



NEWSLETTER

VOLUME XXX

ASSOCIATION OF INDIANA UNIVERSITY CHEMISTS

MARCH 1985

NEW DEPARTMENT INSTRUMENTS AND SERVICES

The chemistry department has acquired a new computer system with a list price of \$1.5 million. The heart of the system is a VAX 11/780 computer with 8 megabytes of memory, 1.2 gigabytes of disk storage, and numerous terminals and communication links. In addition there is an FP 164 attached processor which is 15 times faster than the VAX, with 8 megabytes of memory and another 1.2 gigabytes of disk storage to be used for "number crunching" computational chemistry applications. There will also be an Evans and Sutherland graphics terminal attached to the VAX for use in molecular modeling. A Talaris laser printer with sophisticated word processing software will also be available through the VAX for scientific manuscript preparation. This computer will reside next to the offices which have

been remodeled for theoretical chemistry. Funding for the new computer system came from NSF and NIH grants and from Indiana University. Substantial discounts were received from DEC.

The department has recently acquired a Varian XL-300 superconducting NMR spectrometer. This instrument is capable of performing such state-of-the-art NMR experiments as two-dimensional scans on molecules containing ^1H and ^{13}C nuclei. The instrument is valued at \$250,000 and was obtained with the help of grants from NIH and Indiana University.

Over 120 people in the department of chemistry received training on the STN International search system for the CAS Online files in 1984. Chemical Abstracts Service's Academic Program allowed unlimited searching of both the bibliographic

and the structure files of *Chemical Abstracts* during certain hours for an annual fee of \$6,000. The fee was paid from the Chemistry Library book budget. Gary Wiggins, head of the Chemistry Library and director of the Chemical Information Center, was assisted in the training effort by JoAnn Keys, assistant head of the Chemistry Library, and Ann Razgunas, CIC graduate assistant. In order to assess the enthusiasm with which the end-users searched the system, one need only check the usage data for the period July-December 1984. Over 280 hours of computer connect time were used, which at the normal rates would have cost \$37,370! Much of that searching was done on Chemistry Library equipment purchased largely with funds donated by Dr. Marvin Carmack and his wife Joan.

DAVIS RESEARCH FELLOWSHIPS & DAY UNDERGRADUATE SCHOLARSHIPS



Chester Davis

chemistry at Indiana University. The Day Scholars are selected by the faculty of the Department of Chemistry at Indiana University-Bloomington on the basis of perceived special promise and merit in chemistry.

The Chester Davis Research Fellowships are to be awarded annually by the faculty of the Department of Chemistry of Indiana University-Bloomington to individuals under the age of thirty-five who show exceptional promise for original research and who have demonstrated accomplishment in industrial or academic research in the field of organic, inorganic, or biological chemistry. Awards are for one year, are nonrenewable, and include a stipend and an allowance for incidental research expenditures. The Fellows are required to be in residence in the Department of Chemistry at Indiana University-Bloomington during the period of the award, to conduct research of their own

choosing, and to participate in the scientific and intellectual life of the department.

After receiving his BS degree at IU, Chester Davis received a master's degree in chemistry from the University of Wisconsin, did graduate work at UCLA, joined the National Cash Register Company of Dayton, Ohio and later the research staff of the Charles F. Kettering Foundation also in Dayton. During this time Davis became interested in dye and pigment chemistry and its applications to printing. He continued to do research in this area at Indiana University and at the Colorado School of Mines before returning to his permanent home in the Cincinnati area. He is actively engaged in research in the solutions to problems in theoretical chemistry. The department is grateful to Davis not only for his generous gift but also for agreeing (after much arm-twisting!) to allow us to name the research fellowship after him.

The chemistry department is pleased to announce the establishment of two major award programs made possible by a generous gift from Chester Davis (BS'44). The Harry G. Day Undergraduate Scholarships in Chemistry recognize the contributions made over a long and distinguished career by Professor Harry G. Day to many generations of students of

LETTER FROM THE CHAIRMAN

The most exciting thing that has happened to the department since my last letter is the establishment of the Chester Davis Research Fellowships and the Harry G. Day Undergraduate Scholarships described in a separate article in this newsletter. We are also very fortunate in having received a special grant in support of research from Mrs. Violet West in memory of H. A. Doyal (PhD '31).

We received notice in December that the NIH had approved our application for a Shared Instrumentation Grant for the purchase of an Evans and Sutherland PS 340 graphics terminal for our computing center. The extensive remodeling of the west end of the second floor of the chemistry building has run behind schedule, but nevertheless is now nearing completion. The VAX 11/780 has been installed, and the installation of the FPS 164 is scheduled to begin in mid-February, which should also see our theoretical chemists begin their move into the new quarters. Formal opening of these facilities is scheduled for March 8 and 9 and will probably have occurred by the time you read this. We have planned a symposium on Computational Chemistry for Friday afternoon and a ceremony presided over by President Ryan for Saturday morning.

The department has recently received new graduate fellowship grants from Berlex Laboratories, Inc., General Electric, and Monsanto. We are pleased to have this fellowship support to add to similar graduate fellowship grants previously received from Lubrizol, Procter and Gamble, and Union Carbide.

Unrestricted corporate grants to the department are also extremely valuable to us, and we are pleased to have such grants from International Minerals and Chemical Corporation, Monsanto, Dow Chemical, and, beginning this year, from General Electric as a supplement to the GE graduate fellowship. We are also very fortunate to have a continuing grant from Du Pont used to support our Distinguished Lecture series.

Some remodeling and relocation has also been going on in our attempts to make the best use of our facilities. Professor Dennis Peters has moved from the first to the fourth floor of the chemistry annex so that his and Professor Wightman's groups, who both do electroanalytical chemistry, can more efficiently share resources. Some remodeling has occurred on the sixth floor to accommodate Professor Allerhand's research group better and on the first floor for Professor Hieftje's group.

The Indiana General Assembly is currently in session and should shortly consider our request for funds for the first phase of our chemistry addition and remodeling project. This will be the third session to consider the project. The present situation is much more favorable because in each of the last two sessions one capital project ahead of us was funded, and we are now at the top of the University's priority list for new construction and at the top of the projects recommended by the Indiana Higher Education Commission. The financial situation of the state is much improved over the last two years, and Governor Orr has stressed the importance of improved funding for higher education. Nevertheless our project is a big one, and we need all the help we can get in promoting it with the General Assembly. If it is not funded this year we will be hard put to maintain our progress; we do not have adequate space to attract top quality faculty to fill all of our existing vacancies or to carry out proper student laboratory instruction.

As a final note we are pleased that Professor Gary Hieftje has received the 1985 ACS award in instrumentation and has begun service as chair-elect of the Analytical Division of the ACS. This is an award he richly deserves and follows the Lester Strock, William F. Meggers, and Anachem awards which he just received last year.

V.J. Shiner, Jr.
Professor and Chairman

FACULTY NEWS

(Lynne L. Merritt, Jr., Elizabeth M. Greene)

Ken Busch is involved in several areas of mass spectrometry research including tandem mass spectrometry (MS/MS) and derivation reactions in fast atom bombardment (FAB). An imaging secondary ion mass spectrometer is under construction, which provides spectra of materials separated in thin layer and paper chromatograms. He attended the ACS meeting in Philadelphia and the MUACC conference at the University of Wisconsin. At the ASMS meeting in San Antonio, he presented several papers and organized a workshop on hybrid mass spectrometers. He was an invited speaker again at the annual MS/MS short course held at Purdue. Busch plans to attend the Pittsburgh Conference in New Orleans and the FDA Analytical Symposium in Dallas in April 1985.

Victor Viola was the conference organizer and proceedings editor of the Workshop on Nuclear Dynamics, III, Copper Mountain, CO, March 1984. He was an invited speaker at the Gordon Research Conference on Nuclear Chemistry and will be the vice-chair of that conference in 1985. His topic was "Linear Momentum Transfer in Nucleus Collisions." Viola was also an invited speaker at two symposia at the International Chemical Congress of Pacific Basin Societies, the symposia on Frontiers in Nuclear Chemistry and on Cosmochemistry and Meteorites. He also served on the program advisory committee meeting for the Los Alamos Meson Production Facility and the advisory committee for the National Superconducting Cyclotron Laboratory at Michigan State University.

Gary Wiggins has nearly completed the requirements for the PhD in Library and Information Science. The thesis defense date was February 22, 1985. He is now the editor of the Special Libraries Association Chemistry Division Newsletter. At the St. Louis ACS meeting, Wiggins arranged and chaired the Division of Chemical Information (CINF) "Symposium on Electronic Information Delivery." At the Philadelphia ACS meeting, he delivered a paper entitled "Online Searching Instruction for End-Users at Indiana University." Wiggins finished the second year of service on CINF's Program Committee and was appointed to the CINF Education Committee. Along with two of his students, Linda Heideman and Ann Razgunas, he compiled *Chemical Literature Guides and Aids: Bibliography and Index* distributed by ACS to anyone who is teaching a chemical literature course. He continues to edit the *Current Awareness Profile on Chemical Information*, one of seven such profiles marketed by the Chemical Information Center.

FAILURE TO RECEIVE NEWSLETTERS

In spite of our best efforts some alumni and others fail to receive their Newsletters. The best way to assure delivery is to belong to the **Indiana University Alumni Association**.

For efficiency and economy we use the Association's address printouts of chemistry alumni. Persons whom we know are not alumni members are added to the supplementary mailing list. Readers who know of others interested but not receiving

the Newsletter should give us the correct mailing address.

A single dues payment confers dual membership in the **IU Alumni Association** and the **College of Arts and Sciences-Graduate School Alumni Association**.
Single Annual-\$20 Family Annual-\$26
Single Life-\$250 Family Life-\$350
Make checks payable to IU Alumni Association, IMU M-17, Bloomington, Indiana 47405.

ERNEST R. DAVIDSON JOINS FACULTY



Ernest Davidson

The Department of Chemistry is fortunate to have as a new professor one of its distinguished graduates, Dr. Ernest R. Davidson. Born in Terre Haute, Indiana in 1936, Davidson attended Rose-Hulman Institute of Technology on a Union Carbide scholarship and graduated summa cum laude in 1958 with a BS degree in chemical engineering. He then entered graduate school at Indiana University and received his PhD in 1961 in chemistry with a minor in mathematics under the supervision of Professor Harrison Shull. While here he held a National Science Foundation Predoctoral Fellowship. He then spent one year as a National Science Foundation Postdoctoral Fellow in the Theoretical Chemistry Institute at the University of Wisconsin under Professor Joseph Hirshfelder. In 1962 he joined the faculty of the University of Washington

as an assistant professor. He was promoted to associate professor in 1965, professor in 1968, and professor of applied mathematics in 1975. In 1984 he returned to Indiana University as professor of chemistry.

Davidson was associate editor for the *Journal of Chemical Physics* (1976-79) and of the *Journal of the American Chemical Society* (1978-83). He is on the editorial boards of the *Journal of Computational Physics*, the *International Journal of Quantum Chemistry*, *Chemical Reviews*, *Theoretica Chimica Acta*, and the *Journal of Physical Chemistry*. He presently is a consultant for Lawrence Livermore Laboratory and for Los Alamos Scientific Laboratory. He has been a Sloan Fellow (1967-69), a Guggenheim Fellow (1974), a Distinguished Visiting Professor at Ohio State University (1974), Laureate of the International Academy of Molecular Quantum Science (1971), chair of the American Conference on Theoretical Chemistry at Boulder, Colorado (1978), chair of the Physical Chemistry Division of the ACS (1983), and Visiting Professor at the Institute for Molecular Science in Okazaki, Japan (1984). He is a member of the American Chemical Society, a fellow of the American Physical Society, and a member of the International Academy of Molecular Quantum Science.

The major themes of Professor Davidson's research have been properties of reduced density matrices including charge and spin distribution in a molecule; improved methodology for quantum chemical calculations; theoretical electronic spectroscopy of small molecules; excited states of biomolecules; and potential surfaces of diradicals.

R. Mark Wightman was on sabbatical leave in London, England from January until July 1984. He spent this time working in the laboratories of Michael Armstrong-James and Julian Millar at the University of London Hospital Medical College. They have an on-going active collaboration in the use of *in vivo* measurements of neurotransmitters.

David R. Williams has been much sought after as an invited lecturer at many universities and industries here and in England. This past year he lectured at the Pennsylvania State University, the University of Chicago, and the University of Bath, England and at Pfizer, Sandwich, England, Revlon, Eli Lilly, and Procter and Gamble in the US. Williams also participated in the fifth International Conference of Organic Synthesis in Freiburg, Germany.

Gary Hieftje will soon have to add a trophy room to his home to house the

ever-increasing awards and recognition coming to him as a result of his brilliant work in analytical chemistry. In late 1983 he was the recipient of an IR-100 award, meant to recognize one of the 100 most significant scientific inventions of the year. In 1984 he received three separate awards at the Federation of Analytical Chemistry and Spectroscopy Societies meeting in Philadelphia. One was the Lester Strock medal, intended to recognize the "most significant publication in spectrochemical analysis over a five-year period." Another was the William F. Meggers Award presented to the authors of the paper judged to be the best over the one-year period in *Applied Spectroscopy*. The third was the Anachem Award for "distinguished service in analytical chemistry." Recently Hieftje was elected chair-elect of the Division of Analytical Chemistry of the ACS. Other noteworthy activities included chairing the Review Committee for the Chemistry Division at

the Los Alamos National Laboratory, chairing the Visiting Committee for the chemistry department at the University of Georgia, heading the committee for honorary membership of the Society for Applied Spectroscopy, and serving on the editorial board of six journals. He and his group also presented a host of papers and talks during the past year.

Peter Langhoff was co-organizer of the NATO/NSF Advanced Study Institute on Molecular Astrophysics at Bad Windsheim, West Germany in July 1984. His travels continue to include visits to the University of Paris and the Max Planck Institute for Astrophysics, Munich, in connection with cooperative research programs. In November he was invited to lecture at the Latin American School on Theoretical Chemistry in Caracas, Venezuela. Two of Langhoff's students, Mark Hermann and Ken Greenwald, have taken positions as a postdoctoral student at Berkeley and in industry, respectively.

Ernest Campaigne was "Speaker of the Year" for the Indiana Academy of Science. During the tenure of this appointment he gave talks at IU-Southeast (New Albany), Indiana State University, Sigma Xi at Bloomington, Vincennes University, and Hanover College. He is president-elect of the Indiana Academy of Science and will serve as president in 1986. As president-elect he is cochair of the Annual Meeting of the Academy to be held on the Bloomington campus, November 14-16, 1985.

Kenneth G. Caulton continues to interest his research group in the basic chemistry and uses of hydride/transition metal complexes. He lectured on this work at an NSF-sponsored US/Venezuela Workshop on Organometallic Chemistry in Caracas in March 1984. Part of his 1984 sabbatical leave was spent at the Institute for Petroleum Chemistry at the Technical University in Aachen, West Germany. Besides providing a better understanding of contemporary German graduate training in chemistry, the Aachen location was convenient for consulting with one of his students who was engaged in a collaborative research project on organovanadium chemistry in Groningen, Netherlands. Caulton also lectured at universities in Wurzburg, Munich, Zurich, and Wroclaw.

Malcolm Chisholm continued his duties as American editor for *Polyhedron* and was appointed to the editorial boards of *Inorganica Chimica Acta* and *Inorganic Chemistry*. He also gave over twenty-four invited lectures at universities, industrial laboratories, and national meetings in the United Kingdom, Germany, and the US.

Joseph Gajewski was elected secretary-treasurer-national meeting program chair of the Division of Organic Chemistry, American Chemical Society for the period 1985-89. He is also a co-organizer of the twenty-first Reactions Mechanisms Conference to be held in June 1986, and served

as the chair of the 1984 Gordon Research Conference on Physical Organic Chemistry.

Philip D. Magnus is in active demand as an invited speaker at colloquia and seminars due to his outstanding work in the synthesis of organic pharmaceutical compounds. In 1984, for instance, he gave invited or plenary lectures at symposia held in Kingston, Jamaica; Karachi, Pakistan; Manchester, Oxford, Greenford, Cambridge, and Bath, U.K.; Zurich, Switzerland; Toronto, Canada; and at over a dozen major universities in the United States. He also lectured at some ten pharmaceutical manufacturing companies in the US and the New Jersey ACS section and the Gordon Research Conferences on Chemical Reactions and Processes and on Heterocyclic Chemistry. Magnus is a member of the editorial advisory boards of the *Journal of Organic Chemistry* and *Organometallics* and a member of the NIH Chemistry Study Section and the ACS Awards Advisory Committee for the Frederick Stanley Kipping Award for Organosilicon Chemistry. In 1984 alone he had four papers published, five in press, and three more submitted for publication.

Lynne L. Merritt, Jr. taught Instrumental Methods of Analysis at the IU-Northwest (Gary) campus in the spring semester of 1984 and is teaching Analytical Chemistry I there this spring semester. In addition he served as chair of the search

and screen committee for the Chancellor, IU-Northwest, and is currently acting dean for academic affairs at IU-Northwest. Merritt is a member and secretary of the Board of Directors of the Midwest Universities Consortium for International Activities, the Associated Universities for Research in Astronomy, and the Space Telescope Science Institute. The past three years he has served on the award selection committee for Alpha Chi Sigma and now, along with John Dean and Frank Settle, is actively working on the manuscript for the seventh edition of the textbook, *Instrumental Methods of Analysis*.

Milos Novotny again this past year has been very busy with special lectures at a myriad of places around the globe: an invited lecture in Amsterdam, a seminar at the Institute of Analytical Chemistry at the Czechoslovak Academy of Sciences, Brno, at Atlantic City two lectures and the closing address for the Capillary Chromatography Symposium, an invited lecture at the "Advances in Chromatography" symposium in New York City, also in New York City, a lecture at the International Conference on Column Liquid Chromatography and at Bethesda a lecture at the conference on "Chemical Signals in Nature" sponsored by NIH, lectures in Nurnburg, West Germany, at University of Vienna, Austria, and in January 1985 a lecture at the international HPLC Symposium in Kyoto, Japan. In ad-

dition to these he has also given innumerable talks at universities in the United States. He was awarded the 1984 M. S. Tswett Medal "in recognition of distinguished contributions to the field of chromatography" and was appointed to the Editorial Board of *Talanta*. He continues to serve on the editorial boards of *Journal of Chromatography/Biomedical Applications*, *Journal of High-Resolution Chromatography*, *Contemporary Instrumentation and Analysis*, and *Chromatographica*. He taught three short courses in 1984: one in Amsterdam and one each at the Pittsburgh Conference in Atlantic City for the ACS and at Finigan Institute in Cincinnati.

Dennis Peters received a Distinguished Teaching Award from the College of Arts and Sciences - Graduate Alumni Association in October 1984. He was co-organizer of the symposium on Organic Electrochemical Synthesis in Honolulu in December 1984, and presented a talk, "Electrochemistry of Alkyl Halides at Mercury and Carbon Electrodes" at that symposium. In January 1985 Peters attended the Gordon Research Conference on Electrochemistry at Santa Barbara, CA, and presented a poster session paper on "Electrochemical Reduction of Tertiary Butyl Bromide at Mercury and Vitreous Carbon Cathodes in Dimethylformamide" along with Kenneth L. Vieira, a former doctoral student who is now a postdoctoral research associate at the University of California, Santa Barbara.

GRADUATE NEWS

(P. Stapleton)

The graduate program in chemistry is administered by two faculty committees. The Graduate Standards Committee members during the 1983-84 academic year were professors Chisholm (inorganic), Gurd (biochemistry), Hieftje (analytical), Montgomery (organic), and Parmenter (physical). Professor Paul A. Grieco once again served as graduate adviser and chair of admissions.

The department had a very successful recruiting year with a total of fifty students starting graduate work in fall 1984. In addition two students were admitted for spring 1985. The enormous task of reviewing the hundreds of applications submitted fell on professors Busch (analytical), Christou (inorganic), Lewin (biochemistry), Reilly (physical), and Williams (organic).

FELLOWSHIP HOLDERS: The department takes great pleasure in reporting that **Keith March** was awarded a John H. Edwards Fellowship, the highest distinction for a graduate student at IU, for 1984-85. He received his PhD in chemistry in the fall of 1983 under Professor Frank Gurd.

Dr. March is currently finishing his medical studies at the IU Medical Center in Indianapolis.

We are pleased to announce that the graduate program in the department has three new graduate fellowships for the 1984-85 academic year (see chair's notes). These fellowships were made possible by grants received from Berlex Laboratories, Inc., The General Electric Foundation, and Monsanto. These new fellowships, along with the Lubrizol and Procter and Gamble Fellowships, will be awarded to advanced graduate students commencing in August 1984. The department is now able to award five industrial fellowships to upper-level graduate students.

Robert E. Zelle was the recipient of the Lubrizol Fellowship for 1983-84. He completed his PhD in August 1984. His thesis, "Part I. Model Studies Directed Toward and the Total Synthesis of (+)-Compactin. Part II. The Formal Total Synthesis of (+)-Thienamycin," was done under the direction of Professor Paul A. Grieco. Zelle received his undergraduate degree from The Ohio State University. He ac-

cepted a postdoctoral position with Dr. Samuel Danishefsky at Yale University.

The Procter and Gamble Fellowship for the academic year 1983-84 was awarded to **Alfred C. Childers**, who is doing his research in the lab of Professor Gary Hieftje. His main project involves the measurement of particle vaporization kinetics in flames and plasmas. Hieftje considers this the most experimentally difficult problem ever assigned to a graduate student. Childers received his BS degree in 1980 from Furman University.

Lawrence M. Principe, a first-year graduate student who received his undergraduate degree from the University of Delaware, was awarded a National Science Foundation Fellowship. He has decided to do research in the laboratory of Professor Philip Magnus.

Other fellowship winners were **Loris D. McVittie**, an American Diabetes Association Summer Fellowship; **Edwin M. Horwitz**, an Indiana University School of Medicine Fellowship for Combined Degree Students; **Larry F. Rhodes**, a Gulf Oil Foundation Fellowship; **Mark R. Her-**

mann, a National Aeronautical and Space Administration Fellowship; and **Jeffrey L. Seela**, a fellowship from Union Carbide Corporation.

Graduate School Fellowships were awarded to the following: **Gary A. Cain**, **Carol A. Kreader**, **Kathleen A. Cornely**, **Judith A. Edling**, **Jennifer C. Gluckman**, **Jeffrey D. Hsi**, and **Ravi P. Nargund** received G*POPs (Graduate and Professional Opportunities Program Fellowships).

Foreign students with fellowships were: **Zhen-Min He**, IU/Nankai University Exchange Fellowship; **Ali Bahsas**, **Jose Goncalves**, **Rudolf R. Jaffe**, **Jose L. Jimenez**, and **Adriano Parisi**, Venezuelan Fellowships; and **Paul Galatsis**, Natural Sciences and Engineering Research Council (Canada) Post-Graduate Fellowship.

ANNUAL AWARDS: **Jon T. Meek**, PhD'83, was selected as one of the 1983 winners of the Esther L. Kinsley PhD Dissertation Award, the highest research honor Indiana University bestows on any of its graduate students. Dr. Meek's dissertation, "Laser Photoelectron Spectroscopy," was done with Professor James Reilly.

At the Chemistry Department Honors Banquet in April 1984, the following students received the DuPont Associate Instructors Award for excellence in teaching: **Hamzeh Abdel-Halim**, **Daniel Becker**, **Gerald DiDonato**, and **David Waugh**.

David L. Clark was given the Robert Chernin Award for outstanding C500 research. The Chernin Award was estab-

lished in 1964 to honor the memory of Robert Chernin who passed away in 1963 after completing his thesis in 1961. The Chernin Award is now funded in part through the generosity of Dr. Ronald W. Collins, associate vice president for academic affairs at Eastern Michigan University and a 1962 PhD graduate of this department.

The William Nebergall Memorial Award for outstanding graduate research in inorganic chemistry was awarded to **Kazi Ahmed**. Ahmed, the sixth recipient of this award, is doing his research with Professor Malcolm Chisholm.

Naseem Hoosein is the first recipient of the Henry R. Mahler Memorial Award given to an advanced student beyond the fifth semester examination who has done outstanding thesis research in biochemistry. The award honors the late Professor Mahler who was associated with this department from 1955 until his death in July 1983. Dr. Hoosein received her PhD in December 1984. She did her research under the direction of Professor Ruth Gurd.

RECENT PhDs: PhD recipients for the 1983-84 academic year include the following: **Aheda A. Arafat** (inorganic, L. J. Todd) will be returning to Lebanon as an instructor; **W. Lowry Caudill** (analytical, R. M. Wightman) accepted a position with Travenol Labs, Morton Grove, IL; **James F. Corning** (inorganic, M. H. Chisholm) is a postdoc at SUNY-Stony Brook, NY.

Robert D. Deutsch (analytical, G. M. Hieftje) took a job with the National Insti-

tutes of Health, Bethesda, MD; **Margaret A. Flanagan** (physical, F. R. N. Gurd) is also doing research at the National Institutes of Health, Bethesda, MD; **Kathleen C. Flanders** (biochemistry, R. S. Gurd) accepted a job with the Veteran's Administration Hospital in Cleveland, OH.

James E. Freeman (analytical, G. M. Hieftje) is with Upjohn Company, Kalamazoo, MI; **Jonathan Grote** (organic, D. R. Williams) went to the University of South Carolina, Columbia, as a postdoc; **Karl W. Holtzclaw** (physical, C. S. Parmenter) is a postdoc at the University of Pittsburgh.

Jeffrey A. Joens, (chemical physics, E. J. Bair) is an assistant professor at Florida International University, Miami; **Theophilus F. Leapheart** (organic, P. D. Magnus) is a research chemist with Dow Chemical Co., Midland, MI; **Nan-Hong Lin** (organic, P. A. Grieco) went to the University of California, Irvine, as a postdoc.

Randall E. Lis (organic, P.A. Grieco) accepted a position with Berlex Labs Inc., Cedar Knolls, NJ; **Jay N. Lozier** (biochemistry, F. Putnam) is in medical school at Indianapolis; **Donald W. Lupo** (physical, G. E. Ewing) accepted a postdoc position with Eidgenossische Technische Hochschule, Zurich, Switzerland.

Keith L. March (biochemistry, F. R. N. Gurd) is attending medical school in Indianapolis; **Jon T. Meek** (chemical physics, J. P. Reilly) is working for American Cyanamid in Princeton, NJ; **Daniel A. Morales** (physical, G. E. Ewing) is doing college-level research and teaching in Venezuela; **Thomas L. Ortel** (biochemistry, F. Putnam) is in Indianapolis finishing medical school.

Paul A. Pappalardo (organic, P. D. Magnus) is a postdoc at the University of California, Berkeley; **Jeffrey A. Radding** (biochemistry, F. R. N. Gurd) took a postdoc position at Yale University, New Haven, CT; **Andrew L. Ratermann** (inorganic, M. H. Chisholm) is in England at the University of Bristol as a postdoc.

Mauricio Sankovic (biochemistry, E. H. Cordes) returned to Yugoslavia and is doing research at the Institute Rudjer Boskovic; **Philip M. Sass** (biochemistry, J. P. Richardson) is a postdoc at Cold Spring Harbor, NY; **David E. Shoup** (physical, A. Szabo) was at the National Institutes of Health, Bethesda, MD; **Sing-Yuen Sit** (organic, D. R. Williams) accepted a postdoc at Massachusetts Institute of Technology, Cambridge, MA.

Chidambaram V. Srinivasan (organic, P.A. Grieco) is a postdoc at Oregon State University, Corvallis; **Bradley M. Stone** (physical, C. S. Parmenter) took a postdoc position with the University of California, Irvine; **Thalaththani Vedananda** (organic, P.A. Grieco) is at Oregon State University, Corvallis, as a postdoc.

Kenneth L. Vieira (analytical, D. G. Peters) took a postdoc at the University of



Front row (left to right): **Kazi Ahmed**, **David L. Clark**; back row: **David S. Waugh**, **Gerald C. DiDonato**, **Daniel P. Becker**, **Hamzeh Abdel-Halim**.

California, Santa Barbara; **Norman J. Wells** (inorganic, K. G. Caulton) is currently a visiting professor at St. Lawrence University, Canton, NY; **Timothy J. Wozniak** (analytical, R. A. Hites) took a position with the National Bureau of Standards at Gaithersburg, MD; **Jeffrey D. Zubkowski** (inorganic, K. G. Caulton) is doing a postdoc at the University of Toronto, Canada.

MS RECIPIENTS: **James G. Douglas** (D. R. Peters), Rockwell Hanford Operations; **Juan Flores Moreno** (R. A. Hites), faculty, National University of Mexico; **Amal Hanania** (F. R. N. Gurd), student in School of Nursing, IU; **John R. Kagel** (J. J. Gajewski), student at University of Kansas; **Kristan Lenning** (P. D. Magnus) high school teacher, Lexington, KY; **Nuria Parisi** (L. J. Todd), will return to Ven-

ezeuela; **Randy D. Rutkowske** (V. J. Shiner, Jr.), Mead Johnson & Co.; **Michaelen Trimarchi** (K. G. Caulton), National Library of Medicine; **Marlon L. Walker** (V. E. Viola), graduate student at the University of Georgia; **Kelle Zeiher** (K. G. Caulton), graduate student at The Ohio State University.

MAT RECIPIENT: **Janet I. Insrud** accepted a teaching position with Zion-Benton Township High School.

MLS-INFORMATION SPECIALISTS IN CHEMISTRY

Three students completed the MLS-Information Specialist in Chemistry pro-

gram during 1984. **Michaelen Trimarchi** (MS'84) received an appointment to the highly competitive associate program of the National Library of Medicine. Trimarchi is the second graduate of the joint Department of Chemistry/School of Library and Information Science MLS program to win such an appointment in two years. **Barbara Lutey** (BA'82) finished the associate program in August 1984 and is now a reference librarian at the National Institutes of Health. **Linda K. Heideman** (MLS'84) is now a freelance librarian in Louisville. **Ann (Rogers) Peters** (BA'83) recently began work as a reference librarian at Dow in Midland, MI. **Lori Wahl** has returned to Indiana as a reference librarian for IMC in Terre Haute. All graduates of this unique program must hold at least a BA in chemistry.

UNDERGRADUATE NEWS

(W. T. Jenkins, H. M. Willett)

During the 1983-84 school year Professor W. Terry Jenkins served as coordinator of undergraduate studies and Holly Willett as academic counselor. Enrollments have continued to grow. Second semester of 1983-84 the chemistry department had 583 undergraduate chemistry majors (compared to 512 second semester of 1982-83). We graduated a total of 135 students (ninety-three with BA degrees — the same as 1982 — and forty-two with BS degrees [eighteen were BS chemistry and twenty-four were BS biochemistry] — up fifteen from 1983).

Eighteen students participated in our Chemistry Honors Program during 1983-84 and thirty-three students engaged in C409 Chemical Research (an undergraduate research program entailing up to ten hours of credit and requiring a thesis). Forty-four graduating seniors went on to medical school, twelve to dental school, eight to graduate school in chemistry, eight to graduate work in other areas, and forty-two to industry.

Ball Corporation, Dow Chemical Company, the Drug Enforcement Agency, Mead Johnson Company, and the National Bureau of Standards participated in the Chemistry Cooperative Education Program. Currently the Professional Practice Office, which handles the Program, is endeavoring to increase the number of participating companies and to add summer internship opportunities.

The annual Chemistry Honors Banquet was held on April 6, 1984. The following undergraduate students were honored:

Our Outstanding Senior Award (made possible by the Arts & Sciences Alumni Association Scholarship and Award

Fund) went to Eric A. Wachter. Mark R. Wallace was awarded The Chester Davis Award. This new award of \$100 was donated by Chester E. Davis who graduated from the department in 1944 with a BS degree in chemistry. Robert O. Stuart II was awarded the 1984-85 Courson-Greeves Prize, and Gregory B. Elsner received the Frederic C. Schmidt Award. Laura A. Papach received the Joseph B. Schwartzkopf Award, and Millie M. Marshall received an award from the Southern Indiana Local ACS section. Donna L. Biven was the recipient of the Dow Award.

Merck Indexes were presented to David P. Martin, Andrew M. Scharenberg, and Laura S. Ziemer.

The R. J. Grim Scholarship recipients for 1983-84 were Gregory B. Elsner, Jeffrey A. Ferguson, James A. Krom, Robert J. Manges, Kara M. Newby, Jeffrey Pauloski, James M. Platis, Andrew M. Scharenberg, Hooman Sedighi, Joanna L. Shear, Robert O. Stuart II, Timothy A. Sutton, and David A. Winger.

Summer Research Scholarships for full-time summer research for 1984 were awarded to Tracy L. Black, Mark A.



Front row (left to right): Millie Marshall, Laura Papach; back row: Robert Stuart, Eric Wachter, David Martin, Mark Wallace.

yant, Lisa H. Chang, William D. Clenning, Michael P. Dohrenwend, Karen Neeley, A. Timothy Royappa, R. Leon elton, Robert O. Stuart, Timothy A. tton, Brendan W. Tully, and Steven T. erer.

Six students were recognized as superior in various freshman chemistry courses and received book certificates. Thirty-six chemistry majors were elected membership in Phi Beta Kappa. Nineteen seniors, thirty-two juniors, and forty-two sophomore chemistry majors were on the Departmental Honor Rolls.

In 1983-84 the Chemistry Placement Office hosted twenty-seven companies which conducted a total of 407 interviews. These included Abbott Laboratories,

American Cyanamid, AMOCO Research Center, ARCO Petroleum Products Co., Ball Corp., Baxter Travenol Labs, Calgon Corp., Dow Chemical Co., E.I. DuPont de Nemours, Eli Lilly Co., General Electric Co., Great Lakes Chemical Co., Hercules Inc., Merck, Monsanto Co., NALCO Chemical Co., PPG Industries, Pfizer Inc., Procter & Gamble Co., Rohm & Haas, Standard Oil (OHIO), Stuart Pharmaceutical, 3M Center Union Carbide Corp., Upjohn Co., Warner Lambert/Parke Davis, and Western Electric Co.

Twenty-seven companies have interviewed through the Chemistry Placement Office during the '84-'85 recruitment season. Holly Willett continued as Chemistry Placement Office Manager.

FRED HARDING AND SHIRLEY HUMPHREY RETIRE



Fred Hardy



Shirley Humphrey

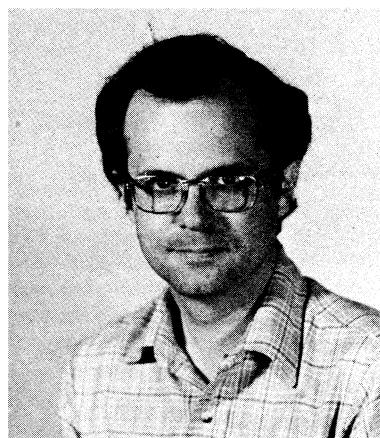
The chemistry department witnessed the loss of two long-time employees to retirement during the spring semester 1984. **Fred Hardy**, manager of physical facilities, and **Shirley Humphrey**, principal clerk, decided that they would prefer warmer climates to the harsh winters of Bloomington.

Hardy, who worked in many areas of chemistry during his thirty-eight years on the staff, came to the department at the age of twenty-three in 1946 as a stockroom helper for teaching laboratories. By 1951 he began giving lecture-demonstrations, and in 1961 he assumed the duties of assistant to the director of laboratories. In 1980 his title was changed to supervisor of physical facilities. Hardy worked with eight chairmen and five directors of laboratories or business managers. The faculty grew in size from twenty-five to forty-six by the time he retired. Hardy was the recipient of the 1984 Outstanding Chemistry Staff Member award. He and his family moved to Florida soon after the very well-attended retirement party held in his honor in late April.

Shirley Humphrey, well-known to all the chemistry department because of her position as payroll clerk, retired after twenty-six years of excellent service. A recipient of the Outstanding Chemistry Staff award in 1981, Humphrey began as a secretary to the director of laboratories in 1958. She witnessed considerable growth in the department while working under the direction of many different laboratory directors and business managers. Humphrey enjoyed all sports and was faithful in her attendance at football practice and games and basketball games. Humphrey, her husband, and parents moved to Arizona following the retirement party for her held in late March.

STUDLEY WINS ALL-CAMPUS AWARD

A special honor was presented to **Stephen Studley**, mass spectroscopy technician, who works in the group of Professor John Hayes. He was one of three Indiana University-Bloomington staff people to be given campus-wide recognition as "Staff Member of the Year." Studley, who started with the department in 1970, was honored at a special reception held in the Frangipani Room during the fall semester of 1984-85. Not only was he awarded a plaque, but also a check for \$500, thus garnering the congratulations and envy of all his colleagues in the department.



Steve Studley

RESEARCH EXPO

Alumni are encouraged to attend Indiana University's Research EXPO to be held April 17-19, 1985 prior to the Little 500 race on April 20. Dr. Gary Hieftje is coordinating the chemistry department's part in this year's EXPO, which will have a strong emphasis on instrumentation. A special video tape is being prepared to highlight instrumentation on the IU campus.

Research EXPO is organized by the Office of Research and Graduate Development on the IU-Bloomington campus. It was first held in 1983 and is designed to bring together industrial scientists and administrators and IU scientists. For further information contact Hieftje at (812) 335-2189 or Dr. Morton Lowengrub at (812) 335-8913.

SKETCHES

During the course of the past few years, Professor Day has prepared biographical sketches of H.T. Briscoe, R.E. Lyons, and F.C. Mathers. Copies of these sketches are available to those who make donations to our Friends of Chemistry account through the IU Foundation. Indicate which sketch is of interest.

NEWS OF ALUMNI

(H. G. Day and E. M. Greene)

Chemistry alumni and others with interests in the department are encouraged to maintain membership in the IU Alumni Association. It costs relatively little, and it benefits the individual as well as the department and University. The association aids in the preparation and distribution of the *AIUC Newsletter* and benefits us in many ways.

SOCIAL HOURS

Those alumni who signed our guest book at the Social Hours held in conjunction with the Alumni Hours at the ACS meetings were:

St. Louis, April 11, 1984

Frank Guthrie, PhD'62, Terre Haute; Jim Hickey, PhD'77, Mt. Prospect, IL; Richard Komoroski, PhD'73, Cleveland; Mary and Joe Leal, PhD'53, Maplewood, NJ; Marshall Mead, Washington; James McChesney, PhD'65, Oxford, MS; Robert Street, MS'68, St. Louis; and Jim Wolfe, PhD'63, VATEch in Blackburg, VA; Jack Shiner, Ken Busch and Gary Hieftje of the current faculty were also present.

Philadelphia, August 29, 1984

Michael Bentz, AB'80, Philadelphia; Joanne and David Cochran, PhD'71, Norristown, PA; Bill Carroll, PhD'78, Radnor, PA; Bill Cooper, PhD'81, Tallahassee, FL; Forrest Gager, AM'51, Richmond, VA; Frank Guthrie, PhD'62, Terre Haute; Mel Hedrick, PhD'47, St. Louis; W. Walter Johnson, PhD'76, Redwood City, CA; Joe Leal, PhD'53, Maplewood, NJ; Ted Logan, PhD'53, Cincinnati; John Marsella, PhD'81, Allentown, PA; Ken Miller, PhD'78, Mt. Vernon, IN; Herb, PhD'59, and Gerry, BS'59, Moss, Yardley, PA; John Patterson, BS'74, Meadows, TX; Thomas Selby, PhD'79, Hockessin, DE; Mona Smith, BS'50, McLean, VA; Jim Wolfe, PhD'63, VATEch. Harry Day, son Robert, and Marilyn Day were also present.

VISITORS TO THE DEPARTMENT

Several of the visitors to the department last year stopped to see us (Dr. Day and Miss Greene), and we enjoyed their visits very much, including *Frank Pruett*, Walnut Creek, CA; *P. K. Nargund*, post-PhD'61-63, whose son is here in graduate school; *Esther Weber Adams*, AM'31, who told us about the chemistry office during her tenure; *Hannalore Wurz*, post-PhD'59-60, who was here from Germany; and *Nolan Sommer*, PhD'44, who was here for a meeting of the Board of Overseers. It was also good to see *Max Marsh*, BS'47, who visited

the department for the same meeting and for a few other conferences.

Esther Weber Adams, AB'30, AM'31, visited the department this year and gave us a valuable oral history interview about the campus in the late '20s and her role as the first secretary (parttime) in chemistry. She lives on the family farm near Greenfield, but she spends part of the winter in Florida.

Pamela Albaugh-Robertson, post-PhD'82-84, is now employed at the Allergan Pharmaceutical Company at Irvine, CA.

T. P. Anathanarayan, PhD'84, has a postdoctoral appointment in medicinal chemistry under Dr. Ronald Harvey at the University of Chicago.

G. H. Atkinson, PhD'71, has been made head of the department of chemistry at the University of Arizona.

W. H. Bell, AM'18, keeps in touch with the department. After sixty-one years of marriage his wife died in 1984. Seven years ago they established a loan fund for students majoring in chemistry at IU. We are grateful for this generosity. A recent letter from him makes reference to a rigorous county examination he took while in high school in 1911. (There was a report on it in the *Wall Street Journal* in 1984. He received the highest grade in a group of 112. Only seventy passed.)

Joseph M. Black, AB'41, MD'44, was elected by IU alumni to a fifth term as trustee of IU. He has for a long time understandingly supported the department of his major and all aspects of science for the University. He has been a physician and surgeon in Seymour for many years.

Ray E. Boucher, PhD'50, has been successfully involved in the carbonated beverage business for almost two decades after making a good start as a chemist. He has been retired about eight years. He and his wife Jeannette are very good friends and golf companions of Charles E. and Mrs. Harrell. Harrell retired several years ago as secretary of the Board of Trustees. Boucher's home in the winter is at Naples, FL and at other times in the mountainous area of North Carolina.

Peter J. Brown, post-PhD'82-84, is in research on cardiovascular chemistry at the Bristol-Myers (Mead Johnson) Company at Evansville.

Harold Burton, post-PhD'64-66, attended a meeting in Vienna, Austria, after which he and Mrs. Burton (Patricia) toured Austria, France, and England. He is connected with the Tobacco Research Institute at Lexington, KY.

Richard T. Cady, PhD'52, continues to consult with DuPont about fifteen to twenty hours per week. Because this is not enough retirement activity, he has

taught a course in organic chemistry at a local college, and he continues to teach some computer classes.

Yun-Ti Chen, PhD'52, professor of chemistry at Nankai University, Tianjin, PRC, is a member of the Chinese Academy of Sciences. Dr. John V. Lombardi met him in China in 1984.

J. F. Christman, AM'46, has been professor of biochemistry at Loyola University, New Orleans, since 1966 and director of research and graduate studies since 1971. He was the national president of Delta Epsilon Sigma in 1974-77. In November 1983 he was an ACS tour speaker to local sections. His topics were "Serendipity — the New Luck in Scientific Discovery" and "World Without Energy."

Wilbur B. Clarke, PhD'62, is coordinating a new MS program in environmental chemistry and biology at Southern University at Baton Rouge, where he has been head of the chemistry department for many years.

Ronald W. Collins, PhD'62, is now provost and vice president for academic affairs at Eastern Michigan University. For several weeks during the summer of 1984, he was acting president due to the illness of the president of the university. In his annual report to the faculty in September the importance of faculty research was stressed.

Raleigh Farlow, BS'75, and family have been in Quezon City, Philippines since June 1984 where he is enrolled at Far Eastern University Medical School. His performance level is high, as his record here as an undergraduate would anticipate.

Vincent Fernandez, post-PhD'60-62, remains at the National Chemical Laboratory in India. At IU he was particularly close to H. R. Mahler and V. J. Shiner. Dr. Mahler was to have visited the Fernandez laboratory in 1975, but an airlines strike prevented it. The recent death of Mahler has touched the Fernandez family.

James P. Ferris, PhD'58, authored *The Chemistry of Life's Origin*, which was reported in *C&EN* 27 Aug. '84. It is an extremely stimulating, thought-provoking, and comprehensive discussion of primordial chemistry and the beginning of life. Among the various actions that measure the level of his achievements are the presentation of some of his work at the Symposium on Xenobiotic Metabolizing Enzymes at the Philadelphia ACS meeting. He will be cochair of the Gordon Conference on Origin of Life in 1985.

Kathleen Flanders, PhD'83, has a postdoctoral research appointment with Dr. Anita Roberts at the National Cancer Institute. She is studying tumor peptides.

William O. Foye, PhD'48, is working on the third edition of his multitranslated textbook on *Medicinal Chemistry* and con-

tinuing research on radiation-protective agents.

Timothy Gallagher, post-PhD'80-83, is on the faculty at the School of Chemistry at Bath University in England.

Charles H. H. Griffith, AM'54, has completed twenty years as general chemistry laboratory supervisor at the University of Kentucky. Several chemistry alumni are connected with that university.

Herbert S. Gutowsky, AB'40, hon. Sc.D.'83, received the prestigious Wolf Foundation prize for chemistry in May 1984. He has been given nearly all the scientific recognitions that can be awarded. In 1983 **Wendell L. Roelofs**, PhD'64, won the Wolf Foundation prize for agriculture.

Rodney Hamilton, PhD'65, became full professor of chemistry at Ft. Lewis College, where he has been on the faculty since 1969.

Sharon Coolican, PhD'82, has won the Bowman Award for excellence in postdoctoral research in the Krannert Institute for Cardiology at the IU School of Medicine.

S. K. Datta, PhD'59, remains connected with National Peroxide Ltd. Research Centre at Bombay, India. His daughter plans to do graduate work in journalism at IU in 1985-86.

Chester Davis, BS'44, through persistence and his handling of sound facts, has won a major victory in gaining a patent infringement judgment against Moore Business Forms, Inc. This victory was with Scott Paper Co., to whom he had sold his patents on the production of a colorless dye used to manufacture carbonless business forms. They had licensed Moore to use the patent. It was a multimillion dollar settlement, and the victor is happy. We rejoice with him.

Bill Day, BS'55, returned to Michigan from the University of Iowa "to finish a manuscript that I have been chiseling at for some time." His book *Genesis* has been published in a second edition. It is carried by the Astronomy Book Club and the Macmillan Science Book-of-the-Month Club.

Anil K. De, post-PhD'52-54, continues at Visva-Bharati University in India. He has been awarded two Gold Medals by the University of Calcutta in recognition of his contributions to analytical chemistry during the past two decades. For the same reason the Institute of Chemists (India) has awarded him the Cooper Memorial Medal.

Judy McKeivitt Douglas, MS'73, coordinates the Alcohol Education Program at Gustavus Adolphus College.

Darrell D. Ebbing, PhD'60, is the senior author of *General Chemistry*, published in 1984 by Houghton Mifflin. He is involved in other writing projects and now uses a word processor. He is professor of chemistry at Wayne State University.

Steven R. Johnson, BS'70, was re-elected Representative in the Indiana

General Assembly in 1984. When he is not in the General Assembly, he is Chemistry Laboratory Supervisor at the IU-Kokomo campus.

Laddawan Kanhasuwan, MAT'74, is on the faculty of Poauakoru Teacher's College in Bangkok and has been designated by the National Science Association of Thailand as the best science teacher in higher education in Thailand in 1984.

Theophilus Leapheart, PhD'83, is a research chemist with the Dow Chemical Company at Midland, MI.

Milton Lee, PhD'75, has been awarded the 1984 Tswett Chromatography Medal for his improvements of capillary chromatography. In 1982, at Brigham Young University, he received the Karl G. Maeser Research and Creative Arts Award. Some of his research has been on the analysis of environmental samples and products derived from coal. Since 1981 he has served on the Editorial Advisory Board of *Chromatographia*. In 1983 he joined the Editorial Advisory Board of *Journal of High Resolution Chromatography and Chromatography Communications*. In the same year he was made a member of the Editorial Board of the same journal. He is now professor of chemistry at Brigham Young University. His research at IU was directed by M. Novotny. Nearly twenty of his approximately 140 publications were co-authored with Professor Novotny.

Arthur, PhD'55, and **Edith Schroeder**, PhD'55, Lessor continue to live at Poughkeepsie, NY. He remains at IBM and will teach a graduate course at nearby Rensselaer Polytechnic Institute. She is still teaching.

William LeSuer, PhD'48, and wife Arlene, accompanied by E. and J. Campaigne, toured Austria, Germany, and Switzerland. The highlight was attendance at the Passion Play in Oberammergau.

Edward T. Marquis, AB'61, continues to do well at the Texaco Chemical Co. of Austin, TX and has been promoted from Senior Project Chemist to Research Associate. Early in 1984 he discovered novel reaction parameters for the catalytic process he developed in 1983. Patent applications are being filed, and a pilot plant is being constructed to develop the process. He will continue to search for new uses for the active, yet stable, catalyst.

Christopher Exon, post-PhD'80-82, is a research chemist with Hoffman-LaRoche in Nutley, NJ.

Tom Fanning, post-PhD'71-73, has completed ten years at Texas Eastman and is in Process Development in the Olefins Division.

David D. Hartley, PhD'32, did his doctoral work under Dr. R. E. Lyons and devoted all of his professional life to the petroleum industry. He was Senior Chemist in Research and Development at Mid-Continent Petroleum Corp — Sun Company at Tulsa, OK when he retired in 1970. His

wife Helen Vernon has an AB from Hanover College.

Edward G. High, PhD'50, continues as professor of biochemistry and coordinator of research at Meharry Medical College. Earlier in 1984 he and his wife were in a group of twenty-two from United States and Canadian medical schools and centers in a "People to People" Medical Education Delegation to the Peoples Republic of China. In 1984 he also helped organize and conduct a Gerontology Conference at his institution.

David Ho, BS'78, is completing a PhD in Medicinal Chemistry at Purdue. He married Josephine Fan in December.

Jonathan Ho, BS'68, is a lecturer at Hong Kong University and a heart and lung surgeon at Grantham Hospital.

Naseema Hoosein, PhD'84, has begun postdoctoral research in pharmacology at Emory University.

Jerard Hurwitz, AB'49, has accomplished much, including membership in the National Academy of Sciences, since he received his PhD at Western Reserve University in 1953. Recently he became a member of the Sloan Kettering Institute and Professor, Sloan Kettering Division of the Cornell University Medical College. He also received an unrestricted grant of \$500,000 over a five-year period from the Major Grants Program of the Pfizer Company. Among other responsibilities he is a member of the grant review committee of the Irma T. Hirsch Trust and the Guggenheim Memorial Foundation.

Jane Irby, AB'76, is doing a residency in Internal Medicine at Medical College of Virginia; she may return to Indiana to practice. Her brother, **Scott Irby**, AB'73, received his MD at the University of Liege, Belgium and is an intern in the department of internal medicine at University of Louisville.

Robert R. McDonald, PhD'62, has become president and chief executive officer of Boride Products, Inc. at Traverse City, MI. The firm was recently acquired by the Dow Chemical Company. He joined Dow in 1963.

Bam D. Mehrotra, PhD'64, of the chemistry faculty at Tougaloo College, was at the University Medical Center, Jackson, MS on a Distinguished Scholar grant in 1983-84. His son, Deepak, attended the annual National Junior Achievement meeting at Bloomington in 1983.

Wendell Meyer, PhD'62, is in the Technical Information Department at Dow Chemical in Midland, MI. His daughter, Jennifer, is a student at Purdue.

Doreen H. Mar, MS/MD'83, has a residency at Brady Hospital, Emory University.

M. H. Moseley, AB'42, MD'44, visited the department in August. In addition to his general practice of medicine in Lyon County, KY, he has devoted much time

to the history of western Kentucky, especially the development of a steel industry in his area during the midperiod of the last century.

Rodney Moss, PhD'51, has returned to Midland, MI as Global Director of Patents and Licensing after five years in Hong Kong as director of Asian Agricultural Research and Development for Dow Chemical.

P.-K. Nargund, post-PhD'61-63, visited the department to see his son, Ravi, who is now in his second year as a graduate student.

Yat-Sun Or, post-PhD'80-82, is a research chemist at the Schering Corp. in Bloomfield, NJ.

Paul Pappalardo, PhD'83, has a post-doctoral appointment with Dr. Henry Rappaport at the University of California, Berkeley.

John M. Patterson, BS'74, is a project geochemist at the Gulf Exploration Technical Center at Houston, TX.

John B. Patton, AB'38, was one of nine people inducted into the Indiana Academy, an honor of high distinction for any resident of Indiana. He is director of the Indiana Geological Survey and State Geologist.

Frank P. Popoff, AB'57, MBA'59, president of Dow Chemical Europe (which includes the Middle East and Africa), spoke at the IU School of Business in January 1985. The topic was "International Competition: the American Challenge." His work at Dow started in the urethane chemicals laboratory.

William E. Rogers, Jr., PhD'57, has served in various capacities at the National Institute for Dental Research. His title is now Chief, Caries and Restorative Materials Research Branch.

Saul A. Schepartz, AB'51, in 1984 became associate vice president for Academic-Industrial Relations at the University of Medicine and Dentistry of New Jersey. Soon after he received his PhD degree in biochemistry at Wisconsin in 1955, he joined the staff of the National Institutes of Health. At NIH he was involved in various aspects of drug evaluation, drug research and development, and cancer treatment.

Stewart Schneller, PhD'68, is professor of chemistry at the University of South Florida. He is past president of the International Society of Heterocyclic Chemistry, which meets in Canada this year.

Nolan B. Sommer, PhD'44, retired executive vice president of American Cyanamid Company, continues on the boards of several companies.

Ian Southwell, post-PhD'82-83, is now a research scientist at the North Coast Region, Agricultural Research Centre, Wollongbar, New South Wales, Australia.

J. H. Stocker, AM'47, has been a professor of chemistry at the University of New Orleans many years. His various activities in the ACS included a speaking tour at

local sections in November 1983. The topic was "Chemmage — A Compendium of Chemical Trivia."

Ryokuero Suzue, post-PhD'59-60, and wife Akiko visited NIH in Bethesda, MD last March. In July '85 he will again visit NIH before going to the International Congress of Nutrition at Brighton, England. Among many responsibilities he is a member of the U.S. — Japan Malnutrition Panel. He is director of the National Institute of Nutrition in Japan.

Meredith P. Sparks, AM'28, an active patent attorney in Coral Gables, FL with a strong background in chemistry, travels extensively on behalf of her clients, herself, and her causes — especially good opportunity for women in the professions. In November she was one woman among seven "of Illinois' most distinguished alumni" invited to the Illini Comeback. She spoke "not only at the Forum, but also with the women from the law school and the professors of chemistry." Her late husband was president of the ACS in 1966.

Byron M. Vanderbilt, AB'29, was newsworthy in the 1984 issue of the *Newsletter*. Several months ago the Angus Chemical Company, producer of a wide range of nitroparaffins, held a major reunion of three scientists who discovered and patented a process for making such com-

pounds. They were Vanderbilt, Edward B. Hodge, and Henry B. Hass. The latter directed the other two in graduate work at Purdue. Vanderbilt has many inventions and has written at least two good books on inventing and inventors. His daughter, Carol V. Brown, is associate registrar at IU.

Harold J. Wesselman, AB'40, has been an analytical chemist at Eli Lilly and Company much of his life. His principal interest has been Alpha Chi Sigma. This summer as Grand Master Alchemist, he presided at the Biennial Conclave. At the end of the conclave, he was made a member of the Order of Altotus, the highest status any member of AXE can attain.

Bernard Wolnak, PhD'43, has become president of Biotech, Inc., in Chicago, an equally-owned subsidiary of Toyo Engineering Corporation in Japan and Bernard Wolnak and Associates in Chicago. The new company will provide conceptual, marketing, research and development laboratory, pilot plant, and engineering services in biotechnology.

Julie Yang, AM'52, traveled in Scotland for W. R. Grace and Company during a part of the year. She writes that her father, **S. H. Yang**, post-PhD'45-46, has been extremely ill at his home and in a hospital in China. Fortunately he is recovering, but slowly.

NECROLOGY

Robert L. Patrick, PhD'50, died February 12, 1985 at a Portland, ME hospital. He was vice president of research and development for Rockwood Systems Corp. of Portland. He and his wife Carole had moved to Wells, ME from Rockville, MD in 1981. They were the proprietors of Coles Country Corner Mall at Wells. In addition to his professional activities and recognitions in the technological areas of adhesives and adhesion, he was loyally involved in IU Chemistry Alumni Affairs.

Ernest H. Gerkin, AB'22, AM'32, PhD'37, died September 27, 1984. He had taught chemistry and physics at the South Bend campus of IU from 1941 to 1968, but during his last years of teaching all of his time was given to chemistry. Many students at South Bend kindly remember Dr. Gerkin.

Norman L. Heckman, AM'47. The death was reported without details.

John P. Overman, BS'41, AM'41, died April 8, 1984 in Merrillville, IN. His lifelong work in battery engineering began under the direction of Professor O.

W. Brown. He installed lead-acid battery plants in Venezuela, Brazil and South Africa. At IU he was a member of the Marching 100. He returned often to the Bloomington campus and played with the Marching 100 alumni at football and basketball games.

Nida Sapianchai, PhD'63, died of cancer June 5, 1983 in Bangkok, Thailand. At IU her work was directed by W. L. Meyer. Her husband Pote received his doctoral degree in the School of Education at IU. They had two teenaged children. In Thailand in 1981 she became director of the Institute for the Promotion of Teaching Science and Technology. Her work involved considerable international travel.

Charles A. Wesselman, BS'42. The death was reported without details.

Harold M. Wood, AB'21. The death was reported without details.

1984 DONORS TO THE DEPARTMENT

We believe the following to be a complete list of donors to the chemistry department in 1984. If your name has been omitted, we apologize. You will be recognized in our next *Newsletter* as well as in the College of Arts and Science 1984 Report of Gifts as a contributor to chemistry.

Once more we wish to thank all of our alumni and friends for their generous support.

Degrees listed next to the names are those that alumni earned in this department; PD stands for postdoctoral research associate.

Darwin B. Appleton, AM'31
Clayton H. Atkins, MA'67
Harold Atkins, AB'50
Stuart V. Babb, AB'79
Charles R. Baker, AM'48
Claire A. Baker, AM'48
David K. Barnes, PhD'47
Horace Baxman, BS'43
Jean C. Beckman, PhD'77
David A. Berges, PhD'67
John W. Berry, AB'37
Lawrence A. Black, BS'77
H.J. Blumenthal, BS'47
Phyllis Boucher, AM'40
Raymond E. Boucher, PhD'50
Bruce A. Bowman, BS'81
Charles H. Boxman, AB'53
G. Dana Brabson
Joyce C. Brockwell, PhD'75
John Max Brown, AM'40
Helmut Brugman, AB'66
John T. Brundage, PhD'28
Robert R. Buck, BS'42
Kenneth T. Burck, BS'58
John E. Burks
William F. Carroll, PhD'78
R. Vincent Cash, PhD'52
John P. Cech, AB'69
Hsieh-Fu Cheng, PhD'57
Grace Py Chiu, PD'62
Alan C. Clark, PhD'70
Richard E. Cline, PhD'51
Richard H. Cole, BS'69
Ronald W. Collins, PhD'62
Donald J. Cook, PhD'44
Eugene S. Corner, AB'39
Standiford H. Cox, AB'57
Phillip J. Crabill, AB'63
Troy C. Daniels, PhD'29
Amal K. Das, AB'78
Chester Davis, BS'44
Ralph A. Davis, AM'42
Joseph Dec, AB'36
John B. Dennis, AB'36
Burton Dietzman, AM'40
Alan Dinner, PhD'70
Gerald E. Doeden, PhD'64
Linneaus C. Dorman, PhD'61
LeRoy Dugan, Jr., BS'37
H. Eldridge Faith, BS'38
Maurice M. Felger, PhD'33
Joanna Dickey Ferguson, AM'33
Robert B. Fischer
Becca C. Fleischer, PhD'58
Sidney Fleischer, PhD'58
William O. Foye, PhD'48

Elizabeth W. Fraser, AB'42
Charles E. Frohman, AM'48
John A. Frump, AB'50
Joe W. Garrison, AM'40
Vernon L. Geiss, PhD'67
Robert H. Gillespie, BS'38
Sandra S. Green, AB'76
Benjamin Greenberg, AB'36
Fred A. Griffiths, PhD'36
Frank A. Guthrie, PhD'62
V. Larry Hammersley, MS'75
Judith A.K. Harmony
Edith Strain Harte, AB'34
William F. Harting, AM'41
Miriam E. Hartzell, AM'46
J.W. Hastings
Albert L. Hensley Jr., BS'51
Zachary I. Hodes, AB'72
Anne H. Hubbard, AB'42
Tony E. Hugli, PhD'68
Ralph H. Humbaugh, AB'26
Neil E. Irick, AB'68
J. Martin Johnson, MS'70
Jack E. Kelley, BS'41
Robert J. Kelly, BS'68
Wendy L. Kindig, AB'73
Gerald E. King
Richard E. Kinsler, BS'51
Helen Kottlowski
Stanley W. Krauhs, Jr., MS'74
Nancy S. Krieger, AB'72
Paul E. Krieger, MS'65
Richard S. Kubiak, AB'49
Ellen LaBelle, MS'70
Elma J. Lanterman, PhD'51
Joseph R. Leal, PhD'53
Herbert Levettown, AB'49
W.M. LeSuer, PhD'48
Mary Ann DiPietro Lindahl, MS'70
Randall Lis, PhD'83
Wayne E. Livingston, BS'53
Ted J. Logan, AB'53
Andrew Loh, BS'71
Suzanne M. Lopez, AB'83
Seth H. Lowell, AB'70
Robert P. Mackenzie, AB'48
Francis M. Maple
Max M. Marsh, BS'47
William G. Mays
Richard O. McClure
Jeanne L. McDonald, AB'70
Fred M. Miller, PhD'35
Robert W. Mitten, BS'38
Pearle A. Monroe, PhD'52
Irene L. Morrison, AM'60
Ira A. Murphy, PhD'57

Felix J. Naples, PhD'36
Stephen M. Neumann, BS'74
John L. Nowlan, AB'83
William D. Parris
Stephen F. Peterson, BS'64
Frank B. Pope, PhD'40
David P. Prather, BS'61
Robert J. Pursley, AB'50
Avis Rector, AM'63
Wilmer T. Rinehart, PhD'40
Ramon F. Rolf, AB'51
Darrell G. Rose, BS'65
Irving Rosen, PhD'51
Maxine Rowe, AB'40
Richard E. Russo, PD'81
Sharad S. Sathe, PhD'71
Bob Sawicki, PhD'78
Alverta Sohl Schantz, BS'40
Ambrose F. Schmelzle, PhD'40
James P. Schooley, AB'53
Bernard Searle, AB'49
Clarence J. Shoemaker, PhD'42
Gilbert M. Shull, BS'40
Allen R. Siedle, PhD'73
Nolan B. Sommer, PhD'44
Meredith P. Sparks, AM'28
Fredrick Stein, PhD'71
Robert W. Street, MS'68
Philip T. Stroup, AM'26
Loon Seng Tan, PhD'81
Ralph G. Thompson, BS'48
Lella R. Trafelet, AM'38
James R. Thrasher, AB'74
Herman B. Urbach, AB'48
John Van Cleve, MAT'65
Byron M. Vanderbilt, AB'29
Harry E. Vick, Jr., AB'42
Paul W. Vogel, PhD'46
Verling M. Votaw, AM'26
Martin J. Wagner, PhD'58
Yng Jiin Wang, PhD'77
Mansukhal C. Wani, PhD'62
Timothy J. Warfield, BS'72
John C. Warner, PhD'23
Joseph E. Weber, PhD'37
Robert H. Weir, BS'40
Violet West
Thomas A. White, AB'52
Henry S. Wilson, PhD'38
Bernard M. Winner, AB'42
Charles K. Wooldridge, MAT'63
Harold H. Zeiss, BS'38
Morris Zimmerman, PhD'55

Association of Indiana University Chemists

NEWSLETTER

is published annually for graduates of the IU Department of Chemistry by the Department of Chemistry and the IU Alumni Association, in cooperation with the College of Arts and

Sciences-Graduate School Alumni Association, to encourage alumni interest in and support for Indiana University.

ISSN 0191-5185

Bloomington, Indiana

March 1985

Department of Chemistry

Chairman V. J. Shiner, Jr.
Editor Lynne L. Merritt, Jr.
Assistant Editors Marvin Carmack
W. Terry Jenkins
Christian Kaslow

College of Arts and Sciences

Acting Dean James Wood
Dir., External Relations ... Linda K. Kirk

Graduate School

Dean Leo F. Solt

Indiana University Alumni Association

University Director of
Alumni Affairs Frank B. Jones
Assistant
Alumni Director Joan B. Curts
Managing Editor for
Constituent Pubs. Kathryn Caras
Editorial Intern Laurel Joyce

REMINDER

Social Hour for Indiana University Chemists will be a part of the ACS Alumni Hour at the National Meeting in Miami Beach on Wednesday, May 1, 1985. There will be a sign identifying the AIUC. Bring any pictures or other items that you would like displayed on our bulletin board.

See you there!

Remember: Wednesday, May 1, 1985
Miami Beach, ACS Alumni Hour
5:30 — 7:00 p.m.

AIUC NEWSLETTER

INDIANA UNIVERSITY ALUMNI ASSOCIATION
Indiana Memorial Union, M-17
Bloomington, Indiana 47405

Non-Profit Org.
U.S. Postage
PAID
Indiana University
Alumni Association