billy Y.H. Lai (B.S., 1994) is laboratory supervisor in the Quality Control Laboratory at LeaRonol in Hong Kong.

Kenneth O. Lynch, Jr. (Ph.D., 1994) reports that he and Laurie are on the road again! In late April, Ken accepted a tenure track position at Stephens College in Columbia, Missouri, which is located about two blocks from the University of Missouri where he will have access to large instrumentation and library facilities. Ken will complete the summer sessions at Sam Houston State University in Huntsville, Texas, then report for work in Columbia in mid-August.

Luis A. Morales (Ph.D., 1994) has moved from a postdoctoral position to a staff position at Los Alamos National Laboratory. He works on the properties of the higher oxides of plutonium.

Chan-Ho Park (Ph.D., 1995) returned to Korea after graduation and is working at the Hansol Institute of Science & Technology.

Mary Elizabeth "Beth" Thomas-Miller (Ph.D., 1992) works at Mallinkrodt Medical where she received a promotion this past year. She is currently working on radio and sonopharmaceutical imaging agents.

Harold C. (Chris) Riddle (B.S., 1995) was hired last fall as a drug chemist in the KBI's Forensic Laboratory and was recently transferred to the Regional Laboratory in Great Bend. Chris was recently commended by the KBI for his outstanding work.

Jessie Mei-Tak Tse (B.S., 1994) has moved to Australia for employment and graduate school opportunities.

Mark Williamson (Ph.D., 1990) has travelled to Paris and Washington for presentations on his work at Los Alamos on transmutation of superheavy elements and new reactor designs.

Memorials

Lloyd M. Woerner (Ph.D., 1966), Lloyd worked as a consultant in chemistry, waste water management, and in education. He taught business and accounting courses for several community colleges. Lloyd was the secretary-treasurer for the Dana Point, California, Sanitary District where he had been a director since 1980. Woerner died July 13, 1995.

Marvel Griswold, died January 27, 1996, in Lincoln, Nebraska. She was born January 2, 1909, near Nickerson and married Chester E. "Ernest" Griswold in 1931 in Fort Scott. Marvel was a homemaker. Ernest Griswold received his Ph.D. in 1934 under the direction of Arthur Davidson, joining the KU Chemistry faculty in 1947. Ernest died May 16, 1992. Marvel and Ernest are survived by three daughters, three sons, 11 grandchildren and seven great-grandchildren. The Marvel and Ernest Griswold Fund was established at the KU Endowment Association by their children, to honor their memory.

Aaron Feldstein (Ph.D., 1952), died on March 17, 1996.

KEEP IN TOUCH!



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