

# Association of Indiana University Chemists NEWSLETTER

VOLUME XXIII

ASSOCIATION OF INDIANA UNIVERSITY CHEMISTS

NOVEMBER, 1977



Jordan River—Winter of '77

## Departmental News

(E. Campaigne, Ed.)

*Publications:* The annual Publications List, June, 76 - June, 77, lists 197 research papers and 15 book chapters and reviews by 36 faculty members. A copy of this list may be obtained on request from the chairman's office.

*New Faculty:* Assistant Professor **John E. Bartmess** (b 1948) joined the department in August. John has an A.B. from Rice,

and Ph.D. from Northwestern, with Fred Bordwell, 1975. He has served as Instructor at Northwestern 1974-75, and Postdoctoral at the U. of California, Irvine, 1975-77, with R.T. McIver. He plans to build a pulsed ion cyclotron resonance spectrometer in our department, for research in gas phase reactions, thus adding to our already outstanding spectrometry program.

**Dr. Stanko Borčić**, of the Faculty of Pharmacy and Biochemistry, U. of Zagreb, Yugoslavia, is Visiting Professor this year. Dr. Borčić has the Ph.D. from Eidgenössische Technische Hochschule, Zurich,

Switzerland, in Inorganic Chemistry, and has served as Visiting Professor at Oregon State, the U. of Minnesota and California State at various times in his career. He is teaching undergraduate courses at I.U.

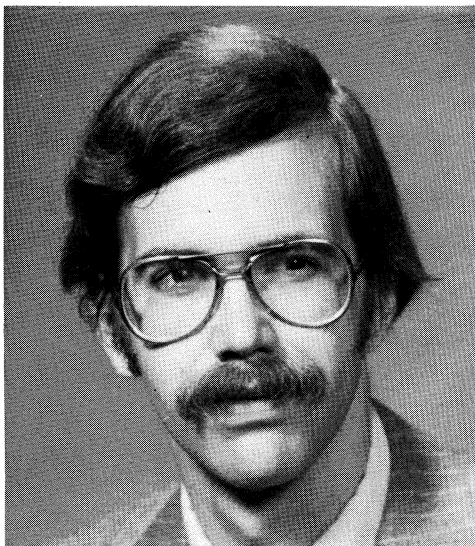
*Sabbatical Leaves:* **Jack Crandall** is spending the 77-78 year at the Université de Paris VII. **Charlie Parmenter** is spending a year at Boulder, Colorado, where he is J.I.L.A. fellow at the Joint Institute for Laboratory Astrophysics, working with new types of lasers and their applications to problems in molecular energy transfer.

Editor: E. Campaigne

Assistant Editors: Harry G. Day, T. Jenkins,  
D. Peters, C. Kaslow.

Production Supervisor: M. Carmack.

This issue marks a change in the format of the Newsletter. We hope you will like it, but in any event, let us know what you think. We hope to include more feature articles, like that on the library, in future issues. Your suggestions for changes and improvements will be welcome. Ed.



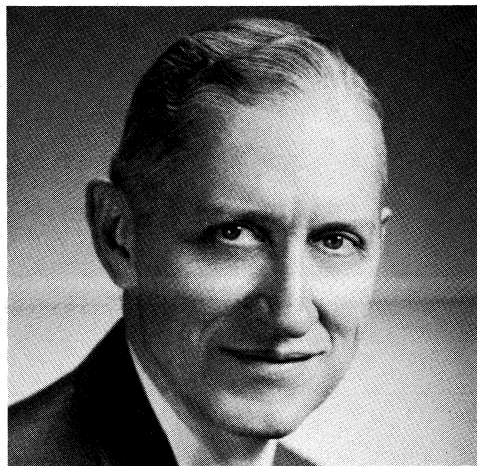
John E. Bartmess



John H. Billman

*Retired Faculty:* **John Henry Billman** (b 1912) has retired after forty years as a teacher and researcher. John received his Ph.D. at Princeton, in 1937; married Nancy, and accepted an instructorship at Illinois. He began his career as instructor at Indiana in 1939, where he rose through the ranks to Professor in 1957. His research interests centered around organic sulfur compounds and biologically active agents. The Billmans plan to live on Long Island. John will be long remembered by his graduate students, many of them in teaching, for his teaching interest and his anecdotes.

**Ralph Louis Seifert** (b 1914) has also retired this year, after 28 years at Indiana. Ralph received the Ph.D. from Illinois in 1937, served as instructor there for a year, and then six years at Alma College in Michigan, where he became Head of the Chemistry Department. From 1944-46 he was employed as a chemist at the Metallurgical Labs, and later Argonne National Labs, in Chicago, where he worked with Glenn Seaborg on the Plutonium Project. He served as Associate Professor at Carleton College, 1946-49, before joining I.U. in 1949 as Associate Professor. He was promoted to Full Professor in 1966. Ralph co-authored a physical chemistry text with Frank Gucker. His research interests were in the determination of vapor pressures and thermal conductivities of solids.

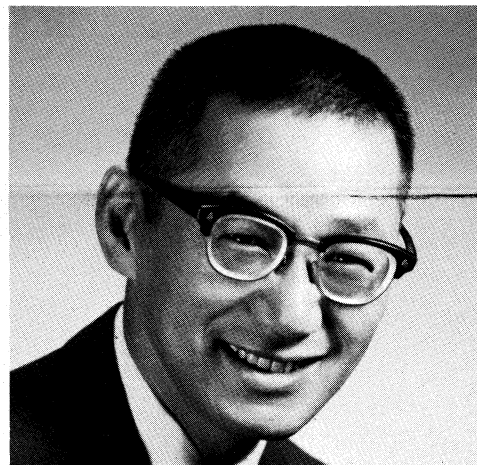


Ralph L. Seifert

### Kochi Named Reilly Lecturer

Professor **Jay K. Kochi** presented the Reilly Lectures at Notre Dame University on October 31, November 2 & 4 of this year. Jay received his Ph.D. with George Hammond at Iowa State in 1952. He joined the I.U. Faculty in 1969, and is the

Earl Blough Professor of Chemistry. He has an international reputation in metal catalyzed organic reaction mechanisms, photochemistry of organometallic compounds, and organometallic free radicals. He was a plenary lecturer at the International Symposium on Free Radicals at Aix-en-Provence, France, in July, and at the International Symposium of Inorganic and Organometallic Chemistry in England, and is on the Editorial Boards of the Journal of Organic Chemistry and Organometallic Synthesis and Reactions.



Jay Kochi

*Special Lectures and Seminars:* The Mathers Lectures featured Henry Eyring, Distinguished Professor of Chemistry and Metallurgy, University of Utah, who visited the department on April 18-22, 1977. In addition to his three Mathers Lectures, open to the public, he delighted us with his willingness to lecture to students, graduate and undergraduate. We were treated to a delightful reminiscence of chemistry and graduate studies from 1920 to 1931, given to the History of Chemistry class, and preserved for posterity on tape by M. Carmack. The 1977 Frank T. Gucker Lecture was brilliantly presented by Professor John C. Polanyi, of the University of Toronto, on November 4.

In addition to about 30 regular Weekly Colloquia, which feature outstanding chemists in all fields, the various divisions have each established a seminar day and offer a program involving visiting speakers, faculty, postdoctorals and students in the more specialized areas. When visitors come, a special effort is made to have them meet with graduate students in their area of specialization, for coffee and conversation. A special effort was made last year to invite a number of industrial speakers. Among these were Jack Frazier, Livermore Laboratories; Tom Hirschfeld, Block Engineering; James Hoeschele, Oak

Ridge National Laboratories; Charles Morgan, W.R. Grace Co.; Nissim Calderon, Goodyear Tire and Rubber; John McDonald, Kettering Research Laboratories; Alfred Bader, Aldrich Chemical; and M. McConnell, Chromatix Corp.

Our Seminar programs also permit us to see old friends and associates. This year these included **Walter Moore** (Fac. 1952-1974), University of Sydney; **Bill Foye** (Ph.D., 1948), Mass. Col. Pharmacy; **I.C. Gunsalus** (I.U. Fac. 1947-1950), University of Illinois; and **Jack Gill** (Ph.D. 1963), Spectra-Physics

An innovation in seminars began this year with Chemistry Staff Seminars. On their own initiative, the Chemistry Staff, some 75 people, invited faculty and technical staff to describe some of the scientific affairs of the department at noon lunch seminars. Among the speakers were Professor Cordes, Chairman, Felix Haurowitz, Distinguished Professor Emeritus, Harry G. Day, Marvin Carmack, Adam Allerhand, Jim Urton, Director of Personnel, Milos Novotny, John Hayes, Drs. David Potter, Brain Research Laboratory, and Garrett Crawford, Electron Microscope facility (these involved visits to the laboratories for demonstrations) and Dr. John Huffman, Molecular Structure Center.

The Chemistry Colloquia Program for 1977-78, which is supported by a Grant from E.I. DuPont de Nemours, has been announced, and includes George Ewing, Indiana University, 9/7; Peter Klein, Argonne National Laboratory, 9/14; Kenneth G. Caulton, Indiana University, 9/21; William Steele, Pennsylvania State U., 9/28; Koji Nakanishi, Columbia U, 10/5; Harold Umbarger, Purdue University, 10/21; David Natusch, Colorado State U. 10/19; Russell Grimes, U. of Virginia, 10/26; Cris Walsh, M.I.T., 11/2; Ralph Hirschman, Merck Sharp & Dohme, 11/9; George Parshall, E.I. DuPont de Nemours & Co., 11/30; Royce Murray, University of No. Carolina, 12/7; Benjamin Widom, Cornell University, 12/14; Jeffrey Schwartz, Princeton University, 1/18; Peter Griffiths, Ohio U. 1/25; Clyde Hutchinson, University of Chicago, 2/8; Robert Abeles, Brandeis University, 2/22; A.I. Meyers, Colorado State University, 3/1; Edward Stiefel, Charles Kettering Laboratory, 3/8; Gregorio Weber, University of Illinois, 3/15; Sydney Archer, Rensselaer Polytechnic Institute, 3/29; Michael Rossman, Purdue U. 4/5; Harold Wittcoff, University of Minnesota, 4/12; Denis Forster, Monsanto, 4/19; James Dye, Michigan State, 4/26.

## FACULTY NEWS

**Adam Allerhand** presented lectures at the National Meeting of American Chemical

Society in San Francisco and at the Seventh International Conference on Magnetic Resonance in Biological Systems, St. Jovite, Canada, the Fifth Enzyme Mechanism Conference, Tucson, Ariz. and several others in the U.S. and England. **Russell Bonham** was awarded an Alexander von Humboldt Senior U.S. Scientist Award to do research in West Germany. He also was an Associate Editor of the Journal of Chemical Physics. While on sabbatical he presented seminars in the Netherlands, Italy, West Germany, France and Hungary.

**E. Campaigne** gave the Welch Lectures in Texas. He has been elected Councilor of the Medicinal Division, A.C.S. **M. Carmack** has just returned from Australia, where he visited **Ian Stapleton** (Ph.D. 1966) at Melbourne and **Walter Moore** (Fac. 1952-1974) at Sydney, among others. **Ken Caulton** delivered a short-course on the subject of homogeneous catalysis at Universidad Central de Venezuela, Caracas. **E. H. Cordes** was the Session Lecturer at the 26th Annual Meeting of I.U.P.A.C. in Japan, on "Kinetics of Micellar Reactions." **Harry G. Day** was the E.V. McCollum lecture at the Nutrition Education Conference in March at the new Iberoamericana Uni., Mexico City.

**Frank Gurd** is a member of the Editorial Board of the Journal of Biological Chemistry. **Judith Harmony** was a supported participant in the Edmond De Rothchild Foundation's meeting "Structural and Functional Aspects of Membrane-Cytoskeleton Interactions," at the Weizmann Institute of Science in Israel. **Gary Hieftje** was an invited Lecturer at a joint meeting of Colloquium Spectroscopicum Internationale and International Conference on Atomic Spectroscopy, Prague, Czechoslovakia on Sept. 1, 1977. He has been appointed to the Editorial Advisory Board, Analytica Chimica Acta. **W.T. Jenkins** is on the Editorial Board of Archives of Biochemistry and Biophysics.

**Henry Mahler** presented lectures in Switzerland, the Netherlands, England, Scotland, France, Austria, and Poland during his sabbatical last year. He is on the Editorial Board of Archives of Biochemistry and Biophysics, the Journal of Neurochemistry, and Mechanisms of Ageing and Development. **Donald McQuarrie** was a visiting scientist at the National University in Canberra, Australia, last year. **Peter Ortoleva** presented a talk "A Variety of Instabilities in Physical Chemistry Systems" at Tel Aviv University. He is also working on experiments for the Space Shuttle program.

**John Richardson** has returned after a year on leave in the laboratory of Professor Pierre Chambon, Institute de Chimie Biologique, Strasbourg, France. He is a member of the Pathobiological Chemistry Study Section in the National Institutes of Health. **Harrison Shull** has been named Chairman of the Commission on Human Resources of the National Academy of Sciences. He has also

been appointed the Vice-President of the American Academy of Arts & Sciences. **Attila Szabo** presented talks at the International Symposium on Atomic, Molecular, and Solid State Theory. He also spoke at the Dept. of Theoretical Chemistry, University of Cambridge, England and the Max Planck Institut für Biophysikalische Chemie, Germany. He has been awarded a Sloan Fellowship. **Steve Wilson** delivered two lectures at the University of Jeddah, Saudi Arabia, this past summer.

## FINANCES

This Newsletter was financed by an Alumni Foundation Fund, "Friends of Chemistry." This general fund, available to the Chemistry Department, can be used for such special projects as special library acquisitions, special seminar speakers, A.I.U.C. Newsletter, etc. We urge you to mark your contribution to the Indiana University Foundation for the Alumni Association "Friends of Chemistry" Fund.

Corporate Giving is a valuable way to contribute to the department. If you can contribute through a matching corporate gift program, please mark those also for "Friends of Chemistry." Remember that your gifts offer a tax advantage, and are totally available to "Friends of Chemistry," without administrative overhead.

Please make your checks payable to the "Indiana University Foundation for Friends of Chemistry," and send them to the Foundation at P.O. Box 500, Bloomington, Indiana 47401.

Please send us your news - changed addresses? New jobs? honors? Family News. We like to keep track of the members of A.I.U.C.

## NEWS FROM THE GRADUATE OFFICE

(T. Jenkins, Ed)

Two committees presently administer graduate student affairs. Prof. J. Gajewski was in charge of student admissions; Prof. K. Caulton succeeded him for 1977-1978. Prof. W.T. Jenkins chairs the graduate standards committee. These committees are helped greatly by Pat Stapleton and Kathy Parker, new secretaries in the graduate office. Pat Chambers, who will be remembered by many alumni for her many years in the graduate office, is now in charge of the departmental financial statements.

**Admissions:** In 1977 we had 361 completed applications; the number of applications has increased steadily from a low of 229 in 1973. Normally we offer AI positions to less than half of those who apply; roughly a third of these accept our offer. Of those admitted over 50% eventually get the Ph.D.; the average time taken is now about 4 1/2 years. The incoming class was larger this

year than in previous years. Sixty-one new students were admitted of whom 48 assumed Associate Instructor duties. Six of the new students were from overseas. A noteworthy trend is that we are getting more students from both East and West coasts—17 this year.

**Fellowships:** Very few national fellowships are now offered. The NIH Biochemistry training grant will end this year and only three students have been appointed to the new Molecular and Cellular Biology Research Service Awards administered by the new Department of Biology, Jordan Hall. We have two fellowships funded by industrial companies. Holders of the Lubrizol Fellowship this year were **J. Jorgenson** (analytical) and **J. Burks** (organic). **D.K. Hanson** was the holder of the Procter and Gamble Fellowship. Many foreign students hold fellowships from their home institutions. Most noteworthy in this regard have been students from South America and, more recently, Saudi Arabia. Two students held University student exchange fellowships—**F.R. Ornellas** from Brazil and **F. Spillecke** from W. Germany.

**Combined Degree Program:** Most alumni must be aware of the fact that many of our undergraduates go on to medical school but may not know that many of our graduate students also are working towards the M.D. through the IU Combined Degree Program. Those who have recently completed their M.D.'s are: **L. Childers**, **A.C. Golichowski**, **R.C. Harruff**, **L.R. Jones**, **F. Kiechle**, **J.A. Madri**, **J.S. Morrow**, **M.T. Stack** and **E. Williams**. The following chemistry graduate students are presently in medical school: **S. Bonsib**, **D.F. Hayes**, **A.J. Infante**, **S.S. Phan**, **G.E. Revtyak** and **J.R. Wilkinson**. Currently enrolled in the program at Bloomington are **K.L. Blanchard**, **O.B. Boyko**, **J.L. Carey**, **K.J. Crane**, **T.L. Croxton**, **M.A. Dayton**, **R.D. England**, **D.M. Feinn**, **T.J. Fitzharris**, **S.H. Friend**, **K.A. Hess** and **M.E. Shertzler**.

**Annual Awards:** Each year, at the unique Chemistry Awards banquet, superior teaching and research are acknowledged. This year **J. Burks**, **D. Dolson**, **G. Hillhouse**, **T. Rothgeb**, **K. Saturday** and **S. Smith** received outstanding AI awards. The Robert Chernin award, for outstanding C500 research was given to an organic synthetic chemist, **R. Raths**.

**Job Placement:** Mrs. H. Willett arranges job interviews with industrial companies for undergraduates, graduates, and postdoctoral students. The Chairman's office periodically circulates a list of known academic and postdoctoral openings. Most students who graduated recently have taken research positions in academic research groups. The number of such positions has increased substantially since the recession but, except for students in analytical chemistry, there are still few academic positions available.

This department has always had substan-

tial numbers of Ph.D. and M.S. students take industrial positions. Some recent graduates are: **R.L. Cochran**, Ph.D., Procter & Gamble, Cincinnati, OH; **J. Golbeck**, Ph.D., Martin Marietta, Baltimore, MD; **L. Haddad**, Ph.D., General Mills, Minneapolis, MN; **T.W. Hunter**, Ph.D., Monsanto, St. Louis, MO; **K.M. Jernberg**, M.S., Ciba Geigy, Summit, NJ; **G. Lehrmann**, Ph.D. National Chemical Search Corp., Irving TX; **M.L. McConnell**, Ph.D., Chromatix Inc., Mountain View, CA; **S. McGovern**, Ph.D., Vought Corp., Dallas, TX; **G. McNamee**, Ph.D., Dow Chemical, Freeport, TX; **M.P. Maskarinec**, Ph.D., Oak Ridge National Lab., TN; **W.A. Nugent**, Ph.D., E.I. DuPont Nemours & Co., Wilmington, DE; **K.A. Prodan**, M.S., G.D. Searle, Chicago, IL; **M.J. Sadowsky**, M.S., Wittco Corp., Chicago, IL.

The following students recently completed the M.S.: **P.A. Asmus**, Littleton, CO; **H-T. Chen**, Keel Ung, Taiwan; **C-T. Cheng**, Dept. Pharmacology, SUNY, Stony Brook, NY; **M.J. DelleDonne**, Dept. Chem. IU, Bloomington; **B. Demmons**, Asst. Prof., San Joaquin Delta Col., Stockton, CA; **M. Foshay**, Champaign, IL; **M. Frierson**, Dept. Chemistry, U. Georgia, Athens, GA; **C. Grimley**, Bloomington, IN; **D.F. Hayes**, IU Medical Sch. Indianapolis; **W.R. Heffner**, Dept. Physics, IU Bloomington; **D.H. Kinder**, Champaign, IL; **R.W. Klaphor**, Physical Sciences Librarian, Western Ill. U. Macomb, IL; **D. Mais**, Dept. Medicinal Chem. Sch. of Pharmacy, Purdue, W. Lafayette, IN; **T. Nwaneri**, Instructor, U. Nsukka, Nigeria; **J.J. Ortiz**, Universidad Central, Caracas, Venezuela; **J. Payne**, Instructor, College of Lake County, Glendale Hts. IL; **Y-W. Yu**, Charlottesville, VA.

Recent PhD's are: **E.M. Avila**, Asst. Prof., IVC, Caracas, Venezuela; **J. Beckman**, Postdoc., Purdue U., Dept. of Medicinal Chem; **C.B. Boss**, Asst. Prof., U.N. Carolina, Raleigh, NC; **C.T. Corcoran**, Postdoc. Inst. Theor. Chem., U. Wisconsin, Madison, WI; **F.E. Dwulet**, Postdoc., Dept. Biology, IU Bloomington, IN; **R. Forsch**, Postdoc. U. Wisconsin, Milwaukee, WI; **A.R. Goldhammer**, Postdoc. Cornell U. Ithaca, NY; **A.C. Golichowski**, Asst. Prof. IU Med. Ctr., Indianapolis, IN; **R.C. Harruff**, Residency, Dept. Pathology, U. Wisconsin, Madison, WI; **R.P. Hatch**, Postdoc. Fordham U., Bronx, NY; **A.J. Hernandez**, Conicita, Caracas, Venezuela; **J.P. Hickey**, Postdoc., McGill U. Montreal, Canada; **A.J. Infante**, IU Medical School, Indianapolis, IN; **H.W. Johnson**, Belvedere, CA; **B.N. Jones**, Postdoc. Chem., IU Bloomington; **H.R. Kang**, Postdoc. Chem., U. Texas, Arlington, TX; **T. Kleindienst**, Postdoc., Chem. Calif. State U. Fullerton, CA; **C. Lowery**, Postdoc. Microbiol. & Immunology, UCLA Med. Sch.; **D. Mathews**, Postdoc. Dept. Medicine, Washington U. St. Louis, MO; **I. Rusinek**, Asst. Prof., U. Simon Bolivar, Caracas, Venezuela; **T.R. Sharp**, Postdoc. Penn. State, State Col-

lege, PA; **R. Sydor**, Postdoc., Chem., U. Iowa, Iowa City, IA; **Y-J. Wang**, Postdoc., City of Hope Med. Ctr. Duarte, CA; **F-F. Wang**, Postdoc. City of Hope Med. Ctr., Duarte, CA; **R.J. Weber**, Postdoc. Chem., Yale U., New Haven, CN; **R. Widener**, Postdoc. Chem., U. Oregon, Corvallis, OR; **J. Wilkinson**, IU Medical School, Indianapolis, IN; **P.M. Wovkulich**, Postdoc., Chem., U. Penn., Philadelphia, PA.

We wish to encourage alumni to send us information concerning their current occupations and addresses. We will be happy to help locate old friends.

## NEWS FROM THE UNDERGRADUATE OFFICE

(D. Peters, Ed.)

During the 1976-77 school year, Professor Dennis G. Peters continued as Coordinator of Undergraduate Studies and Holly Willett as Academic Counselor. Twelve members of the chemistry faculty serve on the Undergraduate Committee and participate in advising students in the planning of their course work. Our advising program has met with much approval from the students, and the department is proud of its reputation of faculty availability and concern.

During the second semester of 1976-77, the Department had 375 undergraduate chemistry majors. We graduated a total of 103 students (88 with A.B. degrees and 15 with B.S. degrees) during the year. Twenty-six students were participants in our Chemistry Honors Program and 23 students participated in C409 Chemical Research (an undergraduate research program entailing up to 10 hours of credit and requiring a thesis).

Thirty-six of the graduating seniors went on to medical school, and 10 to dental school, nine to graduate school in chemistry, 12 to graduate school in other areas, and 20 to industry.

According to Chemical & Engineering News (March 21, 1977) the Department ranked fifth among the top 25 schools in the country in the total number of bachelors degrees awarded.

At the Chemistry Honors Banquet held annually to recognize our undergraduates for unusual achievement in chemistry, the following students were honored:

The Outstanding Senior Award went to **Mark Pellerite**. **Jonathan Lindsey** was awarded the 1977-78 Courson-Greeves Scholarship, and **William Early** received the Frederic C. Schmidt Award. **John McDonald** and **James Zabrecky** received Joseph B. Schwartzkopf Awards, and **Steven Marks** received an award from the Southern Indiana local ACS section.

Merck Indexes were presented to **Gregor Brown**, **Kevin Moore**, and **Andrew Zweig**. Five students, recognized as superior in var-

ious freshman chemistry courses, received book certificates.

Recipients of R.J. Grim Scholarships for 1976-77 were **Kenneth Crane, William Early, John McDonald, Alan Becker, Ronald Conaway, Frances Crawford, Susan Guba, Richard Head, Gary Shipley, Brian Willett, and Gregory Brown.**

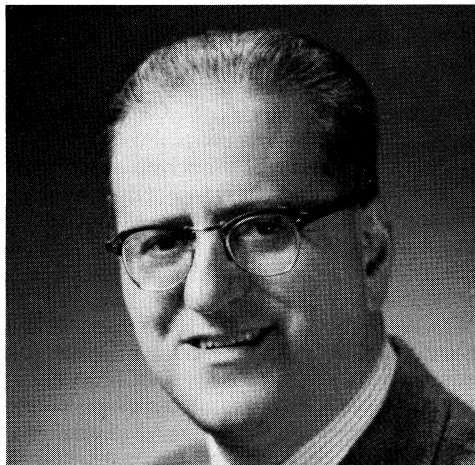
Ira E. Lee Scholarships for full-time summer research for 1977 were awarded to **Mary Brewster, Ronald Conaway, Richard Head, Dennis Lindle, Jonathan Lindsey, Steven Marks, John McDonald, Mark Pellerite, Gary Shipley, Iris Shiu, James Waldman, Brian Willett, and Andrew Zweig.**

Fourteen chemistry majors made the Phi Beta Kappa list. They were: **Nancy Berkeheiser, William Early, Jack Hoover, Susan Guba, Jonathan Lindsey, David Morgan, Chris Nobis, Mark Pellerite, Roger Sporre, Ronald Vierk, David Wagner, Margaret Wiltz, Nevin Young, and James Zabrecky.**

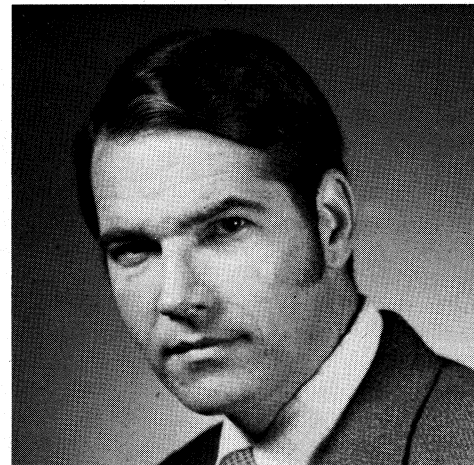
Faculty, students, and friends of the Department are deeply grateful to a number of persons for the contributions that made these awards and recognitions possible.

Because of the growing number of highly talented undergraduate chemistry majors, external financial support from friends and alumni of the Department is urgently needed to maintain and expand the number and value of awards and scholarships that can be offered to worthy students. In fact, the Department faces the unhappy reality of having to decrease drastically the number of scholarships for full-time summer research for 1978 (at a time when interest in such activity is increasing tremendously) unless additional contributions from outside sources can be obtained. Professor Peters and the members of the Undergraduate Committee would welcome specific inquiries from persons anxious to aid the undergraduate program financially.

The Chemistry Placement Office which is managed by Holly Willett had a busy season. During the 1976-77 academic year, 18 companies interviewed in the Chemistry Placement Office and more than 70 additional companies advertised positions through the Placement Office. Companies recruiting on campus included Brown and Williamson Tobacco Co.; Cincinnati Millicron Chemicals; Dow Chemical Co.; Eli Lilly Co.; Flint Ink Inc.; Mead Johnson; Miles Laboratories; Pfizer Inc.; Procter & Gamble Co.; Ralston Purina Co.; Seymour Recycling Co.; Spectra Physics, Inc.; Union Carbide Corp.; U.S. Energy, Res. & Dev. Adm.; U.S. Navy; The Upjohn Co.; and W.R. Grace & Co. One of the extra pleasures of company recruiting is having alumni such as **Dr. W.W. Meyer** of Dow Chemical Co. (Ph.D. '62, E.E. Campaigne), **Dr. Jack Gill** of Spectra-Physics, Inc., (Ph.D. '63, Marvin Carmack), and **Nye Clinton** of Union Carbide (Postdoc. 70-71, Jay Kochi, Faculty, 71-72) come as recruiters.



**John Knego, former Director of the I.U. Chemistry Library**



**Gary Wiggins, Director, I.U. Chemistry Library and Chemical Information Center**

## **CHEMISTRY LIBRARY AND CHEMICAL INFORMATION CENTER PROVIDE A VARIETY OF SERVICES FOR TEACHING AND RESEARCH**

Since the Chemistry Department Library was completely renovated and enlarged in 1966 to occupy the northwest corner of the ground floor of the Chemistry Building, it has continued to grow in the size of its collection and the diversity of services, first under the direction of John Knego, and, since January 1976, under Gary Wiggins. We currently hold 938 serial titles, of which approximately 500 are received at present. On July 1 of this year, we held 41,405 volumes in our serial collection and 13,267 titles in the book collection. *Chemical Abstracts* in 16-mm cartridge microfilm edition has been added, with reader. Microfiche reference material and readers form a small but growing collection. We have capabilities to produce both 16-mm microforms and microfiche in jackets or diazo copies. IBM and Xerox copy machines are available in the Library.

The combined staff of the Chemistry Library and the Chemical Information Center (the latter will be described below) numbers 2 1/2 full-time librarians and two supporting staff members, and uses 120 hours of student help weekly. The Library is open 104 hours each week; it seats 120. New book lists are issued weekly, journals received are posted daily, and recently we have begun publishing a *Newsletter* to inform users of important happenings and new services. The Chemical Information Center has produced several self-tutorial audiovisual presentations on procedures for use of large reference sets such as *Chemical Abstracts*, *Beilstein*,

card indexes, etc. Photocopies of tables of contents of recently received journals are provided upon request to faculty members on both the Bloomington and regional campuses.

The most modern bibliographic service offered through the Chemical Information Center is the computer searching of *Chemical Abstracts* tapes each week for more than 135 interest profiles for customized bibliographies (SDI). Each of these is developed through consultation of individuals with a specialist in the CIC. We have access to many other scientific data bases in California by telephone through equipment located in the Chemistry Library which is available for direct interactive searching. Individual profiles can be edited for users by CIC personnel in the Chemistry Library. Several of the profiles originally developed for one user have been developed into specialized topic index journals which are being sold to subscribers worldwide. Subjects now being published include: (1) Crystallography; (2) Charge, Spin, and Momentum Density; and (3) Isotope Effects. These standard interest profiles are available on a regular basis to outside subscribers at very reasonable rates. Suggestions for extensions of this list or of other specialized information services will be given careful consideration.

We especially suggest that alumni or friends of the Indiana University Chemistry Department who need specialized information or searches of current or retrospective literature in scientific or technical areas (not necessarily chemistry alone) should seriously consider writing for information to Mr. Gary Wiggins, Director of the I.U. Chemistry Library and Chemical Information Center. Details of the present services and costs will be promptly sent, and we will consider requests for customized searches. Not only are the charges in the low range of commercial information services, but the expansion of our CIC activities to outside

subscribers will provide experience and financial strength to the CIC. The latter is one of the small number of such university-based operations closely integrated with the teaching and research mission of the university.

One of the strong justifications for the development of our CIC is the current strong demand for persons trained in scientific information processing. The CIC cooperates with the I.U. Graduate Library School to offer the degree, "M.L.S./Information Specialist in Chemistry." Participants in the program take specialized courses in the Chemistry Department as well as a solid core of information science courses in the Graduate Library School. Several of them have moved on to responsible positions in special libraries.

Two very pressing problems concern Mr. Wiggins, and the Faculty Library Committee: space and budget. The limited space acquired in the 1966 expansion has been almost used up by the growing collection and by the new services and adjunct equipment, although periodic reorganizations have improved the efficiency. Future growth will require more space (which is not presently in sight), or it will be necessary to replace many reference sources with microforms. As mentioned, one set of *Chemical Abstracts* has been replaced with 16-mm microfilm edition and reader. Other replacements will be gradually undertaken but are costly and create new problems.

The severe budgetary problem results from the much more rapid increase in costs of serials (estimated 15% *per annum*) than added funds from regular budgetary sources. Also, the number of new journals and disciplines has been increasing rapidly. Borderline areas such as biophysics, geochemistry, molecular biology, bioinorganic chemistry, chemical communication, etc. are new fields and in some cases represent new interests of faculty members which require many new acquisitions.

The combined book and serials budget for 1977-78 fiscal year is \$87,595, of which \$84,221 is encumbered for serials, leaving only \$3,374 available for new books compared with the approximately \$8,000 which has been available for each of the past six years. The only way to increase or even maintain the same book budget appears to be the cancellation of serials subscriptions or finding new sources of book funds.

The critical review of serials subscriptions has been regularly made for the past ten years and has resulted in elimination of nearly 120 subscriptions. It has reached such difficult choices as the discontinuance of standard references such as Landoldt-Bernstein, Beilstein, Gmelin-Kraut, whose current costs have risen astronomically.

Replacement of one complete paper set of *Chemical Abstracts* (of two received) with 16-mm microfilm has created a one-time

fund which is for a limited time allowing some reduction of the backlog of new book requests, but cannot be repeated. The choices for the future appear to be: (1) cancellation of some of the most expensive sets (e.g., Beilstein); (2) expansion of the specialized bibliographic searching services to outside subscribers to create new sources of income; (3) organization of an appeal to alumni and friends for gifts to help with acquisitions to the Chemistry Library.

Special recognition and thanks are due to Mr. Gary Wiggins, for an ongoing analysis of the library services and problems while he continues the development of both traditional and new services. Thanks are due to Miriam Bonham for her special expertise in the computer-based information services. Several who have rendered valuable service in the recent past, and who have gone out to accept new opportunities elsewhere, deserve recognition and our appreciation for their dedicated efforts; they are: John Knego, now at the University of South Florida, Peggy Ryken, now in California, and Rick Wright, who recently accepted a position with Bell Laboratories Library in New Jersey.

Recently, Leonard Neubert was appointed Affiliate Librarian, taking over the duties of Assistant Head of the Chemistry Library formerly held by Peggy Ryken. Leonard received his Ph.D. at IU in 1969 just before reporting for active service in the U.S. Army, eventually with service in Viet-Nam. He returned to IU as Research Associate and completed his M.L.S., specializing in scientific information.

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**NECROLOGY:** We learned recently through a letter from the widow that **Ahmed Mustafa** (Post-PhD'55-56) died unexpectedly in April, 1977. Belatedly we have learned of the death in February 1974 of **Talbert W. Abbot** (AB '18). **V. Sue Hughes**, who served as secretary to Drs. Merritt and Schaap for a number of years prior to her retirement, died in August, 1977, after a short time in a Bloomington nursing home; and **Clarence E. Prichard** (MA'13) died in Aug. 1975 at his home in Hemet, CA, at 83 years. **Everett Jay Rommes, Sr.** (AB'23) died on Apr. 3, 1975. He had been employed at the DuPont Co. until the time of his retirement. **Raymond N. Keller** (AB, MA'37), became Professor Emeritus at the University of Colorado in May 1976 and died on 21 Sep. 1976. His widow, **Mollie Goodrich**, was departmental secretary-librarian under Dr. Robert Lyons for several years until she and her husband went to Illinois where he received his PhD in 1940.

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## ALUMNI NEWS

(H.G. Day and E. Greene, Eds.)

*Visitors:* Alumni who visited the Department and signed our alumni guestbook since the last Newsletter include: **Jack Gill** (PhD'62) from Spectra Physics, Inc., Palo Alto; **Robert Donaldson** (BS'42), Toms River Chemical Corp.; **Nolan Sommer** (PhD'45), American Cyanamid Co.; **Nida Sapianchay** (PhD'63) now Associate Professor in Chemistry and Deputy Director, The Institute for the Promotion of Teaching Science and Technology at Srinakarinwirot U. in Bangkok, Thailand; **Rod Moss** (PhD'51), Dow Chemical Co.; **Jim Thrasher** (AB'74), from Springfield, IL; **Ajibade Odutola** (AB'72), who has completed his MD and was based in LA this year; **Leora Medsker** (AB'75) from Baltimore; **Bill and Helen (Merriam) Stewart** (MS'46) from Epworth, Iowa; **William Briscoe**, MD, younger son of the late Herman Briscoe, who is now in McLean, VA; **Steven Hulecki** (AB'73) now finishing Medical School in Rome, Italy; **Larry Medsker** (AB'65, PhD Physics'71) on the faculty of the Physics Department at Florida State U. at Tallahassee; **V.L. "Bud" Miller** (AB'38) retired this year and is living in Monroeville, PA; and **John Sloan** (BS'39) who retired last December and returned to attend his high school reunion in nearby Spencer.

*SOCIAL HOURS;* In New Orleans at the Hyatt-Regency Hotel on 22 March 1977 there were 59 registered. In Chicago on 3 August 1977 only 33 of the attendees signed the guestbook.

## VON HUMBOLT AWARD TO IU ALUMNUS

**Wendell L. Roelofs** (PhD'64) shared the \$10,000 Alexander von Humbolt Foundation Award for the most significant contribution to American Agriculture in the past three years with Dr. H.H. Shorey, entomologist at the U. of California at Riverside. Dr. Roelofs, of the Department of Entomology, NY State Agricultural Experimental Station, Geneva, has gained international fame with his work on the chemical identification of insect pheromones, how they are produced, and their application to control of economically damaging insects. Roelofs was also the winner of the J.E. Busart Memorial Award of the Entomology Society in 1973.

*News from Alumni:* The many letters from alumni and others this year was indeed gratifying and pleasing to read. It would be very helpful in connection with plans for the history of the Department if we could hear from many more this year.

**Thomas Alley** (AB'60;MD'63) reports he is in private practice specializing in Internal Medicine and Nephrology at Indianapolis.

He is a Fellow of the American College of Physicians. **Roberto Bastos** (PhD'75) writes from the Department of Virology, Weizmann Institute of Science in Rehovot, Israel that he has enjoyed returning for visits to the Department in Bloomington, and plans to repeat them as often as he can. **John Bateman** (AB'64) is now senior research chemist with Ciba-Geigy's Plastics and Additives Division where he has been employed since receiving his PhD from Kansas University. He is co-writer of the column "Heart Cut" in ChemTech magazine. **John Bornmann** (PhD'58), as a member of the ACS Examinations Committee, Physical Chem. Subcommittee, is working with others to prepare an examination for physical chemistry for the life sciences.

**Ron Collins** (PhD'62) and **John Moore**, both Professors of Chemistry at Eastern Michigan U. received two of the first three Distinguished Faculty Awards for teaching at that Institution. Professor Moore was a member of the IU faculty from 1965-71. He is chairman of the ACS Division of Chemical Education Committee on the Role of Computers in Chemical Education. Those at IU when John was on the faculty will remember his work on computer-graded, repeatable exams while he was here. Ron Collins was the first chairman of the Committee several years ago. He is acting chairman of the Chemistry Department at EMU. **Robert Conley** (PhD'58) writes that since 1974 he has been a partner in the consulting firm, Mineral and Resource Technology (Mountainside, NJ) which is concerned primarily with chemical process development in the mineral, resource, and recovery industries. **Donald Johns** (BS'53) and Bob worked together on a job last year. **Jean Craton** (AB'49; MD'53) has been involved in psychiatry and mental health programs in Southern California for many years including serving on the faculty of Stanford U. Med Sch. **William Creek** (BS'45) writes that he has completed twenty years with Pfizer Co. and for some time he has been District Sales Manager for the Detroit district.

**Troy C. Daniels** (PhD'29) became Dean Emeritus when he retired as Dean of the School of Pharmacy at the U. of Calif. (San Francisco) in 1967. He greatly influenced pharmaceutical education starting with his appointment as assistant professor at California in 1929. He emphasized the teaching of basic sciences. Among his many recognitions perhaps the most cherished is his honorary DSc award by the U. of Michigan where he received his BS in Pharmacy in 1923. **Richard Ebeling** (MAT'62) is now serving as Chairman of the Subcommittee I ACS-NSTA Examination (High School). **Stephen Eck** (MS'70) is very active in his work with the Bureau of Criminal Investigation, Criminalistic Laboratory, frequently being called to give expert testimony in the courts in Des Moines, Iowa. **Richard Ellis**

(PhD'67) has left DuPont Central Research for a position with a consulting firm in Rockland, MD. **Richard England** (AB'76) has been awarded a five-year scholarship, provided by Am. United Life Insurance Co. for use while he completes the PhD. (expected in 1980) and his MD (expected in 1982), all at IU. This major recognition is part of the Insurance Medical Scientist Scholarship Fund. Richard graduated with highest honors and was elected to Phi Beta Kappa as a junior.

**Edmund Flexman** (Ph.D'67) is Senior Research Chemist in DuPont's Plastics Department and has been involved in the commercialization of a new engineering plastic, Zytel ST801, having participated in each step from discovery through manufacturing, testing, and trouble-shooting. **Mildred (Hatch) Graves** (AB'18) writes that she and her husband are living in Maple Knolls, a retirement village in Cincinnati. She gave information about **William Bell** (AB'18) who was one of the founding partners of Coleman and Bell, manufacturers of biological stains and other organic chemicals. **Margaret (Winslow) Hall** (AB'32), although retired from the Redwood City (CA) Schools, is keeping in touch with students and changes by continuing to serve as a substitute teacher. **James E. Hatfield** (PhD'36) tells us he has been retired from Globe-Union, Inc. four years. He spent his years after graduation working in storage batteries research. **Lowell Henderson** (AB'38; MD'41) is Chairman, Division of Allergic Diseases and Internal Medicine at the Mayo Clinic. He is also Professor of Medicine at the Mayo Medical School. **Edward G. High** (PhD'50) has completed ten consecutive years as Chairman of the Department of Biochemistry at Meharry Medical College. During this time the Dept. and School have gained much in stature and recognition. Dr. High has continued as a loyal alumnus. Among his many national responsibilities he is a member of the National Arthritis, Metabolism, and Digestive Diseases Advisory Council of the NIH. **Margaret (Davis) Keys** (AB'59; MD'62) spent the past year on the Ivory Coast, Abidjan, where her husband is posted with the Department of State. **Frank Kitchel** (MA'41) retired in May, 1977 from DuPont where for the past ten years he has been Staff Assistant to the Superintendent, R&D Lab at Martinsville, VA. He has many plans for traveling after 36 years with DuPont. We hope he will include Bloomington in his travels. **Katherine L. Knight** (PhD'66) is now Professor in the Department of Microbiology at University of Illinois Medical School in Chicago. She has the distinction of being a member of one of the Study Sections of the National Institutes of Health. **Nancy Kreiger** (AB'72) completed a PhD in Pharmacology at Stanford and is doing postdoctoral work with Dr. Armen Tashjian at Harvard School of Dental Medicine. **G. William (Bill) Leonard** (AM'46) was recognized for his

role as the creator and driving force behind the Navy's Total Energy Community Program when last February he was given the Los Angeles Federal Executive Board's Federal Employee Distinguished Service Award. He is now Assistant Technical Director for Engineering and Head of the Engineering Department at the Naval Weapons Center at China Lake, California.

**James Mair** (MA'70) is now Industrial Hygienist with the Rohm and Haas Company, Philadelphia. **Lavon M. Marks** (AB'72, IU-South Bend) in 1976 was promoted from Associate Research Scientist to Supervisor, Stability and Performance Evaluation in Research and Development, Ames Company, Division of Miles Laboratories, Inc. **Dana Mayo** (PhD'59) after several health problems, is back on a full schedule at Bowdoin working on a study of oil pollution on the Maine Coast. Keep well, Dana. **Francis W. McClelland** (AB'37) has been retired for five years now from Eli Lilly as Head of Research Services. **John H. McKenzie** (MA'34) is chairman and chief executive of Agritec, Inc. in Houston, Texas. He sent us a picture of members of AXE at the time he was at IU. We much appreciate such mementos for addition to our collection. **Guenter Meier** (PhD'64) is now working as a department manager, DuPont de Venezuela in Caracas, Venezuela. His wife and two boys are with him there. **June Ossenberg Metz** (MA'23) who retired as high school teacher of chemistry and physics at Martinsville, Indiana, in 1945, has been living at the Kennedy Home in Martinsville since 1970. She dropped us a note to tell us more about the things she had done in her professional teaching years. She celebrated her 86th birthday in June. **Mark Mishkin** (AB'49) is currently Professor of Radiology and Chief of Neuroradiology at the School of Medicine of the University of Pennsylvania and is serving this year as President, The Association of University Radiologists. His oldest son received his AB in Political Science from IU last year and is now in law school.

**Donald Neese** (AB'33) retired in 1974 from Goodyear Tire and Rubber Co. after 27 years there. He has moved to Sedona, Arizona where he is very interested in gems, minerals, and fishing with his own firm of Jig & Rig at Sedona. **Charles G. O'Bannon** (BS'47) has sold his interests in two instrument manufacturing companies and retired from other business activities except that he still advises various firms around Houston. He and his wife are in semiretirement at Seabrook, Texas. **Jerome Odom** (PhD'68) was promoted to Full Professor of Chemistry at the University of South Carolina.

**Robert L. Patrick** (PhD'50) has left the University of Pittsburg to become Manager of the Harris Research Laboratories, Gillette Research Institute, Rockwell, Md. **John B. Patton** (MA'40, PhD-Geology'54), Director

of the Indiana Geological Survey, was designated Speaker of the Year for 1977-78 by the Indiana Academy of Science. During the year he will address various colleges in Indiana on energy problems. **William W. Paudler** (PhD 1959) is beginning his second five-year term as Chairman of the Chemistry Department, University of Alabama. **Ralph Phillips** (AB'40;MSD'55), in addition to being Associate Dean of Research at the Indiana University Dental School, is also Director of the Oral Health Research Institute there. He has been the recipient of two recent awards—the William J. Gies Award from the American College of Dentists and also the Hollenback Prize from the American Academy of Operative Dentistry. **Frank Pope** (PhD'40) retired from Kay-Fries Chemicals, Inc. last year, following six years with the firm. He had been in sales for 18 years with Allied Chemical before going with Kay-Fries.

**Michael Rapp** (PhD'68) was promoted to Professor of Chemistry at University of Central Arkansas, and served as Secretary-Treasurer for Central Arkansas Section - ACS last year. **Royston Roberts** (Visiting Professor, 1961 summer) spent one semester 1976 in Bucharest, Romania as a Fulbright-Hays Research Awardee. He did some research with Prof. Balaban and gave a series of

lectures on Friedel-Crafts Chemistry while there. **Rodolph Rouhana** (AB'62;MD U. Montpellier, France,'71) writes that after an internship in Hull, Quebec, and residency at Methodist Hospital in Indianapolis in Family Practice, he is now engaged in private practice at Indianapolis.

**Stewart W. Schneller** (PhD'68) will serve as chairman of the Seventh International Congress of Heterocyclic Chemistry at the University of South Florida in August 1979. **John A. Shively** (AB'44;MD'46) has become Vice Chancellor for Academic Affairs at University of Tennessee Center for the Health Sciences after serving as Chairman of Pathology at the University of Tennessee College of Medicine for five years. **Mona Franck Smith** (BS'50) writes that after ten years at home with three children she has gone back to work and is a Technical Information Specialist at the Commerce Department, National Technical Information Service. **Lenore Spencer** (AB'72), now **Lenore Kelly**, is completing doctoral training in the Department of Molecular Biology at Vanderbilt University. **J.R. Spraul** (PhD'41) is now senior staff engineer at TRW Systems Group in Redondo Beach, CA. **Kathryn Campbell Susott** (AB'40;MD'42) writes that she has been in Civil Service since 1958 and practicing medicine at USAF clinic, Hickam

Air Force Base, Hawaii, since 1968. She has one son who is a sculptor in bronze and a second son who is in medical training at the University of Hawaii.

**David Templer** (PhD'68) tells us he is laboratory manager, Latin American Regional Technical Service Laboratory at Rohm and Haas Company, in Miami, Florida. **Forrest L. Warner** (AB'36) writes that he retired in 1972 as Vice President U.S.S. Lead Refinery and Vice President U.S. Smelting Refining and Mining Co., New York (now UV Industries). He recalled that Dr. Mathers had recommended him to these companies at the time of his graduation and he was able in later years to employ Dr. Mathers as a consultant for the companies. **James C. White** (BS'43) was appointed Technical Services Manager for Union Carbide Corporation, Nuclear Division in June 1976. **Sarah Zimmerman** (AM'61) now in the Department of Clinical Pathology at IU Medical Center (Indianapolis) has been elected a member of the American Association of Immunologists. **Jay Young** (BS'39) is now Technical Director of the Manufacturing Chemists Association, having left Individualized Science Instructional System at Florida State University the first of the year. He has been elected Councilor, Division of Chemical Education, ACS.