Association of Indiana University Chemists

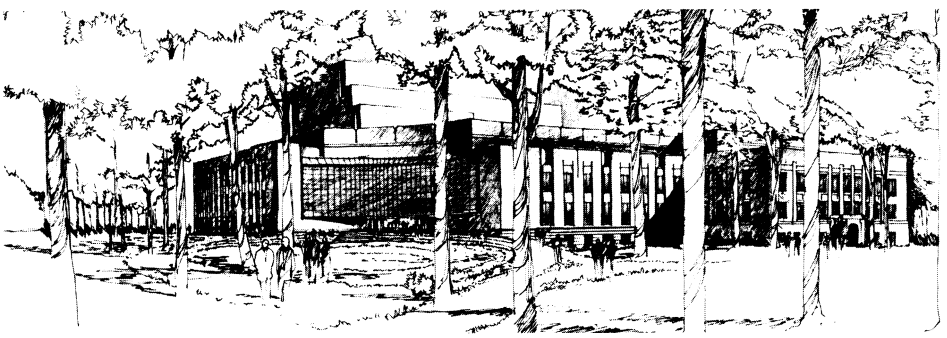
NEWSLETTER

VOLUME XXVIII, No. 3 ASSOCIATION OF INDIANA UNIVERSITY CHEMISTS MARCH 1983

THE CHEMISTRY CRUNCH

by Nancy Musgrove

The following article is reprinted with permission from the November/December 1982 issue of the Indiana Alumni Magazine. The author, formerly a newspaper reporter and copy editor for the American Society of Microbiology, received her master's degree in December from the IU School of Journalism.



The proposed $15.5 million addition may look like this if final approval is received. It is the first phase of the $55.5 million project for upgrading the chemistry facility over a six-year period. The above view is from the southeast corner, containing a new entrance that will line up diagonally across a wooded area with a new north entrance, planned when the addition to Jordan Hall is completed. Architects are Harley Ellington Pierce Yee Associates of Southfield, Michigan.

Safety. In an age of seat belts, smoke detectors, and air filters, the meaning of the word changes often. Equipment and standards considered "safe" only a few years ago are now regarded as inadequate.

Researchers and students in IU's Department of Chemistry feel the gap between current professional standards for space and safety equipment more than most of us. Chemicals such as benzene, used often by many researchers, have been found in the past few years to be highly toxic and cancer-causing. Because of such findings, more space in exhaust hoods for work with volatile chemicals is now needed.

Department Chairman Jack Shiner says that is only one of many problems created by the space crunch the department has faced since the 1960s. Although an addition was built in 1965 onto the 1930s original structure on the campus, several problems with the "Addition" as it is dubbed made it inadequate from the beginning, Shiner says.

Later, in the 1970s, IU Department of Chemistry's student ranks swelled to make it the largest grantor of undergraduate chemistry degrees in the United States (sometimes sharing the distinction with the University of North Carolina.) IU is also eighth in the country in the number of PhD degrees granted.

Those factors, combined with the fact that the Addition provided only the minimum space needed per researcher in the mid-1960s, meant that juggling space and fume exhaust hoods for researchers and students became a reality that still plagues Shiner. Shiner took over as chairman of the department in November 1981 when Adam Allerhand resigned and returned to teaching and research in the wake of a controversy over comments he made to the *Indiana Daily Student*. Allerhand told the *ids* last October that on the basis of safety he would advise chemistry students to go to Purdue. "It was an urgent matter," he says, and the department had waited long enough for a positive response. The published reports of unsafe conditions in IU's undergraduate chemistry laboratories did focus public attention on the problems, but the Higher Education Commission had decided to table the funding request. Allerhand felt that it was necessary for him to resign as chairman if the project was going to proceed successfully from that point. The controversy seems to have had no effect on chemistry enrollments, however. According to Shiner, the number of chemistry students at IU rose sharply this fall.

The department's plea for additional space and modern safety equipment began long before the fall of 1981. In the early 1960s, it requested $5 million to build the Addition, an amount that would have been adequate, Allerhand says. But only $3 million was appropriated, and many corners had to be cut to build an addition the same size as one at the University of Illinois chemistry department, which cost $5 million.

Because of the cost-reduction measures taken then, many of the bare concrete walls and floors of the Addition still have not been painted, and the new electronic research equipment spills out of small rooms. Today, 10 to 15 freshmen must share each fume exhaust hood in the building, making it impossible to do some experiments. By comparison, at Purdue, each freshman has an individual hood. IU's present ventilation system does not allow for a remedy of the situation short of major renovation.

According to Allerhand, several factors compounded the lack of adequate funding for the Addition. A lack of expertise in planning for the future needs of a chemistry department caused some of the problems, he said. Also, some bad luck with engineering firms hired to work on the project combined to make the Addition what Allerhand strongly terms "a disaster." One example of "cost shaving" is the lack of a drainage system for condensation from air conditioning in the building. The former chairman, as well as most Addition occupants, keeps a pan on the floor to catch water from the unit in his office.

Department researchers "lived with" the deficiencies for several years, according to Shiner, until 1979 when a team of outside reviewers evaluated the department's functioning and also found the facilities lacking. Among the problems they noted were those stemming from the heating, ventilating, and air conditioning system in the building, which they termed "a joke."

The report said: "It is uncontrollable, apparently, in terms of providing a comfortable, safe environment for humans, animals, and machines. The hoods are ineffective at removing noxious vapors because their maximum airflow is totally inadequate. On occasion, they even "back up" and blow into the labs." Extreme fluctua-

(Continued on next page)

CHEMISTRY CRUNCH

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tions in laboratory temperatures from the faulty heating system have caused corks to pop out of bottles and experiments to be affected, according to Allerhand.

A lack of adequate storage space caused many researchers to use hallways as storage areas until OSHA inspectors required disposal of the chemicals. The outside reviewers also recommended that storage areas be made available for the hundreds of chemical compounds used by researchers.

The outside review was requested by IU officials as part of routine reviews mandated by the Indiana Higher Education Commission. Although critical of IU's physical facilities, it gave the faculty and department good ratings. Reviewers were Dale W. Margerum, chairman of Purdue's chemistry department; H. S. Gutowsky, chairman of the University of Illinois chemistry department; and Jerry A. Bell of the Simmons College faculty. The reviewers agreed that "the accumulation of problems is formidable" in IU's chemistry department. However, Shiner and Allerhand said that many of those problems will end when the proposed project is completed.

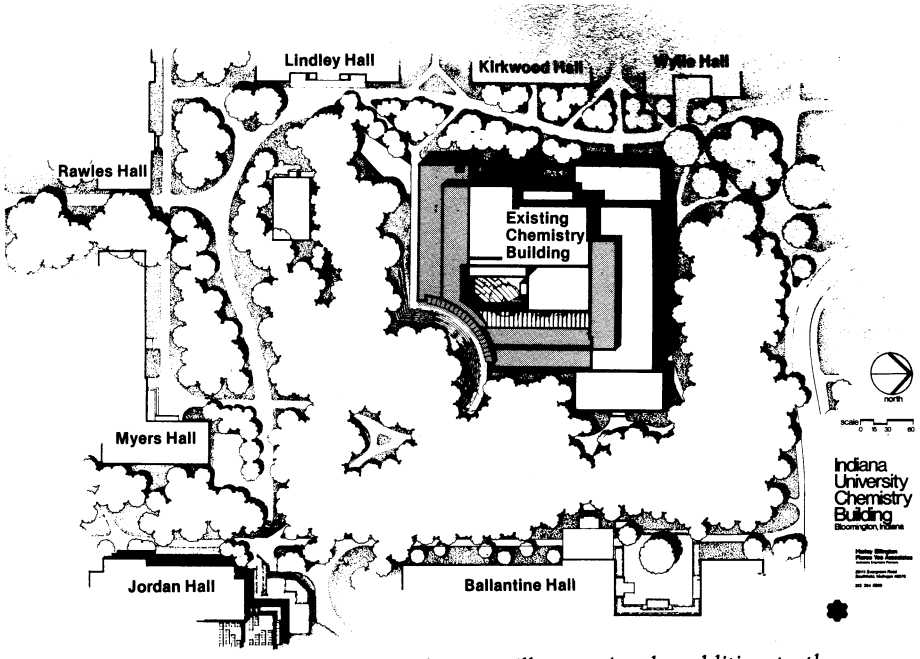
Also, demands for space in the chemistry department have increased the past few years due to the advent of computer technology and electronic instruments, according to both Allerhand and Shiner. More room is needed for large equipment.

With equipment crowded into laboratories, already-limited work space is at even more of a premium. According to Shiner, 120 square feet of working space per laboratory occupant is standard in the building, "whereas by modern design we ought to have about 180 to 200 square feet. (With the new addition), we plan to have about 180 square feet."

If the upcoming 1983 session of the General Assembly approves funding for the first phase of the renovation/building project, construction could begin in the fall of 1983, according to Shiner. The architect's preliminary design for Phase I was approved September 28 by the architectural committee of the IU Board of Trustees. It includes the addition of a new wing, 44,000 square feet of working space, which it is estimated by the Indiana Higher Education Commission will cost $15.5 million. New teaching laboratories for all undergraduate courses will be provided.

Upon completion of Phase I, researchers whose labs are in the Addition will move into the new building while the Addition is remodeled in Phase II, at a cost projected to be in the $8 million range. The final stage of the project, Phase III, will be remodeling of the original 1930s structure and is projected to be a $7.5 million request to the legislature for the 1985-87 biennium.

Despite less-than-ideal conditions the past several years, the situation has not stopped the department's climb in national college rankings. The Gourman Report, of 1980, ranked the department at 15th in the nation and number three in the Big 10 (behind Illinois and Wisconsin). Back in 1969 the Roose and Andersen Report had placed IU at only number 20 in chemistry. And Shiner believes future appraisals will put IU at a yet-higher ranking.



The shaded area of this architect's serial view will comprise the addition to the chemistry building. At top (west) are Lindley, Kirkwood, and Wylie halls. To the right is the front of the 1930s structure, which faces the Memorial Union.

"These ranks were taken before we had the recent addition of two nationally known synthetic organic chemists on our faculty. Because of that and because of the departmental developments and improvements we've had in analytical chemistry and inorganic chemistry," Shiner said, he expects the next ranking to be higher.

"I don't expect any personal credit because all of that was really done while Allerhand was chairman," Shiner said. "But I'm pleased with the way the department has developed in recent years."

Basic research grants have also been a positive measure of the department's growth, according to Shiner. "The amount of funding for basic research has gone up every year for the past four years by about 20 percent—up to $4.5 million a year now." At least one-seventh of the grant income of the Bloomington campus comes in through researchers in the chemistry department, according to Allerhand.

But the money for the building project must come from the state's general fund budget. Some state legislators say that Indiana's current economic condition makes 1983 a bad time to ask for funding for the initial phase of the largest capital improvement project in the history of Indiana higher education, according to legislative reports.

Shiner pointed to a number of factors that make this a good time to build. "It will help our economy when it is in a downturn," he said. "Further, interest rates are going down and are likely to continue in that direction into next spring, which is biding time. The companies and the workers need the work and will give it at a good price." He pointed to the fact that the bids for the renovation of Jordan Hall last spring came back below estimates. The chemistry building and renovation will be financed by issuing tax exempt bonds, he explained. "The interest rate on these bonds is now a little over ten percent in contrast to about 15 percent not too long ago."

Allerhand predicts that chemistry graduates will be in more demand in the future in Indiana. A Procter and Gamble study showed there is a national shortage of chemistry graduates and that the shortage will become greater in the future.

Besides the chemistry-related industries located in Indiana now, new enterprises such as genetic engineering should increase the demand for chemists, according to Allerhand. "It will also affect organic chemists, who have to make some fragments related to DNA by chemical methods."

Research and development of alternate energy sources such as solar and synfuels require expertise in several areas of chemistry. Those areas of research are also increasing demand for chemistry graduates.

Eli Lilly & Co. indicated its interest in the future of synthetic organic chemical research at IU with a $50,000 grant for renovating that segment of the department, according to the building project proposal.

Other administrators say that the promotion of the building project which Allerhand and Shiner have done is nothing short of phenomenal, but the real test of success will be this winter. That is when the Indiana General Assembly will vote on the $15.5 million appropriation for the first phase of the project. In 1985, the department may be moving into the new addition, and IU will begin to see the end of the space and safety problems that have been the major weak point of the department. Shiner anticipates that, by 1990, IU's chemistry department will "project into the top 10 in the country."

A LETTER FROM THE CHAIRMAN

Work in our Department of Chemistry seems to continue at an ever-quickening pace. It is a tribute to the quality of our programs that even in these relatively difficult times the total of research grants to the department continues to rise, reaching an annual rate of $4,500,000 last year. We also welcomed to the campus last fall one of the strongest graduate student classes ever admitted; and undergraduate enrollments in chemistry have increased by about 25% in the last three years.

Harley Ellington Pierce Yee Associates have finished the preliminary design phase for our addition and remodelling. The documents that they have provided are most impressive; I would enjoy showing them to those of you who have an opportunity to visit Bloomington. Everything is now in order awaiting the action of the Indiana General Assembly. Although this body, in a special session last Fall, acted courageously to raise taxes to meet the State's projected deficit, some uncertainties still cloud the future of state finances. Since our building will be financed through the University's (tax exempt) bonding authority, the project has the advantage of not impacting the State's short term revenue problem. Times of economic slack have historically proved advantageous for the investment in new publicly owned facilities. We hope that these arguments, along with the strong need to update our seriously deteriorating and out-dated physical plant, will persuade our legislators to approve the chemistry project.

I want to again thank all of you who have made contributions to "Friends of Chemistry" and to assure you that these resources are extremely important to the Department, especially in supporting our program of outside lectures and providing for special equipment needs.

There is much more I could say, but with as much copy as we already have for this edition, I must sign off. I look forward to greeting you in Seattle at the ACS meeting and/or at our reunion in Bloomington next Fall.

V.J. Shiner, Jr.
Professor and Chairman

Association of Indiana University Chemists NEWSLETTER

IU-Bloomington March, 1983
ISSN 0191-5185

Editor: Lynne L. Merritt, Jr.
Assistant Editors: Marvin Carmack, Terry Jenkins, Christian Kaslow
Production Supervisor: Susan Clark

THE INORGANIC BIENNIAL SYMPOSIUM

Indiana University, Bloomington, was the site of an International Symposium entitled "Inorganic Chemistry: Toward the 21st Century." The symposium was an historic occasion, being the first inorganic symposium to be jointly sponsored by the American Chemical Society, the Canadian Institute of Chemistry, and the Royal Society of Chemistry (U.K.), and was primarily the result of the efforts of Malcolm Chisholm, the symposium chairperson and coordinator.

The main topics for discussion were in the areas of inorganic photochemistry and energy conversion, thermal and photoinduced electron transfer processes, nonclassical coordination compounds including clusters and multiple bonds with metal atoms, and applications of various developing spectroscopic and analytical techniques to inorganic chemistry. The symposium was attended by over 350 participants. (IU Chemistry alumni attending are listed elsewhere in this Newsletter.)

In addition to the plenary lectures and discussion periods, there was an active poster session program organized around social hours. Over 100 posters were exhibited by the participants. The meetings and accommodations were held in the IMU and Poplars, and IU Chemistry was well represented in the program with plenary lectures being given by Professors Kochi and Chisholm, and Professor Caulton acting as a discussion leader. Several of the inorganic graduate students gave posters and the occasion provided for a natural reunion of many IU alumni.

The conference received financial support from a number of federal and independent research agencies and industries. A proceedings volume of the symposium is being published by the American Chemical Society.

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 supplemental 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—$16 Family Annual—$20
Single Life—$200 Family Life—$250

Make checks payable to IU Alumni Association, IMU-M17, Bloomington, Indiana, 47405.

KOCHI ELECTED TO NATIONAL ACADEMY OF SCIENCES

Jay K. Kochi

Jay K. Kochi was elected to the National Academy of Sciences in April 1982. He was one of only 60 new members elected last year and thus joins this most prestigious group of scientists in the United States. There are only six other living members of the National Academy of Sciences on the Indiana University Bloomington campus. These include Felix Haurowitz, chemistry; Marcus Rhoades, biology; John Preer, biology; Frank Putnam, biochemistry; Robert Briggs, biology; William D. Neff, psychology.

The National Academy of Sciences membership totals 1386 U.S. scientists and 209 foreign associates. Members are picked "in recognition of their distinguished and continuing achievements in original research."

Kochi joined Indiana University in 1969 after teaching at Case Western Reserve University, Cleveland, Ohio, and at Harvard University. He has also been a research chemist at Shell Development Company. Kochi is noted for his studies of free radical intermediates in chemical reactions.

STAFF AWARD FOR OUTSTANDING SERVICE

The 1982 award for outstanding service to the Department went to Ronald Withnell, Director of Technical Services in the Department. Ron came to IU in 1977 and is in general charge of such departmental support services as computer services, glassblowing shop, electronic instruments, the mass spectroscopy shop, mechanical services, the Molecular Structure Center and the nuclear magnetic resonance laboratories. As you can see from the list above, he is a very critical cog in the operation of the Department.

FACULTY NEWS

John Bartmess presented papers at the NSF Physical Organic Chemistry Conference in June at Pingree Park, Colorado. He also read papers in September at the NATO meeting for Ion/Molecule Reactions in Portugal and at the Euchem Conference on Gaseous vs. Solvated Ions in Rome.

Russell Bonham attended the Sagamore Conference on "Charge Spin and Momentum Density" at Nikko, Japan, August 23-30, 1982. He was elected a fellow of the American Physical Society in December, 1982.

E.E. Campaigne continues to be active in affairs of the Indiana Academy of Science. He serves on the editorial board for the Proceedings and as chairman of the Research Grants Committee. He is also a member of the Executive Committee of the Academy. He attended the ACS meeting in Kansas City as a councilor of the Division of Medicinal Chemistry.

Kenneth G. Caulton's research group is concentrating on the application of transition metal hydride compounds to the problem of reducing carbon monoxide and carbon dioxide to useful organic chemicals. This work has been presented at a conference on "C_1 Molecule Chemistry" at Bruges, Belgium and at a conference on the "Chemistry and Uses of Molybdenum" at Golden, Colorado. He has also spoken on the work at the New York Academy of Sciences as well as at the Universities of Arizona, Kentucky, Pittsburgh and West Virginia.

Malcolm Chisholm. Showing that one can combine work and pleasure both efficiently and joyfully, Malcolm Chisholm and Cyndy Truax, his secretary, were married May 1, 1982, thereby providing a memorable anniversary date for future celebrations. Malcolm was active on the lecture circuit, visiting a number of schools and industries, including Harvard, M.I.T., Cornell, Chicago, and Monsanto. He was also appointed to the committee set up to review the state of chemistry in the nation and the American Chemical Society journal, *Inorganic Chemistry*. He also assumed the position of American Editor for Polyhedron Reports and Symposia-in-Print.

Harry G. Day continues to be as active as ever in university, professional and civic affairs. He is in his office nearly every day. This past year he was made a Fellow of the American Institute of Nutrition. Harry has been a member of the Institute since 1940, was president in 1971-72 and is presently Chairman of the Committee on the History of Nutrition. He organized and chaired a symposium on "Total Parenteral Nutrition" which was part of the meeting of the American Institute of Nutrition in the spring of 1982. He and his wife, Gertrude, became residents of the IU Retirement Community, Meadowood, last summer and like living there in one of the garden units.

Frank R.N. Gurd along with Jay A. Berzofsky of the NIH and their colleagues have developed a semisynthetic procedure for reconstructing myoglobin, the oxygen-bearing protein in muscle cells [Proc. Natl. Acad. Sci., 79, 7739 (1982)]. This procedure opens the way for studying how many individual amino acid residues affect myoglobin. The method involves attaching synthetic peptides which can be altered chemically at will to a much larger, natural fragment of the protein. Techniques developed in this synthesis, the authors note, "extend the fragment condensation methodology to include large, minimally protected protein fragments soluble only in aqueous systems." The need for ineffective intermediate purifications is obviated. The method is particularly designed for examining behavior of the 13 amino acids nearest the amino terminal of the myoglobin polypeptide.

Felix Haurowitz was especially touched by the dedication of a book to him by Maxwell A. Richter, post-PhD'58-59, entitled "A Physician's Guide to the Theory and Practice of Clinical Immunology," University of Ottawa Press, 1980. The dedication reads, in part, "This book is also dedicated to Dr. Felix Haurowitz, M.D., D.Sc., Teacher extraordinaire of biochemistry, immunology, cell biology, physiology and chemistry. The year which my wife and I spent (I as a post-doctoral fellow) at the

(Continued on next page)

BIOGRAPHICAL SKETCH OF DR. FRANK C. MATHERS

Dr. Harry G. Day has finished a biographical "sketch" (over 40 pages in length) of Dr. Frank C. Mathers, 1881-1973. This publication will be sent to any person who contributes $25 or more to the IU Foundation for the Friends of Chemistry Fund or for the Mathers' Lectureship Fund or for any other chemistry fund [that assures a tax deduction on the gift].

Donors to the Department

The Department of Chemistry is grateful to the persons listed below for their contributions to support the work of the Department. Contributions may be sent to the chairman and should be made payable to the IU Foundation for the Friends of Chemistry account.

Burton L. Appleton, PhD'55; **Michael Aronson**, BS'67; **Harold Atkins**, AB'50; **Joe Baran**, BS'78; **David K. Barnes**, PhD'47; **Helen B. Barnes**, AB'38; **Jean C. Beckman**, PhD'77; **Nicholas Bensko**, MS'74; **Lawrence A. Black**, BS'77; **H.J. Blumenthal**, BS'47; **Thelma Bonecutter**, PhD'42; **Raymond E. Boucher**, PhD'50; **Charles H. Boxman**, AB'53; **John M. Brown**, AM'40; **John T. Brundage**, PhD'28; **Kenneth T. Burck**, BS'58; **Carol Cavender**, PhD'73; **Ming Jing Chang**, PhD'80; **Alan C. Clark**, PhD'70; **Ronald W. Collins**, PhD'62; **Eugene S. Corner**, AB'39; **Standiford H. Cox**, AB'57; **Lynn E. Dahl**, AB'70; **Troy C. Daniels**, PhD'29; **Ralph A. Davis**, AB'42; **Joseph Dec**, AB'36; **John B. Dennis**, AB'36; **Gerald E. Doeden**, PhD'64; **George P. Dolby**, AB'70; **John P. Doran**, BS'67; **Stephanie Scott Doran**, AB'68; **Linneaus C. Dorman**, PhD'61; **Terence J. Duffy**, AB'78; **LeRoy Dugan, Jr.**, BS'37; **H. Eldridge Faith**, BS'38; **W.H. Flack**, AB'50; **Becca C. Fleischer**, PhD'58; **Sidney Fleischer**, PhD'58; **Orpha D. Ford**, BS'45; **William W. Forgey**, MD'75; **Otis Fortner**, BS'40; **William O. Foye**, PhD'48; **Elizabeth Fraser**, AB'42; **Robert J. French**, MD'69; **Charles E. Frohman**, AM'48; **John A. Frump**, AB'50; **Joe W. Garrison**, AM'40; **Harry R. Gigous**, AM'32; **Charles H. Griffith**, AM'54; **Fred A. Griffitts**, PhD'36; **Frank A. Guthrie**, PhD'62; **H.S. Gutowsky**, AB'40; **V.L. Hammersley**, MS'75; **Evelyn S. Harte**, AB'34; **Miriam E. Hartzell**, AM'46; **David J. Hauber**, MS'74; **William C. Houser**, MD'71; **Tony E. Hugli**, PhD'68; **Ralph Humbaugh**, AB'26; **J. Martin Johnson**, MD'70; **Robert J. Kelly**, BS'68; **Franklin S. King**, BS'37; **Alfred C. Kinsey**, AB'21; **Stanley Krauhs**, MBA'75; **Nancy S. Krieger**, AB'72; **Ellen LaBelle**, MS'70; **Elma L. Lanterman**, PhD'51; **Joseph Leal**, PhD'53; **David L. Leland**, MS'73; **Arthur E. Lessor, Jr.**, PhD'55; **Edith S. Lessor**, PhD'56; **W.M. LeSuer**, PhD'48; **Luan Ho Lin**, PhD'67; **Ted J. Logan**, AB'53; **Andrew Loh**, BS'71; **Elizabeth Mantel**, AB'82; **Max M. Marsh**, BS'47; **William G. Mays**, BS'70; **Robert L. McAnally**, AB'71; **Robert C. McHarness**, AM'30; **Richard H. McIlroy, Sr.**, AB'62; **Ruy G. McLemore**, AM'60; **W.R. Merriman**, BS'52; **Fred M. Miller**, PhD'35; **Pearle A. Monroe**, PhD'52; **David Moody**, PhD'75; **Irene L. Morrison**, AM'60; **Kenneth Newnam**, AM'31; **Regina O'Connell**, BS'70; **James Pauloski**, AB'53; **Edgar L. Peglow**, AB'50; **David P. Prather**, MS'62; **Avis Rector**, AM'63; **Wilmer T. Rinehart**, PhD'40; **Frank J. Rishe**, AB'67; **Paul G. Roach**, BS'36; **Darrell G. Rose**, BS'61; **Irving Rosen**, PhD'51; **Maxine Rowe**, AB'40; **Sharad S. Sathe**, PhD'71; **Alverta Sohl Schantz**, BS'40; **Ann T. Schindler**, MS'57; **Robert S. Schroeder**, PhD'70; **Graham Schuler**; **Bernard Searle**, AB'49; **Eugene Seidel**, BS'44; **Clarence Shoemaker**, PhD'42; **Gilbert M. Shull**, BS'40; **Allen R. Siedle**, PhD'73; **Alice Sievert**, AB'50; **Carol A. Smith**, AB'60; **Nolan B. Sommer**, PhD'44; **Meredith P. Sparks**, AM'28; **Margaret Stevenson**, BS'40; **Steven A. Steward**, BS'68; **Mrs. Earl G. Sturdevant**; **Robert J. Sydor**, PhD'76; **James R. Thrasher**, AB'74; **Lella R. Trafelet**, AM'38; **John Van Cleve**, AM'65; **Byron M. Vanderbilt**, AB'29; **Verling M. Votaw**, AM'26; **Elaine H. Waiss**, MD'68; **Timothy J. Warfield**, BS'72; **John C. Warner**, PhD'23; **Charles Weber**, PhD'53; **Joseph E. Weber**, PhD'37; **Harold J. Wesselman**, AB'40; **Edward C. Wheeler**, MD'60; **Charles F. Wilson**, AB'78; **Henry S. Wilson**, PhD'38; **John S. Wilson**, AM'39; **Mrs. J. S. Wilson**, AM'38; **Bernard M. Winner**, AB'42; **Bernard Wolnak**, PhD'43; **Charles K. Wooldridge**, AM'63; **Jack P. Young**, PhD'55; **Harold H. Zeiss**, BS'38; **Morris Zimmerman**, PhD'55; **Daniel Zweig**, AB'78.

FACULTY NEWS

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University of Indiana, Bloomington, Indiana (1958-59) is indelibly fixed in my mind. Dr. Haurowitz demonstrated to me the uncanny ability to combine a gentle nature, a humble disposition, a wry sense of humor, a piercing mind and a fountain of knowledge in a manner which was most disarming but which left a permanent imprint on me." Felix says that this is as pleasing to him as any award. He and Mrs. Haurowitz also moved into Meadowood last year and are enjoying living in this new retirement community.

John C. Huffman, PhD'74, has been Director of our Molecular Structure Center since 1974. The Center is sometimes involved in providing research experience for some of the highly talented students who attend the annual High School Science Student Institute. In summer 1982 John supervised the work of participant Tanja Curtis, one of ten high school seniors in Indiana this year among the top 300 students in the nation who will compete for scholarships in this year's Westinghouse Science Talent Search.

Alfred Lewin, assistant professor of chemistry, whom you met as a new faculty member in last year's Newsletter, has received a Junior Faculty Research Award of $54,000 from the American Cancer Society. The grant extends through December 1984. Al's study of how bodies regulate the production of the chemical energy which they use for growth is useful in investigations of the growth of tumors.

Peter Langhoff was an invited lecturer at the NATO Advanced Study Institute on Methods in Computational Molecular Physics, West Germany, in August 1982. He is a frequent visitor to Europe, particularly Paris and Munich, in connection with collaborative research funded by the International Programs Division of the National Science Foundation. His travels in the U.S.A. take him to the JILA Data Center of the National Bureau of Standards, Boulder, Colorado, where he was a visiting Fellow in 1976, and to the NASA Ames Research Center, Mountain View, California, where he was a Senior Research Associate in 1978, in connection with continuing collaborative research projects.

Lynne L. Merritt, Jr. took early retirement in June, 1982 at the age of 67. He continues, however, to teach C315, Chemical Measurements Laboratory I, serve as Grand Marshal of the University and as Special Assistant to the President. In the latter capacity he represents the University on a number of boards. From July through December, 1982, he was Acting Dean for Academic Affairs at the I.U. Northwest campus in Gary, Indiana. He normally spent two days each week in Gary.

Milos Novotny continues to serve on the Advisory Committee to the Oak Ridge National Laboratory. He lectured at the Rocky Mountain ACS meeting and at the Gordon Conference on Analytical Chemistry last August, at the Eastern Analytical Symposium in November and the North Jersey Chromatography Discussion Group in December. Milos was the U.S. Coordinator of the Joint U.S.—Japanese Seminar on "Microcolumn Separation Methods" in Honolulu, Hawaii, August 25-28, 1982. Two of his former students, Jim Jorgenson, assistant professor at the University of North Carolina, and Mike McConnell, with Chromatex, Sunnyvale, California, were among the 38 participants at the seminar. After this seminar, Milos was invited by the Japanese organizers to give a lecture in Kyoto, Japan. In September, 1982, he was invited to give a plenary lecture at the International Symposium on "Biomedical Applications of Chromatography" in Hradec Kralove, Czechoslovakia and also to lecture at the 1982 International Symposium on Chromatography in London. He also gave an invited lecture at the 1982 LABCON, Chicago, and seminars at Louisiana State University and the University of Pittsburgh.

Charles S. Parmenter has been appointed for a three-year term to the Chemistry Advisory Board of the National Science Foundation. He was a lecturer at Gordon Conference on Electronic Spectroscopy and organized the section on Relaxation Processes in Isolated Systems. He was invited to lecture at numerous conferences and universities here and abroad; among these were the 28th IUPAC Congress, Vancouver, B.C., in August 1981; the International Meeting on State Specific Photodissociation at Berkeley, California, November 1981; the Third International Meeting on Picosecond Phenomena, Germisch, Germany, June 1982; the 15th Informal Photochemistry Meeting, SRI International, Stanford, California, June 1982; and the Gordon Conference on Electronic Spectroscopy in August 1982. He also organized the section on Relaxation Processes in Isolated Systems at this Gordon Conference. His invited lectures at universities include Georgia Tech, John Hopkins, Notre Dame Radiation Laboratory, Rutgers and the Universities of Michigan, Pennsylvania and Toronto.

James Reilly, assistant professor, was awarded a $25,000 research fellowship from the Alfred P. Sloan Foundation last spring. This is a two-year grant to be used for research in any way approved by the university. The grants were established by the Foundation in 1955 "as a means of stimulating fundamental research by young scholars at a time in their careers when government and other support is difficult to obtain and are designed to permit the greatest possible freedom and flexibility for the researchers." About 400 nominations were considered from fields of chemistry, economics, mathematics, and physics and only 88 were chosen. Jim uses ultraviolet lasers to study the behavior of molecules in chemical reactions in which light is absorbed or emitted. He is developing sophisticated new analytical techniques which can be applied to a variety of problems in chemistry.

Vic Viola is a member of the National Science Foundation Panel on the Status of Low-Energy Physics at NSF University Facilities, of the Executive Committee of the National Superconducting Cyclotron Laboratory at Michigan State University, and the Nuclear Science Review Committee of the Lawrence Berkeley Laboratory. He was also on the organizing committee for the Workshop on Nuclear Dynamics, Granlibakken, California. Vic gave three lectures in March 1982 as C.I.L., Inc., Distinguished Lecturer, Simon Fraser University, Vancouver, B.C. His other invited lecture activities include a talk at the Workshop on Nuclear Dynamics mentioned above, the Chemistry Colloquium at the University of Kentucky and the Indiana University Cyclotron Seminar in November 1982. He also attended the Gordon Conference on Nuclear Chemistry, New London, NH in June, the International Conference on Nucleus-Nucleus Collisions at Michigan State University in September and the Workshop on Proton-Nucleus Interaction at McCormick's Creek State Park in October.

Gary Wiggins is chairman of the Special Libraries Association Chemistry Division for 1982-83 and a member of the American Chemical Society, Division of Chemical Information, Program Committee. During the past year he attended the 6th International Conference on Computers in Chemical Research and Education, Washington, D.C. where he delivered a paper on "Teaching Computerized Chemical Information" and the Tri-Society (ACS, SLA, ASIS) Symposium on Technology and its Impact on the Future of Chemical Information Processing, Columbus, Ohio. He has published an article, "The Indiana University Chemical Information Center Program of Chemical Literature Instruction" in the Journal of Chemical Education, 59(12), 994-7, December 1982.

David Williams was informed just as this Newsletter was going to press that he has been awarded an Alfred P. Sloan Foundation research fellowship, thus joining James Reilly (see above) as one of two Sloan fellowship holders in this department. David is an Assistant Professor of Chemistry and came to the department in 1980. His research group is undertaking fundamental studies on the chemistry of recently discovered, biologically active natural products, such as terpenes, alkaloids and antibiotics, which are structurally unique and thus far unexplored. Generally, his efforts are focused on the preparation of complex substances of pharmacological significance. Presently, he is studying new agents for treatment of cardiovascular disorders and neoplastic diseases as well as new antibiotics.

UNDERGRADUATE NEWS

(D.G. Peters, H. Willett, eds.)

During the second semester of 1981-82 the Chemistry Department had 486 undergraduate chemistry majors (compared to 450 second semester of 1980-81). We graduated a total of 134 students (97 with B.A. degrees—down 7 from 1981—and 37 with B.S. degrees [33 were B.S. Chemistry and 4 were B.S. Biochemistry]—up 9 from 1981). For first semester of 1982-83 we had a total of 485 undergraduate chemistry majors.

Sixteen students participated in our Chemistry Honors Program during 1981-82 and 27 students engaged in C409 Chemical Research (an undergraduate research program entailing up to 10 hours of credit and requiring a thesis). Forty-one graduating seniors went on to medical school, 10 to dental school, 13 to graduate school in chemistry, 16 to graduate work in other areas, and 25 to industry.

The B.S. degree in Biochemistry, introduced in 1981-82, has met with a good deal of student interest. Semester I, 1982-83, 14 seniors and 27 juniors were declared B.S. Biochemistry majors. We expect to graduate 10 students with B.S. Biochemistry degrees this May.

The Chemistry Cooperative Education Program which began in 1980 continues to be an attractive opportunity for chemistry majors. During the 1982-83 school year, Ball Corporation, Dow Chemical Company, Inland Steel Company, Mead Johnson Company and the U.S. Department of Commerce have participated.

The annual Chemistry Honors Banquet was held on April 16, 1982. The following undergraduate students were honored:

Our Outstanding Senior Award (made possible by the Arts & Sciences Alumni Association Scholarship and Award Fund) went to **John N. Caviness. Mark R. Anderson** was awarded the 1982-83 Courson-Greeves Prize, and **Anne M. Wegener** received the Frederic C. Schmidt Award. **Melodye A. Smith** received the Joseph B. Schwartzkopf Award, and **Mark A. Henderson** and **Rosina M. Georgiadis** received awards from the Southern Indiana local ACS section. **Milita June Moore** was the recipient of The Dow Award.

Merck Indexes were presented to **Rodney J. Folz, Lauri Jill Hast,** and **Farid Sabet-Shargi.**

The R.J. Grim Scholarship recipients for 1981-82 were **Mark R. Anderson, Robert L. Bergren, John N. Caviness, Julie M. Freelin, Rodney J. Folz, Rosina M. Georgiadis, Lauri Jill Hast, Shari A. Owen, Michael S. Ross, Farid Sabet-Shargi, Melodye A. Smith,** and **Mark R. Wallace.**

Ira E. Lee Scholarships for full-time summer research for 1982 were awarded to **Linda L. Dearth, Andrew L. Deputy, Robert H. Falender, Julie M. Freelin, Lauri Jill Hast,** and **Laura A. Papach.** Dow Chemical Company Summer Scholarships were awarded to **David E. Cowen** and **Tax M. Georgiadis.**

Six students were recognized as superior in various freshman chemistry courses and received book certificates. Thirty-nine chemistry majors were elected to membership in Phi Beta Kappa. Eighteen seniors, 16 juniors, and 33 sophomore chemistry majors were on the Departmental Honor Rolls.

A large family group at this year's Banquet included Dr. and Mrs. Minas Georgiadis and their family. All four of the Georgiadis children have come to Indiana University to attend school and all four have been chemistry majors. Dr. Georgiadis received his PhD in organic chemistry from IU in 1963. Currently he is doing research at the University of Illinois while on sabbatical leave from the Agriculture University of Athens, Greece, where he is a Professor of Chemistry and Director of Research. The oldest son, Greg, received his B.S. in Chemistry from IU in 1980 and is currently in his third year of medical school at IU. Next in line, Rosina, graduated with her B.S. degree in Chemistry last May and is now doing graduate work in physical chemistry at Berkeley. Tax, a senior B.S. chemistry major, plans on graduate work in organic chemistry. The youngest, Katy, a freshman at IU, plans to do a B.S. degree in Biochemistry.

In 1981-82 the Chemistry Placement Office hosted 22 companies which conducted a total of 355 interviews. These included American Cynamid, AMOCO, Calgon Corporation, CONOCO, Dow Chemical Company, DOWELL, E.I. du Pont, Edwin Cooper (Division of Ethyl), Eli Lilly and Company, General Electric Company, Hercules Inc., Monsanto, PPG Industries, Pfizer Inc., Procter and Gamble Company, Rohm and Haas, Shell Oil Development Company, Standard Oil (OHIO), 3M Company, Union Carbide Corporation, Universal Oil Products, and The Upjohn Company.

Although the job market is not strong, we continue to attract a large group of leading chemical firms to the Chemistry Placement Office. During the 1982-83 recruiting season we have hosted 24 companies.

Dr. Dennis G. Peters served as Coordinator of Undergraduate Studies and Holly M. Willett as Academic Counselor and Placement Office Manager during the 1981-82 school year.

OUR NEW FACULTY MEMBER

George Christou has been appointed assistant professor although he will not be on board until next year. He is finishing up an appointment as Temporary Lecturer in the Department of Chemistry, Imperial College, London.

Dr. Christou was born in 1953 in the United Kingdom and received the B.Sc. (hono.) in 1974 and the PhD in 1977 from the University of Exeter. He carried out postdoctoral research with Dr. C.D. Garner at the University of Manchester, 1977-79, and was a NATO postdoctoral fellow with Professor R.H. Holm at Stanford and Harvard Universities, 1980-81. He has published over 30 papers on his research work.

Dr. Christou is a bio-inorganic chemist. His research is concerned with the synthesis and study of inorganic models ("synthetic analogs") for the metallosites of various metal-containing proteins and enzymes. His goal in the immediate future is the application of the synthetic analog approach to manganese-containing proteins and enzymes. Very little is known about the structure of the metallosite(s) in these systems, many of which have only recently been identified.

GRADUATE OFFICE NEWS

(P. Stapleton)

Professor **John Hayes** was Graduate Advisor during the 1981-82 school year. Serving with him as members of the Standards Committee were: Professors **Chisholm, Crandall, Gurd, Hieftje,** and **Parmenter.**

The department had a very successful year recruiting new graduate students. A total of 57 students started their graduate studies in August 1982. Professor **Paul A. Grieco** chaired the Graduate Admissions Committee. Evaluating the hundreds of dossiers submitted to the department were: Professors **Caulton, Lewin, Magnus, Reilly,** and **Wightman.**

FELLOWSHIP HOLDERS: We take great pleasure in reporting that **James G. Phillips** was the recipient of the Lubrizol Fellowship for 1981-82. Mr. Phillips will receive his PhD this spring. His research was completed under Prof. **David Williams** and involved "Asymmetric Synthesis with Sulfur Stabilized Carbanions." He transferred from Case Western University in June, 1980, when Prof. Williams moved to Indiana University. Mr. Phillips has taken a position with Bristol Myers in Syracuse, New York.

The 1981-82 Procter and Gamble Fellowship was awarded to **James E. Freeman.** Mr. Freeman is completing his research on "Near Infrared Atomic Emissions" under Prof. **Gary Hieftje.** He will complete his PhD in the Spring of 1984. Mr. Freeman received his undergraduate degree from Allegheny College and entered Indiana University in August, 1979.

Other fellowship winners were: **David B. Moss** who was awarded a Du Pont Summer Fellowship; **Kerry L. Blanchard, Richard D.**

England, and **Keith L. March**, who were awarded Medical Scientist Scholarships from the Insurance Medical Scientist Scholarship Fund; **Charles C. Kirkpatrick**, who was awarded a SOHIO Fellowship; **Kathleen A. Cornely, Jon H. Fong, Jennifer C. Gluckman**, and **Michaeleen Trimarchi**, who received G*POPs (Graduate and Professional Opportunities Program Fellowships); **Michaeleen C. Trimarchi**, who received a Foreign Language and Area Studies Fellowship (Polish); and **Vicki L. McGuffin**, who received an American Chemistry Society Fellowship-Division of Analytical Chemistry.

Graduate School Fellowships were awarded to the following first year students: **Timothy H. Lemmen, David B. Moss, David E. Honigs**, and **William J. Simonsick. Bertrand Garcia-Moreno** and **Robert L. Wilson** were awarded Summer Graduate School Fellowships.

Foreign students with fellowships were: **Zhen-Min He** and **Rui-lian Shao**, IU/Nankai University Exchange Fellowships; **Rudolf E. Jaffe, Jose L. Jimenez, Daniel A. Morales, Adriana Parisi**, and **Nuria Parisi**, Venezuelan Fellowships.

ANNUAL AWARDS: At the Chemistry Department Honors Banquet in April, 1982, the following students received the Du Pont Associate Instructors Award for excellence in teaching: **David L. Catlett, Jr., Stephen R. Springton**, and **Timothy H. Lemmen.**

The William Nebergall Memorial Award for outstanding research in inorganic chemistry was awarded to **Andrew L. Ratermann.** Mr. Ratermann is doing research under Prof. **Malcolm Chisholm.**

RECENT PhDs: PhD recipients for the 1980-81 and 1981-82 academic years were: **Aziz Abbaspour** (Organic, R.M. Jacobson) accepted a Postdoc position at Purdue University, West Lafayette, IN. **Bradley B. Basinger** (Organic, V.J. Shiner, Jr.) is currently in Medical School at the University of Kansas, Lawrence, KS. **Rachel A. Bauman** (Biochemistry, F.R.N. Gurd) is a Postdoc for Prof. Frank Putnam in the Biology Department at Indiana University, Bloomington. **Orest B. Boyko** (Biochemistry, F. W. Putnam) finished his Medical School studies at Indianapolis, IN, and is now interning in the Department of Pathology, Duke University, Durham, NC.

Mary E. Brawner (Biochemistry, S.R. Jaskunas) accepted a Postdoc at Yale University, New Haven, CT, and is now with Smith, Kline & Beckman, Philadelphia, PA. **Heather K. (Brown) Zimmerman** (Biochemistry, F.R.N. Gurd) is a Postdoc with Prof. Gurd at Indiana University, Bloomington. **Ming Jing Chang** (Organic, J.J. Gajewski) is at Rutgers-The State University, New Brunswick, NJ, as a Postdoc. **Tsu-Yu Raymond Chen** (Organic, D.G. Peters) took a Postdoc at the University of Oklahoma, Norman, OK.

John W. Clader (Organic, R.M. Jacobson) accepted a Postdoc at the University of Notre Dame, Notre Dame, IN, and is now with Hoffmann-LaRoche, Nutley, NJ. **William T. Cooper, III** (Analytical, J.M. Hayes) is an Assistant Professor at Florida State University, Tallahassee, Fl. **James D. Copp** (Organic, R.M. Jacobson) accepted a position with Eli Lilly & Co., Clinton Lab, IN. **Garrett D. Crawford, Jr.** (Biochemistry, H.R. Mahler) is at the City of Hope National Medical Center, Duarte, CA.

Thomas L. Croxton (Chemical Physics, D.A. McQuarrie) is currently a senior attending the IU Medical School at Indianapolis, IN. **Mark A. Dayton** (Biochemistry, R.M. Wightman) is currently in his last year of Medical School at Indianapolis, IN. **Michael J. DelleDonne** (Physical, P. Ortoleva) upon leaving IU accepted a Postdoc at Massachusetts Institute of Technology, Cambridge. **David A. Dolson** (Physical, C.S. Parmenter), is a Postdoc and Fellow at J.I.L.A., Boulder, CO.

Daniel M. Feinn (Physical, P. Ortoleva) is in Medical School at Indianapolis, IN. **Thomas J. Fitzharris** (Biochemistry, J.A.K. Harmony) is, also, in Medical School in Indianapolis, IN. **Lawrence R. Finger** (Biochemistry, J.P. Richardson) accepted a Postdoc at Friedich Miescher Institute in Switzerland and is now a Postdoc Fellow with Westar Institute of Anatomy & Biology, Philadelphia, PA.

Vickie L. (Gertler) Hess (Physical, A. Szabo) is an instructor at Taylor University, Upland, IN. **Deborah K. (Pickett) Hanson** (Biochemistry, H.R. Mahler) took a Postdoc at Cornell University in the Section of Genetics & Development, Ithaca, NY. **Gregory L. Hillhouse** (Inorganic, B.L. Haymore) accepted a Postdoc at the California Institute of Technology, Pasadena. He has recently accepted a faculty position at the University of Chicago. **Jahei Ihm** (Biochemistry, J.A.K. Harmony) served as a Postdoc at Indiana University and then returned to Korea.

Patrick K. Jaynes (Biochemistry, H.R. Mahler) accepted a position with American Medical Labs, Inc., of Fairfax, VA. **Robin L. Kump** (Inorganic, L.J. Todd) is a research chemist at E.I. du Pont de Nemours Co., Wilmington, DE. **Richard L. Kopec** (Physical, G.E. Ewing) accepted a teaching position at Incarnate Word College, San Antonio, TX.

George P. Lahm (Organic, R.M. Jacobson) is a research chemist with E.I. du Pont de Nemours Co., Wilmington, DE. **Raima Larter** (Physical, P. Ortoleva) served as a Postdoc at Princeton University, Princeton, NJ, and is now a Visiting Assistant Professor of Chemistry at IUPU in Indianapolis, IN. **Willie Lau** (Organic, J.K. Kochi) is a Postdoc for Prof. Kochi, Indiana University, Bloomington. **Larry N. Lewis** (Inorganic, K.G. Caulton) accepted a job as research chemist at Monsanto Research Corp., Miamisburg, OH, and is now at General Electric in Schenctady, NY.

Giovanni Lipari (Physical, A. Szabo), shortly after completing his PhD, accidently drowned off the coast of North Carolina during a freak storm. **Eric A. Maatta** (Inorganic, R.A.D. Wentworth) went to Northwestern University, Evanston, IL, as a Postdoc and is now an Assistant Professor at Kansas State University, Manhattan, KS. **David Tung Mao** (Organic, S.R. Wilson) accepted a Postdoc at Texas A&M University, College Station, TX.

Daniel J. Margoliash (Chemical Physics, P.W. Langhoff) is at the University of Western Ontario, London, Ontario, Canada, as a Postdoc. **John A. Marsella** (Inorganic, K.G. Caulton) took a position as a research scientist with Air Products & Chemical, Inc., Allentown, PA. **Astley McLaughlin** (Organic, E.E. Campaigne) is working for Eastman Kodak Co., Rochester, NY. **Joseph Lee Meuth** (Biochemistry, F.R.N. Gurd) accepted a position with Scripps Clinic & Research Foundation, La Jolla, CA.

Raj N. Misra (Organic, S.R. Wilson) accepted a Postdoc at Princeton University, Princeton, NJ, and is now with Squibb Corp., New York, NY. **K. David Monson** (Analytical, J.M. Hayes) is with E.I. du Pont de Nemours & Co., Inc., Wilmington, DE. **Fernando Rei Ornellas** (Chemical Physics, S. Hagstrom) is now a government scientist, Institute of Space Activities, Brazil. **Eric W. Otterbacher** (Organic, J.J. Gajewski) took a position with Dow Chemical, Central Research, Midland, MI.

Rex D. Pendley (Physical, G.W. Ewing) served as a Postdoc at Harvard University, Cambridge, MA, and is now at Computer Sciences Corp., Silver Springs, MD. **Nancy Ratner** (Biochemistry, H.R. Mahler) is a Postdoc in the Department of Anatomy & Neurobiology at Washington University School of Medicine, St. Louis, MO. **Holly Ann Read** (Biochemistry, S.R. Jaskunas) is in Medical School at Indianapolis, IN. **Gerald R. Rhodes** (Analytical, M.V. Novotny) went to Postdoc at the University of Virginia, Charlottesville, VA, and is now with Rohm & Haas, Philadelphia, PA.

Kevin L. Rollick (Organic, J.K. Kochi) took a job with Goodyear Tire and Rubber Co., Akron, OH. **Richard E. Russo** (Analytical, G.M. Hieftje) accepted a position with Procter & Gamble, Cincinnati, OH, and is now a research scientist at Lawrence Berkeley Laboratory in Berkeley, CA. **Steven L. Schmidt** (Physical, P. Ortoleva) accepted a position as a research scientist at Western Electric, Princeton, NJ. **Mark T. Skoog** (Biochemistry, E.H. Cordes) was a Postdoc at Brandeis University, Waltham, MA, and is now with Merrell Dow Pharmaceuticals, Cincinnati, OH.

Sharon L. Smith (Analytical, M.V. Novotny) took a job with Eli Lilly and Co., Indianapolis, IN, and is now a staff scientist, IBM Instruments, Danbury, CT. **Loon-Seng Tan** (Inorganic, M.H. Chisholm) is at Wright State University, Dayton, OH, as a Postdoc. **Erland P. Wittig** (Analytical, G.M. Hieftje), after completing his PhD, accepted a position with Chevron Research Company, Richmond, CA. **Tommy W. Yarbrough** (Physical, C.S. Parmenter) is at the U.S. Navy Nuclear Power School, Orlando, FL. **Richard Yodice** (Organic,

(Continued on next page)

E.E. Campaigne) accepted a position with Lubrizol, Cleveland, OH.

M.S. RECIPIENTS: The following students recently completed the requirements for the M.S. degree. **Ahmed R. Al-Mutairy** (W.T. Jenkins), Instructor, King Faisal University, Saudi Arabia; **Bernardo Chataing-Nieves** (J.A.K. Harmony); **Celinda Hernandez** (J.J. Gajewski), Universidad de Los Andes, Merida, Venezuela; **Diana Hernandez** (L.J. Todd), Instituto Universitario Pedagagico, Caracas, Venezuela; **James R. Koch** (J.K. Kochi), E.I. du Pont de Nemours, Troy, MI; **Ralph E. Lemke** (G.M. Hieftje), Sylvania Systems Group, GTE Products Corp., Mountain View, CA, and is now with VisiCorp., San Jose, CA; **John G. Noel** (J.A.K. Harmony), Research Assistant, University of Cincinnati; **John Reel** (P.A. Grieco), Eli Lilly & Co., Indianapolis, IN; **Peter L. Riley** (F. Putnam), Upjohn Co., Kalamazoo, MI; **Julia M. Stone** (K.G. Caulton); **Esther E. Vogelstein** (G.M. Hieftje); **Aaron D. Weiss** (G.M. Hieftje), Plasma-Therm, Inc., Kresson, NJ.

M.A.T. RECIPIENT: **Ekram Abdulkarim,** Instructor, Sudan.

NEWS OF ALUMNI

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

Chemistry alumni are encouraged to maintain membership in the IU Alumni Association. The cost is relatively small. It benefits the individual and the Department as well as the University. At least three chemistry graduates (V.M. Votaw, J.M. Black, and E.G. High) have been presidents of this high-ranking association. Our AIUC is important in the Alumni Association.

Social Hours: Alumni and other friends of chemistry who signed the well-known registration book at the ACS meeting in Las Vegas in March included Tom **Britton,** BS'72; Alan C. **Clark,** PhD'70; Nancy **Clark,** MS'69; W.F. **Coleman,** PhD'70; Robert **Degeilh,** PhD'56; David **Dolson,** PhD'81; Melvin **Druelinger,** BS'62; Tad **Kleindeinst,** PhD'77; Joe **Leal,** PhD'53; Ronald **Lewis,** PhD'66; Ted **Logan,** AB'53; Linda **Powell,** PhD'80; Fredrick **Stein,** PhD'71; Robert **Street,** MS'68; Robert M. **Summers,** PhD'55; Jim **Wolfe,** PhD'63; Jay N. **Young,** BS'39; and former faculty member Ernest Wenkert, as well as the current department chairman, Jack Shiner.

Those who registered at the Kansas City meeting in September included: Robert **Ake,** AB'60; Doug **Armstrong,** BS'63; George **Bodner,** PhD'72; Frank **Cheng,** PhD'57; Richard **Enrione** PhD'62 and Mrs. Enrione, Margaret **Flanagan;** graduate student; S.R. **Hartshorn,** Post-PhD'67-69; Andrew **Komin,** PhD'75; Andy **Loh,** PhD'71; K. David **Monson,** PhD'81; David **Moody,** PhD'75; Phil **Nubel,** BS'79; Kathy **Prodan,** MS'76; Bob **Sawicki,** PhD'78; Robert **Schroeder,** PhD'70; Heather (Brown) **Simmerman,** PhD'81; Marvin **Yates,** PhD'64; and Jay **Young,** BS'39. Former faculty member Riley Schaeffer and current faculty, Jack Shiner, Mr. and Mrs. Marvin Carmack and Mr. and Mrs. Harry Day were also in attendance.

Chemistry alumni who attended the ACS Inorganic Chemistry Symposium held on the Bloomington campus in May 1982 included: Don **Gaines,** PhD'63; Jim **Hickey,** PhD'77; Paul **Hoffman,** PhD'75; Larry **Lewis,** PhD'80; Ken **Moloy,** BS'80; Dave **Moody,** PhD'75; Phil **Nubel,** BS'79; Eric **Otterbacher,** PhD'80; Al **Sattelberger,** PhD'75; Al **Seidle,** PhD'73; Lee **Thompson,** PhD'64.

There were many alumni and others who visited the campus and stopped in Room 121 (Chemistry Alumni Records and Archives—Day and Greene): Basil **Anex,** post PhD'59-60; David K. **Barnes,** PhD'47; Paul **Burnett,** PhD'61 and Mrs. Burnett; Joseph A. **Davis,** PhD'55; Robert **Degeilh,** PhD'55; John **Dennis,** AB'36; Dale **Fink,** BS'41; Charles **Frohman,** AM'48 and Mrs. Evelyn (Sisson) **Frohman,** BS'43; John **McKenzie,** MA'34; V.L. "Bud" **Miller,** MS'38; Herbert **Moss,** PhD'60 and Mrs. Geraldine (Germeck) **Moss,** BS'59; Bill **Samson,** BS'43; Nolan **Sommer,** PhD'44; John G. **Stevens,** BS'65; and James O. **Stewart,** BS'54.

In various ways we have learned more about the achievements and interests of many alumni than can be recorded in our limited space. Supplemental information will be gladly furnished upon request.

Bennie C. Arnwine, Grad. '52-53, was here only a short time, but he keeps in touch through communications with E. Campaigne. For some time he was with Mobil R&D at Paulsboro, N.J., but three years ago they moved to Dallas, Texas, where Bennie is responsible for Plant and Financial Operations.

Charles E. Becker, PhD'51, has retired from the U. of Detroit, and is living in a new house at St. Clair Shores, Michigan.

Ram Dev Bedi, PhD'60, although still suffering some from muscle spasms incurred in an auto accident some ten years ago, has obtained great relief from low back pains by treatment at the Shealy Pain Clinic in Springfield, Missouri. He has purchased a 40 year-old home on a small private lake in a northwest suburb of Detroit, has enlarged and remodeled it, and plans to move into it in March.

His family business, V&V, named after his twin sons, Vijay and Vivek, did approximately 30% more business in 1982 than in 1981. They have added an extra person in the office and hope to do the same in production this winter. Their diversification of the market and product line has helped them survive better in the depressed Michigan economy.

James H. Beeson, BS'62, is Assistant Professor in the School of Medicine of the University of Utah, and is studying immunologic similarities between pregnancy and tumorigenisis. Jim's career began in developing new chemical instrumentation with Varian Aerograph in California, then with Miles Laboratories in Elkhart. Finally he entered medical school at the University of Chicago. He went on to residency and specialization in obstetrics before joining the University of Utah Medical School Faculty.

William Bell, AM'18, has been a loyal alumnus since the year that he did graduate work here under the direction of F.C. Mathers. The Coleman & Bell Company he helped form and operate was a leader in providing biological stains and a large line of chemicals. The Bell student loan fund in the Department has much value. As Mr. Bell has recently concluded, if it helps only one student per year it is worthwhile. The Bells have retired to Mississippi to keep warm and be near members of their family.

Mohammad Behforouz, PhD'65, recently joined the Chemistry faculty at Ball State University. After leaving IUB he was with the Monsanto Company before assuming a professorship at his home university in Shiraz, Iran. He became Professor of Chemistry and Dean of the College of Arts and Sciences, but returned to the United States with his wife Nancy and three children several years ago, and has been doing research at Boston College in the field of natural products synthesis. Dr. Behforouz will do research in natural products, while wife Nancy is completing her PhD degree in Public Health at Harvard University.

Glenn A. Berchtold, PhD'59, has been at MIT more than 20 years. He has recently completed the first synthesis of chorismic acid, an intermediate in the biosynthesis of phenylalanine and tyrosine, as well as of other natural products. The Berchtolds live in Lexington, Massachusetts. They have enjoyed sabbatical leaves in Zurich and at Santa Barbara.

Sam Berkowitz, MS'63, is Vice President of PPD, a subsidiary of ANTA Corporation. He and his wife live in Marietta, Georgia, with their two children. His company has technology for handling of plastics, including packaging, coatings, and impregnating sintered metal parts.

Bill Bromer, PhD'53, having been much involved at Eli Lilly in the biosynthesis of human insulin—which is now on the market—is expected to focus on another big project. He has been at Lilly 30 years. He and wife Pat celebrated the insulin achievement and their 30 years of marriage by spending a month touring Ireland and Britain.

The Walter, MS'47, and **Jacqueline** (Hyberg), AM'49, **Budde** family live in Blooming Prairie, MN and travel near Bloomington, IN occasionally in visiting family in Cincinnati and in Louisville.

J. Paul Burnett, PhD'61, is director of Molecular Biology program at Eli Lilly. On the occasion to honor **Max Marsh,** BS'47, by the Department of Chemistry in 1982 Paul was one of the speakers. He was introduced by Distinguished Professor Emeritus of Chemistry Felix Haurowitz.

Richard T. Cady, PhD'52, retired from his long-term work at duPont two years ago. The family still lives at Woodstown, NJ. He is involved in computer programs and astronomy, and he is doing some part time teaching in a large chemical plant.

Gary Caldwell, PhD'82, has a postdoctoral appointment in the laboratory of Professor Paul Kebarle at U. of Alberta.

Gerald L. Carlson, BS'69, at S.C. Johnson and Son, Inc. since 1981, and three coworkers elsewhere, have recently published convincing evidence that the prematurely ballyhooed starch blockers (-amylase inhibitors) for weight reduction do not impair the digestion of starch when added to the diet of human subjects. At IU Gerald learned much in Campaigne's laboratory while doing undergraduate research.

R. Vincent Cash, PhD'52, has retired from Central Connecticut College. The family now lives in Florida, but they "hope to get to Bloomington one of these days."

Frank (Hsieh-fu) Cheng, PhD'57, and wife continue to live in Iowa City but all three daughters are away from home. Frank attended the ACS meeting in Kansas City.

Choong W. Chung, Post Phd'57-60, and his M.D. wife live in McLean, VA. She is a practicing ophthalmologist and since 1977 he has been a scientist in the Division of Toxicology at FDA.

John F. Christman, AM'46, and wife Neale continue the connection with Loyola of New Orleans. Besides his special involvement in computer-assisted instruction, he addresses a few local sections of the ACS every year.

Donald J. Cook, PhD'44, and Marion live in retirement at Greencastle. He had major surgery last year but seems to be doing well. Their Christmas card this year reproduced a significant passage from Jack's book *Elements of Chemistry.*

Carl W. Cotman, PhD'68, and coworkers in the Department of Psychobiology at U. California, Irvine, have been major contributors to advances in neurobiology. Their impressive paper in an issue of Science in 1982 was given prominence on the AP News and TV broadcasts. At IU Carl was introduced to brain biochemistry by H.R. Mahler and W.J. Moore.

Chester Davis, BS'44, has had his own private research program almost 30 years. His achievements have been primarily in the development of the imaging system now used in a well known carbonless paper. But the invention has been in litigation for several years on the matter of paying royalties. He holds about a score of patents.

Joseph (Chip) Davis, Jr., AB'78, is Account Manager for Schenectady Chemicals, Inc., with headquarters at Houston, Texas. Oilfield emulsion breakers and surfactants are supplied to Texans and others who can use them.

Bryce Douglas, post PhD'53-55, is Vice President for Science and Technology of Smith Kline Beckman Corporation. He is responsible for the incorporation of new scientific and technological advances into the research program in developing new medicinal and diagnostic products and procedures. He and Joyce have three sons.

Richard L. Ellis, PhD'67, and wife Pat brought their son Greg to IU for the latter to enroll and for all to visit Dick's graduate school mentor, E. Campaigne. Dick is the director of the Analytical Section, Department of Agriculture and his family lives at Columbia, MD.

Raleigh Farlow, BS'75, is a supervisor/research scientist with a staff of 11 at the Municipality of Metropolitan Seattle. Their environmental/toxicology studies in the area focus on urban receiving waters and municipal sludge application sites. He did much undergraduate research here under Novotny's direction.

Dale J. Fisher, PhD'51, was the recipient of the Distinguished Alumni Award from the University of Wisconsin at Oshkosh in 1982. He has been re-elected as the President of the Gem, Lapidary, and Mineral Society of Washington, D.C. He is also into lap swimming and circuit weight training. Since 1976 he has been directing research programs in the FDA for development of instrumentation important in obtaining information for diagnosis and patient care. He and the family live at Columbia, MD.

James P. Ferris, PhD'58, is Chairman of the Department of Chemistry of Rensselaer Polytechnic Institute. Recently, he assumed the Editorship of the journal, *Origins of Life,* published in Holland. He has been studying prebiotic chemistry since his period of research at the Salk Institute in La Jolla. Joan Ferris is Associate Executive of the Albany Presbytery.

Edmund A. Flexman, PhD'66, has worked in the Research Laboratories of duPont in Wilmington since leaving IU. His research on the development of a new polymer will be revealed when duPont introduces it commercially in 1983. Ed and Ruth lead busy lives in a Wilmington suburb, with Ed serving as a promotion chairman for the United Way and Ruth active in camping trips, church activities, and community service.

Robert B. Forney, PhD'48, became a member of the faculty in 1946 and is now Distinguished Professor of Toxicology. He is the State Toxicologist. He frequently makes public appearances and he is quoted by the press.

Bill Foye, PhD'48, had a fascinating tour of India and Thailand a year ago and he lectured at a number of universities and other institutions. All of the colleges of pharmacy he visited were using his book, *Principles of Medicinal Chemistry.*

Charles E. Frohman, MS'48, and **Evelyn (Sisson) Frohman,** BS'43, have a son in mathematics at IU whom they visit occasionally. Charles is still making progress in brain chemistry. They live at Grosse Pointe, MI.

Gerald R. Galluppi, PhD'78, and a colleague at the Monsanto Company in St. Louis gave an important paper at the Spring 1982 meeting of the ACS on accelerating the synthesis of DNA. The essence of the work was reported in Science on April 23, 1982. At IU John Richardson directed Galluppi's doctoral work.

Harry C. Gatos, AM'48, continues to be in the forefront of developments in electronic materials and various areas of electrochemistry. Last fall he gave the prestigious Acheson Lecture in Detroit. His many recognitions include honorary membership in the Electrochemical Society. He has held many positions of responsibility in academic, industrial, and governmental organizations. He is Professor of Electronic Materials and Molecular Engineering at MIT. Also he is a skilled musician and Trustee of the Longy School of Music.

Minas Georgiadis, PhD'63, and all his family attended the Chemistry Honors Banquet in 1982. For a resume of the family activities, see Undergraduate News.

George T. Gifford, AB'32, and wife come to Bloomington frequently since they live in Indianapolis. This was a special year because it marked the 50th year of his graduation.

Jack M. Gill, PhD'63, has had several careers: first, as research chemist at Monsanto, then as Director of Research and Development at Varian Aerograph, Vice-President of the Autolab Division of Vidar Corporation, and Executive Vice President of SpectraPhysics, Santa Clara, California.

(Continued on next page)

DAVID BARNES RECIPIENT OF DISTINGUISHED ALUMNI SERVICE AWARD

David Kenneth Barnes, PhD'47, was awarded the Distinguished Alumni Service Award at a luncheon at Bloomington, June 20, 1982. David is Executive Vice President, Director, and member of the Executive Committee of E.I. duPont deNemours and Company. He came to IU with a BS degree from Olivet College, whose Distinguished Alumni citation he also holds. He began his career with the Stanolind Oil and Gas Company in 1947, and moved in 1953 to the duPont Company as a senior research chemist in the plant technical section of their dacron division. In 1967 he became director of the manufacturing division of duPont's industrial and biochemical department, was made vice president of the textile fibers department, and achieved his present rank in 1981. He was head of the duPont team in the acquisition of the Conoco Company, and he continues to have primary liaison responsibility for the worldwide textile fibers business and duPont's petrochemicals department.

Jack has recently joined two associates to organize his own venture capital firm, Vanguard Associates, Menlo Park, CA. This firm is engaged in raising capital and providing entrepreneurial experience and guidance for the launching of new business enterprises in the area of high technology. Jack also has lectured in the Business School at Stanford University. He and his wife, Linda, live in Palo Alto, and pursue many hobbies such as collecting fine wines and classic automobiles.

Antonio Hernandez, PhD'77, and wife **Eglee,** BS'77, will spend part of a sabbatical year at IUB in 1983. He is Associate Professor of Chemistry at Simon Bolivar University, Caracas, Venezuela.

Phil Hidy, PhD'44, and Marion have been in retirement a few years, in Terre Haute, but each winter they spend several weeks in Hawaii.

Edward G. High, PhD'50, has recently been appointed to the National Advisory Council on Aging of NIH. He has served in various other capacities on state and national commissions and committees concerning health and aging. In 1982 he completed his exceptionally successful year as President of the Indiana University Alumni Association. This part time activity required much consultation, wise leadership, and visits to many alumni clubs in different parts of the country.

James Jorgenson, PhD'79, is Assistant Professor at the University of North Carolina. In 1982 he was selected from approximately 35 applicants to receive the DuPont Young Faculty Development Award.

Katherine L. Knight, PhD'66, publishes extensively on immunology. Recently one of her papers appeared in the Proceedings of the National Academy of Sciences. She is Professor of Microbiology in the School of Medicine of the University of Illinois at the Chicago campus.

Andrew P. Komin, PhD'75, moved from the Fine Chemicals Division of the Southland Corporation in New Jersey to the Research Division of Koch Industries, located in Wichita. Koch Industries is a large and diversified corporation, with extensive interests in oil drilling, chemicals, cattle production, and more recently fine chemicals. Andy Komin is joining the new corporate venture in developing the production of fine synthetic chemicals.

Gunter Kuehl, Post PhD'57-59, and Christine continue to live at Cherry Hill, NJ. They generally attend ACS national meetings. They have pleasant memories of

Horst Langer, Post PhD'56-58, spoke in the Chemistry Seminar last June on "Thermal Analysis by Mass Spectrometry." He is connected with the New England Laboratory of the Dow Chemical Company. The Langers' daughter is a student at IU.

Elma Lanterman, PhD'51, retired from ~~Continental Can~~ Company last year and has moved to Marshfield, Wisconsin.

Milton Lee, PhD'75, received an award in 1982 for distinguished faculty research at Brigham Young University where he is an Associate Professor.

Dennis Lichtenberger, BS'69, has been on the faculty at the University of Arizona since 1976 and is now Associate Professor of Chemistry. He and his associates have published approximately 30 papers primarily on the characteristization of the electronic interactions between small molecules and metals. He has lectured and presented papers at institutions and scientific meetings on more than 30 occasions. The several special recognitions include citation for outstanding graduate work at Wisconsin in 1974 and he was a recipient of a Sloan Research Fellowship in 1979-81.

John S. McAnally, PhD'50, and Ruth have been living in retirement since June. Their new home is in Pacific Grove, CA. Jack is now on a part-time assignment advising pre-med students at U.C. Santa Cruz.

John H. McKenzie, AM'34, and his wife drove 5200 miles this summer to see new sights and enable him to attend the 50th Anniversary meeting of his class (AB'32) at IU. They live near Houston.

James W. Mair, MS'70, and Diane have bought a nice new home at Lansdale, PA, but landscaping cannot be completed until this spring. Obviously he is doing well in Rohm and Haas' Research Division Industrial Hygiene program.

Dan Margoliash, PhD'80, changed from postdoctoral status to faculty status in the Department of Computer Science at U. Western Ontario.

Max Marsh, BS'47, was the first recipient of the newly established Award for Meritorious Service by an Alumnus of the Department of Chemistry. It consists of a gold medal and a certificate. The presentation was made at a symposium on March 12 in the areas of research in which he has worked at Eli Lilly in Indianapolis. Several of his colleagues at Lilly's were speakers.

David Mao, PhD'80, continues his research at NIH in Bethesda, MD on the synthesis of nucleosides of significance in research on cancer.

Thomas N. Mathers, AB'36, did not major in chemistry but his deceased brother, **William Hammond Mathers,** AB with Honors, '38, was an outstanding chemistry major who died less than three months after graduation. Brother Tom will be on campus on April 21 for the dedication of the William Hammond Mathers Museum. This attractive and important addition to the University's resources was made possible by a generous gift of the father, Dr. Frank C. Mathers.

Dana W. Mayo, PhD'59, has been a chemistry faculty member at Bowdoin College for more than 20 years, and has served as Chairman during part of that time. In 1972 he assumed responsibility for the famous Summer Course in Infrared Spectroscopy founded and conducted by Professor Richard Lord for many years at MIT, Dana's undergraduate alma mater. For the past ten years it has been presented on the Bowdoin campus. Last year Dana and several collaborators took it to Norway. This year, at the invitation of the Mainland Chinese government, Dana and three other faculty will present a three-week version of the course in Shanghai, China. They are scheduled also to present it in a London suburb in 1984.

A new project is presently engaging much of Dana Mayo's attention, in association with colleagues in the Chemistry Department. It involves a comprehensive reorganization of the beginning organic chemistry laboratory courses to reduce greatly or eliminate the hazards of exposure to chemical substances and of fire and explosion.

Dana also reports that Jennifer Cordes is a student at Bowdoin, as is also a daughter of **Leonard Weinstock,** PhD'57, Director of Process Research at Merck & Co., Rahway, NJ.

John Meade, AB'67, and his family are now residents of Indianapolis. John has become a partner in a new law firm, Bayh, Tabbert, and Capehart.

Ravi Mehra, PhD'68, and wife Renu travelled from their home in Maharastra, India and spent some weeks in Europe and England. He is manager of quality control at Roche (India).

Clyde R. Metz, PhD'66, last year became Professor of Chemistry at The College of Charleston at Charleston, SC. He had been a member of the faculty at IUPUI since leaving IUB in 1966. He has written and published many teaching materials in general chemistry and physical chemistry. Since 1978 he has been a co-author of the well known *Chemistry* by J.C. Bailar and coworkers. At IUB Ralph Seifert was his mentor.

John W. Morgan, AB'63, and Judy have a son who expects to enroll at IU in 1983. John continues to help keep P&G prosperous.

Rodney Moss, PhD'51, and wife Phyllis have been connected with Dow Chemical a long time. Rod keeps in touch with his people in Japan, Korea, Taiwan, Phillipines, Malaysia, Indonesia, Thailand, India, Pakistan, Australia, New Zealand, and China. The Mosses live in Hong Kong.

Joseph C. Muhler, PhD'51 (also DDS'48), was inducted into the Indiana Academy for his contributions to the cultural, educational, civic and social life of the state. Among his many recognitions, the highest awarded by IU is the Distinguished Service Alumni Award which he received in 1980. He and Majetta have a son in graduate school at IUB.

Fred W. Neumann, PhD'45, since retiring from Dow Chemical two years ago, has made music his main hobby. There are rehearsals and performances at least two times per week. He still lives in Midland.

Robert L. Patrick, PhD'51, has become a free lancer again. He and his wife Carol are operating several businesses and he has his own consulting firm, Trabor Associates.

John B. Patton, AB'38, who has many distinctions, has been chosen by the American Association of Petroleum Geologists to receive the organization's Public Servic Award in April 1983. He is Director of the Indiana Geological Survey, State Geologist, and Professor of Geology at IU.

William W. Paudler, PhD'59, after serving as Chairman of Chemistry at the Uni-

versity of Alabama for more than six years, moved to Portland State University, Portland, Oregon to become Dean of the College of Science. In a recent merger of three colleges, Paudler was made Dean of the new combined College of Liberal Arts and Sciences. Bill's wife Ronnie is teaching part-time in the Art Department.

Elsa Proehl Paulsen, AM'45, keeps on making progress in studying teen-age diabetes. Also, as Medical Director for Camp Holiday, near Charlottesville, she is helping a variety of children with special health needs. She hopes to report some of her research at a meeting in Europe this year.

Donald R. Paulson, PhD'68, is now Chairman, Department of Chemistry, California State U., LA. Crandall was his mentor at IU.

Eduardo M. A. Peixoto, PhD'68, is the chief advisor to the Brazilian development bank, vice president of the Institute Oswaldo Cruz (Rio de Janeiro), and President of the Brazilian equivalent of our FDA. His mentor at IUB was R.A. Bonham.

Royce Rasmussen, Post PhD'62-63, is in the Research Department of McNeil Laboratories, Ft. Washington, Pennsylvania. Royce and Caroline attended the International Congress of Heterocyclic Chemistry held in Graz, Austria, last year.

Herbert H. Reller, PhD'52, continues actively in determining how P&G can make better products that affect the skin. This includes attendance at all kinds of meetings that involve dermatology. His wife Bettye continues as an assistant bank manager. Like so many alumni, they are much absorbed in the development of their children and grandchildren.

Dr. **David A. Rothrock, Jr.,** AM'32, and wife made a special trip to campus in June because his class was celebrating the 50th anniversary (AB'32) of their graduation. For many years he was connected with Rohm and Haas.

James K. Rice, BS with highest distinction, '63, is a supervisor at the Sandia Labs, Albuquerque, NM, an elder on the Session, chairman of the Personnel Committee and teaches Sunday School. For relaxation he goes duck hunting (at 5 a.m.) and jogs six miles nearly every day. His wife, Linda, is deeply involved in music, teaching, conducting, singing. She was asked to play the organ in the Hayden "Maria Therese Mass" with Margaret Hillis from the Chicago Symphony conducting.

Delmar Sanders, AB'68, is much involved in neurological surgery and his wife Carmen is his office manager. He is Chief of Neurosurgery at Providence Hospital, in Oakland, CA.

Tom P. Selby, PhD'79, was on campus in June. He is now Competitive Products Specialist in the Agrichemicals Research Division of duPont.

Nicholas N. Seldon, MAT'59, retired from teaching chemistry in an Indianapolis high school last year and Betty retired from teaching history at IUPUI. He is brushing up on his already fluent Russian.

Charles Sharp, PhD'66, and family continue to live at Rockville, MD. Their oldest son is in the honors program at the University of Maryland. Charles is a scientist at nearby NIH.

Daniel Shew, PhD'59, moved from the Chicago area to New Jersey to assume a position as General Manager of the Fine Chemicals Division of Southland Corporation, a large corporation with extensive interests in food and food products as well as chemicals.

Ryu Shinke, Post PhD'62-63, will return briefly to America with his daughter in August to attend meetings and to visit the campus. The daughter is interested in music. The only son is preparing to enter the Japanese National Aviation School. Ryu is a Professor at Kobe University.

Alice (Haurowitz) Sievert, AB'50, and husband Bill come to Bloomington as often as possible to visit her parents Gina and Felix Haurowitz. Bill and Alice got their PhD's together at Wisconsin in 1958. He, like many in his company (Abbott), is attempting to develop new and better drugs. A painful back continues to slow down Alice, but she gets much from life.

Blanche E. Skidmore, AM'42, after 32 years in service with the American Red Cross, will retire this year. She will continue to live in Wilmington, DE.

R.M. Slagle, AB'27, and wife looked extraordinarily young to be observing the 55th year of his graduation when they were on campus for the Alumni Weekend.

Meredith P. Sparks, AM'28, an active

(Continued on next page)

VISIT BLOOMINGTON THIS FALL!
A.I.U.C. REUNION OCT. 21-23

Shawnee Bluffs, the new alumni camp located on Lake Monroe, will be the site for our next Association of Indiana University Chemists Reunion October 21-23, 1983.

Alumni and their families are invited to attend the Reunion, which will feature scientific seminars, plus recreational facilities available at the camp and the beautiful fall foliage of Southern Indiana.

A seminar Friday afternoon, October 21, on campus, will kick-off the event, followed by a barbecue at the camp that evening. All guests will have free access to tennis, basketball, volleyball, heated pool and boating facilities at the camp. Excursions to Brown County and campus, including a tour of the new Art Museum, may also be arranged.

Single and family lodging will be in cabin units. All meals will be provided, including a banquet Saturday night. The rate for lodging is listed below; prices are pro-rated according to the number of people per cabin, so get in touch with old roommates, or bring your family! Large cabins can accommodate up to eight people. The price for all meals (Friday barbecue, Saturday breakfast, lunch and Banquet, and Sunday Brunch) will be $35 per person (half price for children under 10); vegetarian menus will also be available.

Number of persons per cabin unit	1	2	3	4	5
Adults	$20	$26	$31	$35	$39
Children age 6 and over	$12	$15	$18	$21	$24
Children age 5 and under	$5	$7	$9		

In the Spring we will send more information about the scientific programs as well as other events which will be going on at that time on campus.

Spaces will be limited! For more information, please return the form printed below to the Chairman's Office, Rm. 248, Department of Chemistry, Indiana University, Bloomington, IN 47405.

Please send more information about the A.I.U.C. Reunion to
Name _____

Address _____

_____

Please check the following which may be applicable to you:
I would come:
_____alone
_____with spouse
_____with children, ages _____
_____with colleagues, number _____

I/We would be interested in:
_____Brown County Bus Tour
_____Campus Tour

I would be especially interested in attending a scientific program on _____

_____

patent attorney in Coral Gables, Florida, was President of the National Association of Women Lawyers in 1982. Her late husband **William J. Sparks,** AM'29, was President of the American Chemical Society in 1966.

Ian W. Stapleton, PhD'66, continues research in the Protein Research Laboratory of the Commonwealth Scientific and Industrial Research Organization of the Australian government. This laboratory is concerned not only with basic research in protein chemistry but especially with the intensive study of wool protein and the improvement of the properties of wool fiber. Ian spent a year recently on sabbatical leave at the Textile Institute at Clemson University and in Scotland making special studies in the physical and chemical properties of wool fibers. Dr. Shirley Stapleton carries on her medical career in addition to caring for the family. The oldest son, David, who was born in Bloomington is a first-year student at LaTrobe University in Melbourne, with the intention later of taking up veterinary medicine.

John G. Stevens, BS'65, is Professor of Mathematics at Montclair State College. His family and he visited the campus in August. His interests and the value of his contributions are reflected in his statement, "It is exciting when mathematical analyses enable one to understand better the chemical and physical interactions within a system."

Ryokuero Suzue, Post PhD'59-60, is the Director of National Institute of Nutrition in Tokyo. While at IU he worked in Research Professor Henry Mahler's laboratory.

Verling Votaw, AM'26, and Lib have maintained strong connections with the campus, including Chemistry, since they left here 57 years ago. All of his professional years were with P&G and he was the primary link between his company and IU in the research and development of successful fluoridized tooth pastes. He has resigned from his post-retirement "voluntary" job with the Episcopalian Diocese of South Ohio. For health and comfort reasons the Votaws spend winters at Cocoa Beach, Florida but the rest of the year is spent in Cincinnati. They hope to be here for

Joseph E. Weber, PhD'37, and Martha were among many members of the class of 1932 (AB) who returned for the 50th anniversary festivities last June. He was Professor of Chemistry at Bowling Green State University many years.

Richard Weddleton, PhD'65, has moved to Orlando, Florida, along with his company's division headquarters, National Electric Coil Company.

Harold J. Wesselman, AB'40, who has become Grand Professional Alchemist of the Alpha Chi Sigma Fraternity, occupies the same top administrative position that was held for many years by the late **John R. Kuebler,** MA'15. Many IU graduates have been associated with the fraternity.

Ralph, PhD'67, and **Anne (Hosch),** PhD'72, **White** are continuing on course at Norwich-Eaton, which was purchased by Procter and Gamble in 1982.

Julie Yang, AM'52, has been in China again to be with her father, S.T. Yang, while Nankai University celebrated his 58 years of association with the University. For many years he was President. Shortly following World War II he was a post-doctoral fellow in this Department. Julie is research manager in materials for research for W.R. Grace and Company at Lexington, MA.

Albert C. Yates, PhD'68, after leaving a deanship at the University of Cincinnati, became President of Washington State University, at Pullman.

Morris Zimmerman, PhD'55, in 1982 was made Senior Investigator in the Department of Inflammation at Merck Sharp and Dohme. The research in inflammation is directed at developing pharmacological agents which will have disease modifying properties in chronic inflammatory conditions. Morris is also Adjunct Professor in the Department of Environmental Medicine at New York University School of Medicine. His son is scheduled to graduate from IU this year.

REMINDER

Social Hour for Indiana University Chemists to be held March 23 at Seattle.

We will join with alumni of other institutions again in a combined alumni hour from 5:30 p.m. to 7 p.m. on Wednesday, March 23, 1983 in the Grand Ballroom of the Seattle Sheraton Hotel in Seattle. There will be a sign identifying the IU Alumni organization. There will also be a large poster for our use. Bring pictures or other items that you would like displayed for your friends.

Remember: Grand Ballroom, Seattle Sheraton Hotel, 5:30 p.m. Wednesday, March 23, 1983

NECROLOGY

Saul J. Abraham, AM'41, owner and president of Morris Hardware and Paint Supply Co. of Kearny, NJ died September 15, 1982. The two children are graduates of IU. Both Saul and Mrs. Abraham were consistently loyal to IU.

Cecil V. King, AB'19, died August 3, 1982. Survivors are his wife, the former Lillian Russell, and his son Peter F. King, AM'52. Cecil received his doctoral degree at Columbia. He had a distinguished career in electrochemistry and he was president of The Electrochemical Society in 1971-72. In 1974 he was the recipient of the prestigious Acheson Medal and Prize. From 1928 to 1963 he was on the chemistry faculty at NYU. After retirement in 1963 he became associated with American Gas and Chemicals, Inc.

Giovanni Lipari, PhD'82, died June 19, 1982 while swimming in the ocean near Coquina Beach, NC. He had made a successful defense of his Doctor of Philosophy dissertation on April 21 and the degree was officially awarded on May 8. His body was returned to Rome for burial near his family home in Italy.

Jitsuo Tsurugi, Post PhD'59-60, died suddenly July 12, 1982. He had been a member of the faculty at Setsunan University in Japan. One of his students, Yasuo Abe, had been a postdoctoral worker here in 1974-75. While at IU Dr. Tsurugi was associated with E. Campaigne.

INDIANA UNIVERSITY ALUMNI ASSOCIATION
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