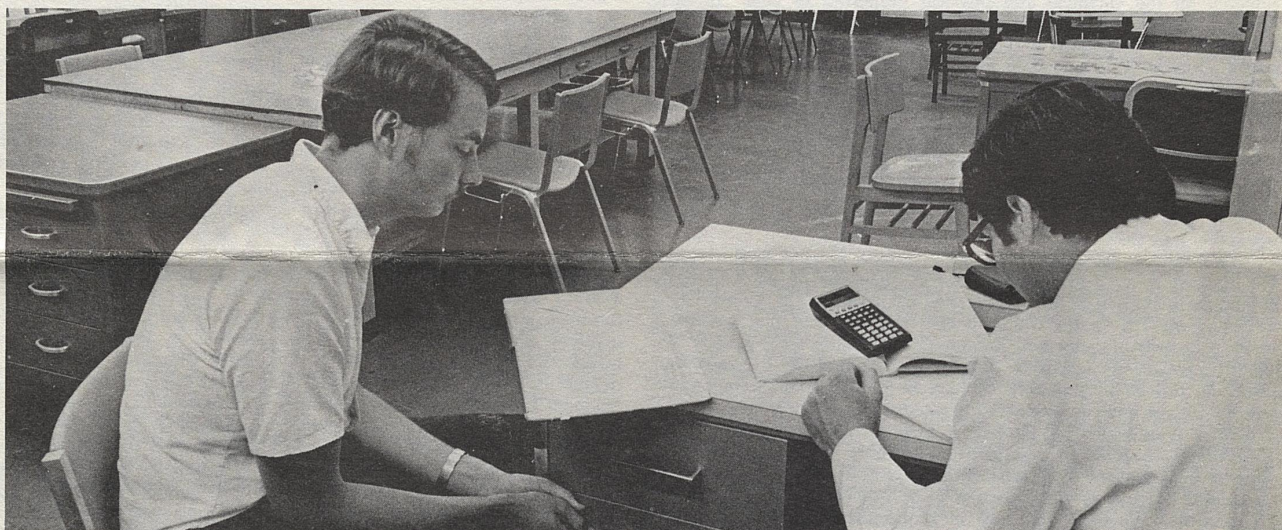


ALUMNI NEWSLETTER

department of chemistry • THE UNIVERSITY OF KENTUCKY

SUMMER 1976



The Chemistry Resource Room. First opened in 1974, it was expanded recently to accommodate an increasing number of students. Alumni contributions have helped to provide furnishings and equipment for this room.

A NOTE FROM THE CHAIRMAN

I am pleased to report that the Alumni Newsletter distributed last summer was very well received and more than 110 information sheets were returned. Reflecting this alumni interest we have prepared another newsletter this year. This year's issue is being sent by first class mail in an attempt to reach alumni who have moved since last corresponding with the department or the alumni association.

We encourage you to take a few minutes to fill in this year's information sheet and bring us up to date on your accomplishments and current address. A resumé of many of the comments returned to us last year is presented elsewhere in this newsletter.

I am also pleased to report that alumni-giving funds designated for the use of the Department of Chemistry increased from \$188 in 1974 to \$850 in 1975. This year these funds supported the publication and mailing of this newsletter, furnishings and reference books for the chemistry resource room, seminar refreshments and two \$100 awards to outstanding graduate student teaching assistants in the Department of Chemistry. These funds are greatly appreciated by the faculty and students in this department. They provide us with the ability to fund certain projects which could not be funded with State appropriations. Donations to the Chemistry Development Fund may be sent to:

Director of Development
204 Administration Bldg.
University of Kentucky
Lexington, Kentucky 40506

If you wish the funds to be used by the Department of Chemistry, please specify the donation is for the Chemistry Development Fund for unrestricted use by the Department of Chemistry, or the Robert M. Boyer Fund.

The Naff Symposium featuring Nobel Laureate H. G. Khorana and Professor Dieter Söll was an outstanding success again this year. This yearly symposium funded by the Anna S. Naff Endowment attracted over 250 participants. The members of the department were saddened this year by the deaths of two former colleagues, Emeritus Professor Lyle Dawson and former Laboratory Manager, Robert Boyer. Additional information may be found elsewhere in this newsletter.

Approximately 20 new graduate students joined the department in 1975-76, the largest incoming class in many years. We hope this signals a rekindling of interest among students in graduate education in chemistry after a drought of several years duration. The academic quality of last year's incoming class is also higher than for the previous few years. The new A.B. program in chemistry, designed largely for students who wish a strong science background to qualify them for professional schools, has proven to be popular with students. Currently over 100 freshmen have registered as B.S. or A.B. chemistry majors for the fall of 1976. This may be one of the largest undergraduate major classes in the history of the department.

Finally I would like to note that I will be finishing my four year term of Chairman on June 30, 1976. I have enjoyed meeting many of you as you stopped to visit in Lexington, or to participate in our seminars or symposia. It has been a busy and enjoyable four years in which the Chairman actually hired one-third of the present faculty and nearly one-half of the present staff. As June 30 approaches, however, I must admit that I look forward with enthusiasm to returning to a deeper involvement in my first loves—teaching and research. If you are in this area, we hope you will find the time to visit us and renew old acquaintances. On behalf of our faculty, our students and myself I again thank you for your continuing interest in the department.

William D. Ehmam
Chairman
May, 1976

FACULTY-STAFF NEWS

New Chairman Appointed

Effective July 1, our new Department Chairman will be *Dr. William F. Wagner*, who should be familiar to many alumni. Bill Wagner first came to UK in 1949 as an Instructor in the Department; he was promoted through the ranks to full Professor in 1958. He has already served a term as Chairman of the Department and as Director of General Chemistry.

Bill's research interests show how one's background can always be valuable in later years. Just prior to receiving his doctorate from the University of Illinois, he spent the war years (1940-45) working as a research chemist at the Illinois State Geological Survey, doing research on the chemical and physical properties of coal. In fact, his first two publications dealt with coal. Recently, with the increased interest in the large coal and oil-shale deposits in Kentucky as one possible energy source to help meet the national goal of energy self-sufficiency by the mid-1980's, he has once again embarked on a research project on the properties of an energy source—the application of modern thermal methods of analysis to oil-shale in order to provide a simpler, more reliable, and more informative method for estimating the nature and yield of the gaseous and liquid petroleum products from the industrial processing of oil-shale. Bill is an analytical chemist, and some of his other research interests include solvent extraction and the properties of rare-earth chelates.

Bill Wagner has been very active in the local AAUP chapter. He has just spent a very active year as chairman of the University committee on privilege and tenure. As chairman of the Credit Committee of the UK Credit Union, it can be safely said that a number of the Chemistry faculty are "indebted" to Bill in a special way. We should have a very smoothly running Department for the next four years, as Bill could probably succeed in getting a majority faculty vote on almost any resolution by threatening to call in loans.

Seriously, we wish Bill the best of luck in this demanding position.

William D. Ehmann, our present chairman, will be returning in July to full-time teaching and research. In his four-year tenure as chairman, Bill has presided over a great number of changes in the Department. We have nine new or replacement faculty in the Department, the Chemistry Resource Room for undergraduates has been a major success and is now open over 40 hours a week, and the Naff Symposium has proven to be one of the most popular and prestigious lecture series in the University—to name but a few significant changes. We thank Bill for his efforts on behalf of the Department and the sacrifices he has had to make in his personal life; he certainly has earned a rest from administrative duties.

Faculty Addition

Joining our staff next fall will be *Dr. Laren M. Tolbert*, presently at Harvard University. He obtained his education at Tulane (B.A., '70) and the University of Wisconsin (Ph.D., '74) where he worked under the direction of H. E. Zimmerman. Presently he is a post-doctoral associate of R. B. Woodward, doing research in new synthetic methods. His research interests are in the areas of organic photoelectrochemistry, thermal and photochemical rearrangements of carbanions, new synthetic methods, and spectroscopy. Dr. Tolbert says his professional goal is "to do interesting chemistry with interested students."

Promotions

We are pleased to announce two promotions within the Department. *Dr. Audrey L. Companion*, who joined our Department last September from the staff at Illinois Institute of Technology, has been promoted to full Professor. Dr. Companion was born in Pennsylvania, and obtained all her degrees at Carnegie Institute of Technology (Ph.D., '58). She is the author of over thirty publications, and her popular book *Chemical Bonding* passed the 100,000-copy sales mark in 1975. Audrey is very active in the field of chemical education, serving on the advisory board of the ACS magazine *Chemistry*, and as a consultant to the ACS/NSF sponsored College Chemistry Consultant Service (C₃S). Her research is concerned primarily with computer simulation of gas phase and gas-solid reactions using molecular orbital theory. Some of the practical applications of this theoretical work include a better understanding of the degradation of metals and of certain types of catalysis.

Dr. Merle D. Pattengill has been promoted to Associate Professor in our Department. Dr. Pattengill obtained a B.S. in chemistry from the University of Kansas ('64), a Ph.D. from California-Irvine ('69), and did postdoctoral work at Wisconsin and the University of

Toronto before joining our Department in 1973. His research involves theoretical calculations of gas-phase rate processes, the aim of which is to develop an increased understanding of the factors which govern the outcomes of collision events. Among the studies he has underway are the development of simple models of bimolecular exchange reactions and classical trajectory studies of inelastic and reactive scattering.

Grants and Contracts

The Department has been especially fortunate in obtaining external funding this past year. In all, some seven grants totaling over \$250,000 from external sources and six grants totaling over \$30,000 from internal University sources were awarded to faculty in the Department during the past academic year.

D. Allan Butterfield, an Assistant Professor in his first year at UK, received a Frederick Gardner Cottrell Research Grant from the Research Corporation and a grant from the Muscular Dystrophy Association of America to assist in his studies on the nature and detection of myotonic and duchenne muscular dystrophy. Dr. Butterfield uses the technique of electron spin resonance spectroscopy and spin-labeling to study protein-protein and protein-lipid interactions in the membranes of red blood cells of both normal and afflicted people. Already, the method he has pioneered has assisted in diagnosing the presence of myotonic muscular dystrophy in several children prior to the onset of the usual clinical symptoms of this disease.

Steven W. Yates, another first-year faculty member, also received a grant from the Research Corporation to assist in his studies on the nuclear properties of deformed and transitional nuclei. His work involves physical and radiochemical studies on the structure of nuclei using γ -ray spectroscopy. Dr. Yates obtained his doctoral degree at Purdue ('73) and did postdoctoral work at the Argonne National Laboratories before joining our Department.

William D. Ehmann has received a renewal of his NASA Lunar Sample Research Grant. This year's research work will concentrate on the chemistry of the lunar-core samples which are just now being opened by NASA. Bill Ehmann has an international reputation for his work in the chemical analysis of lunar and geological samples using the technique of neutron activation analysis. This non-destructive, sensitive method has proven nearly ideal for the analysis of lunar materials.

Dr. Kurt Niedenzu received a grant from the Tobacco and Health Research Institute to study the syntheses and reactions of functional (pyridylamino)boranes. Kurt, an internationally known inorganic chemist, is interested in the synthesis, structure, and reactions of various boron compounds—with particular emphasis on organoboron-nitrogen heterocyclic compounds of potential medicinal use. He was on sabbatical leave last year at the Gmelin Institute for Inorganic Chemistry in Frankfurt, Germany, and has returned to full-time teaching and research duties in the Department this past year.

John M. Patterson and *W. T. Smith, Jr.*, have been awarded a contract by the USDA to study the synthesis and pyrolysis of labeled maleic hydrazide. This grant will assist in the continuation of their joint research program on the pyrolysis reactions and mechanisms of organic compounds, which—besides its basic significance—has important practical applications to cigarettes and other tobacco products.

In addition to his "regular" research grant from the National Science Foundation, *Dr. Robert D. Guthrie* has received a "Small College Faculty Research Participation Grant" for the summer of 1976. This grant will enable Professor Gerald L. Seebach of Pennsylvania University to join Bob's research group and investigate some electron-transfer reactions of carbanions with transition metal complexes.

Other

As noted in the Chairman's letter, the Anna S. Naff Symposium on Chemistry and Molecular Biology was again a huge success as judged by the number and enthusiasm of those attending. Professors H. Gobind Khorana of M.I.T. and Dieter Söll of Yale University spoke on "Structures, Synthesis and Biological Functions of Nucleic Acids" on March 26, 1976. The third symposium in this annual series is now being planned for the spring of 1977. Suggestions for speakers and topics are especially welcome from Chemistry Department alumni. Please send your suggestions to Dr. W. T. Smith at the Department of Chemistry at UK.

Early last summer *Dr. Joseph W. Wilson* was among those given the Great Teacher Award. Five of these \$500 prizes are presented annually by the UK Alumni Association. Joe received B.S. and Ph.D.

degrees from M.I.T. and Indiana University, respectively, and spent two postdoctoral years at the University of Wisconsin before joining the Department in 1963. He has taught many of the organic courses in the department at one time or another. His research interests are in the areas of organic reaction mechanisms and photochemistry. His wife of three years, the former Marlène Miracle of Lexington, was once one of his students. Their son, Joshua, was born last August.

Staff

The Don Cash Seaton Safety Award was recently presented to *Homer L. Grimes*, chief storekeeper in the Department. The Seaton Award is the highest safety award on campus and was given in recognition of Homer's contributions in laboratory safety and chemical waste disposal. *Ellen P. Baxter*, head librarian the Chemistry-Physics Library, has been promoted to the rank of Librarian I, the equivalent in her discipline of the rank of Professor. She presided over the recent rearrangement of the Chemistry-Physics Library, which now has significantly more shelf space than it did. *Wilbur C. Mateyka*, in charge of the Department's glass shop, has just finished a year as chairman of the Southeastern Chapter, the largest chapter, of the Scientific Glassblowers Association. Wib recently presented a paper with Marshall Gordon at the SGA Convention. It was titled "A Modified Jet Separator for a Gas Chromatograph-Mass Spectrometer Interface" and has attracted the attention of a number of glass companies.

DEATHS

Dr. Lyle R. Dawson, 71, distinguished Professor Emeritus and former head of the Chemistry Department, died on April 16, 1976, after a long illness. He came to the University in 1945 as head of the Department of Chemistry, and served twenty years in that capacity. In addition to Kentucky, he served in academic positions in Illinois, Wisconsin, Nebraska, and Louisiana, and as a research chemist and supervisor of analytical laboratories for United States Steel Corp. at Gary, Indiana. During World War II he was a research chemist and group leader on the Manhattan Project at the University of Chicago.

Dr. Dawson published more than fifty research papers during his career, and was the holder of several patents. He was elected distinguished professor of the year by the faculty of the college of Arts and Sciences in 1954, and in 1956 the Board of Trustees appointed him to the rank of Distinguished Professor in the field of physical chemistry. Perhaps the most lasting monument to his career is the present Chemistry-Physics Building, which he helped design. The movement of chemistry from the antiquated facilities in Kastle Hall to our present, modern facilities was certainly a milestone in our Department's history. All of us at the University mourn his passing.

The University community was saddened to hear of the death on November 23, 1975, of *Mr. Robert M. Boyer* of cancer after a short illness. Mr. Boyer was Laboratory Manager in the chemistry department for some 15 years, and may be a familiar face to many graduates. Recently, Mr. Boyer has been Special Assistant to the dean of the College of Arts and Sciences.

Mrs. Robert Boyer has established the Robert M. Boyer Memorial Fund at the University in his honor. The fund is to be used for the benefit of the Chemistry Department. Anyone wishing to contribute to the fund is requested to do so through the UK Development Office, specifying the Robert M. Boyer Fund.

Frederick Garman (B.S., '10) died in December, 1974. *Effie D. Martin* (B.S., '30; M.S. '32) died on November 13, 1974. *Francis Roberts Lamb* (M.S., 1928) died in May, 1976.

STUDENT NEWS

Undergraduate Awards

Thomas Barbara, already the recipient of an impressive number of awards including the Freshman Chemistry Award in 1973 and the Meredith Award in 1975, recently won the American Institute of Chemists Award for the outstanding graduating senior in chemistry and a first place Oswald Award given annually to a U.K. undergraduate for creative research in the physical sciences. Mr. Barbara's research involved the study of "Mass Conservation and Kinetic Mechanisms". The project was conducted under the guidance of Dr. Paul Corio, in whose footsteps Tom will be following in September when he attends Columbia University on a graduate fellowship. Mr. Barbara was the president of the American Chemical Society Student Affiliate for the past year. *James Swan*, who has been working with Dr. W. T. Smith, was recently awarded a Kentucky Superior Scholar Athlete Award. Jim has been able to combine successfully his

interests in Chemistry and sports. He holds a varsity track letter and will be running off to graduate studies in bioorganic chemistry at Pennsylvania State University in September. The Meredith Award to the outstanding junior chemistry major went to *Jeffrey Franks* who is currently actively involved in the isolation of RNA polymerase I from Ependemoblastoma A on a joint project with neurosurgery and Dr. W. T. Smith of this department. Jeff is a past winner of the Merck Award and plans to attend medical school after graduation. The Merck Index award to the outstanding sophomore was presented to *Kathleen Henke* and the Freshman Chemistry Award went to *John M. Patterson, Jr.* *Marshall Prunty* was awarded a subscription to *Analytical Chemistry*.

Graduate Student Activities

Chet Leach has been a productive president of the Chemistry Graduate Student Association for this past year. Through cooperative efforts with the faculty, the GSA has organized a successful new organic resource room voluntarily staffed by organic teaching assistants. Another result of this cooperative effort was the establishment of the Outstanding Teaching Assistant award, which consists of a certificate and a check for \$100. Two teaching assistants, *John Bauer* and *Kenneth Campbell* tied for first place this year and so both had the honor of being the first recipients of the new award. Chet's successor as president of the GSA is *William Stroube*. This year's Kentucky Academy of Sciences meeting was dominated by U.K. graduate students. *John Layton*, *Sharon Cronch*, *Bill Stroube*, *Preston Miles* and *John Bauer* all presented papers. *Bill Stroube* also co-authored a paper presented at the 7th Lunar Science Meeting in Houston.

DEPARTMENTAL SEMINARS BY GRADUATES

Periodically the Chemistry Department is particularly honored by the return of one of our graduates to present a seminar. We were especially fortunate this year to have six of our alumni present seminars to us—one a month from October through March. Beginning the parade was *Dr. Edward J. Griffith* (Ph.D., '51) who is presently a Senior Science Fellow in the Inorganic Division at Monsanto in St. Louis. Dr. Griffith did his graduate work under the direction of Professor Lyle Dawson. His talk, entitled "Phosphorus—A Bridge to the Primitive Earth," detailed some of his research on the evolution of the earth. In November, *Dr. Andrew C. Plaszc* (Ph.D., '70), Research Chemist at Abbot Laboratories in Chicago, shared with us some of his thoughts on the education he received in this Department and some of his experiences as an industrial chemist in a seminar entitled "Three Years Later: A UK Graduate's Impressions on the Job." Dr. Plaszc, who did graduate work in organic chemistry under the direction of Professor Ellis Brown, now is doing a considerable amount of analytical chemistry involving various drugs and medicinal formulations. *Dr. Richard L. McConnell* (B.S., '48; Ph.D., Virginia, '52), spoke to the Department on "Relationships of Catalyst Composition to Catalytic Activity for the Polymerization of α -Olefins" in December. Dr. McConnell is presently a Senior Research Chemist at Tennessee Eastman in Kingsport. Leading off the bicentennial year was *Dr. Mary F. Richardson* (B.S., '62; Ph.D., '67), Associate Professor of Chemistry at Brock University in Ontario, Canada. Dr. Richardson, a former student of Professor William Wagner, spoke on "Structural Studies of Thiamine Derivatives," a part of her research in the area of X-ray crystallography. In February, *Dr. C. Kenneth Bjork* (Ph.D., '53), presently a Group Leader in the Patent Department at Dow Chemical in Midland, Michigan, addressed the Department on the subject of "Patents, or What I Always Wanted to Know about this Special Type of Literature." This interesting talk was followed by a special slide program "Patents and Progress in the Useful Arts—A Bicentennial Perspective" which he narrated. In March, *Dr. James R. Vogt* (Ph.D., '66), Associate Director of the Environmental Trace Substance Research Center at the University of Missouri at Columbia, spoke on "Trace Element Studies using Neutron Activation Analysis." Dr. Vogt, a former student of Professor William Ehmann, discussed some of the many applications of neutron activation analysis at the Center, particularly in the area of law enforcement.

ALUMNI NEWS

It was a special pleasure to hear from so many alumni after the last newsletter. Most of these responses are included below. We encourage all of you to keep us up to date on your activities by returning the enclosed information sheet to Dr. Wagner.

A. S. Behrman (B.S., '14) is a Chemical Consultant in Chicago. He writes that he is very glad that the Alumni Newsletter has been resurrected and that he has fond remembrances of UK and the Department.

A. J. Whitehouse (B.A., '24) has been a physician for about forty years in Obstetrics and Gynecology in Lexington. He was the second President of the Kentucky Obstetrics and Gynecology Society and is an Honorary Attending Staff at Good Samaritan Hospital.

Manly M. Windsor (M.S., '25) is retired and is a Staff Consultant, Lorain County Metropolitan Park District, Elyria, Ohio. He received his Ph.D. from M.I.T.

Raymond K. Feldge (B.S., '25; M.S., '27) writes that he is enjoying his retirement. He is Professor Emeritus in the Department of Textile Engineering at Georgia Institute of Technology, Atlanta. He received an M.S. in Chemical Engineering from M.I.T.

Elwood V. Schulte (B.S., '27) is a Consultant to Koppers Co., Inc., Pittsburgh. He retired from Koppers in '70; he has 14 U.S. patents and ca. 35 foreign patents in coal chemical recovery, explosive shattering of ores, and retorting of oil shale.

Alex Black (B.S., '29) is Professor Emeritus in Animal Nutrition at Pennsylvania State University, State College, Pennsylvania. He says he is enjoying retirement and spends his winters in Fort Meyers Beach, Florida. He received an M.S. from Penn State in '33 and the Ph.D. from University of Rochester in '38.

Robert H. Baker (B.S., '29; M.S., '31; D.S.D. (Hon.), '68) is currently on a year's terminal leave from Northwestern University, Evanston, where he is a Professor of Chemistry and Dean of the Graduate School. He will have been in graduate administration 25 years and is the Senior Graduate Dean in the Association of American Universities. He received the Ph.D. from Wisconsin in '40.

Emerson G. Cobb (M.S., '31) is presently a Professor of Chemistry and Chairman of the Department at the University of the Pacific, Stockton, CA. He has previously been at the Louisiana Institute of Technology and at Dakota Wesleyan. He was a Fulbright Lecturer, Univ. of Peshawan, Pakistan; a Lecturer, Univ. Poona, India; Lecturer and consultant, Universidad de Baja California division de Ciencias Marinas, '74-'75; and a member of the Council Committee on Chemical Education ACS. He received a Ph.D. from Univ. of North Carolina in '41 and an L.H.D. from Union College in '61.

Malcolm H. Filson (B.S., '29; M.S., '31) is presently the Editor of FLACS, the official publication of the Florida Section of the ACS. He is Professor Emeritus of Chemistry at Central Michigan University, Mt. Pleasant, and has been honored by the CMU by having the department's research and instructional labs named after him. He was cited by the State Legislature for his 37½ years service at CMU, 16 of which were as Chairman of the Chemistry Department. He received his Ph.D. from the Univ. of Michigan and had Post-doc fellowships at Univ. of Wisconsin, Florida, Purdue, Cornell, Michigan State, and Ohio Wesleyan.

Don B. Forman (B.S., '31) has been retired since '71 from duPont, Wilmington; he now spends his time in various ways: consulting in elastomer technology, safety, and technical personnel; and TV talk show on Delaware History. He received an M.S. from the Univ. of Illinois.

Forrest F. Cleveland (M.S., '32) is Professor Emeritus of Physics at the Illinois Inst. of Technology and is an Adjunct Professor in the Electrical Engineering Department at UK. He received a Ph.D. in Physics from UK in '34.

J. Phillip Clements (B.S., '32; M.S., '33) is the President of Fulltone Foto Co., Inc., Colortone, Inc.; Chrome Service, Inc., and Clements Realty Co., Inc., Louisville, Ky. He writes that he has been in the photo-finishing industry since 1939. Fulltone Foto Co. was the parent company, developing and printing amateur B-W.

Thomas W. Moore (B.S., '32; M.S., '33) recently retired as Vice-President of Exxon Corp., New York, after over 38 years of service. He received an M.S. in Chemical Engineering from the Univ. of Michigan in '34.

John J. Owen (Ph.D., '34) calls our attention to an error in the last newsletter. He says that "My 'sheepskin' carries the date of June 1, 1934 and is duly authenticated by Gov. Lafoon, Dr. McVey and others. I still bear some of the 'scars' of that final exam." He then joined Exxon Research and Development Labs where he advanced through the ranks to Administrative Assistant to the Director. He was retired from Exxon in 1959. Dr. Golban (Ph.D., '49) and Dr. Kelly (Ph.D., '49) were the first to receive the Ph.D. in Chemistry here after the establishment of the modern Ph.D. program under Dr. Dawson.

Charles W. Hammond (B.S., '35) was an Area Supervisor Analytical Research, Dacron Research Lab, duPont, Kingston, NC, prior

to his retirement. He visited the department last August and teaches navigation and seamanship and makes replicas of old navigation instruments.

Charles D. Randal (B.S., '36) is Professor and Chairman of the Dept. of Microbiology, since '57, at the Univ. of Mississippi Medical Center, Jackson. He received an M.D. from the Univ. of Mississippi.

James W. Higgins (B.S., '37) is a Sales Manager in the Specialty Chemicals Div. of the Unitech Chemical Co., Chicago.

James B. Irvine (B.S., '37) is a Process Engineer for the Quaker Chemical Corp., Conshohocken, Pa.

David I. Randall (B.S., '37) is a Consultant halftime and Retired halftime. He received his M.S. and Ph.D. from Penn State Univ.

Donald W. Riester (B.S., '37) is presently a Deputy Associate Director for Technology, Bureau of Foods, U.S. Food and Drug Admin., Washington. He joined the FDA (for a 5-year period) after retiring in '72 after 37 years with American Can Co. as Director of R & D. He recommends this to others as the Government needs experienced people.

John H. Holmes (B.S., '38) is a Project Engineer at Bechtel Power Corp., Ann Arbor, Michigan. He is currently working on the design of an 800 MW oil fired power plant for the Detroit Edison Co. He received an M.S. in Chem. Engineering from the Univ. of Michigan.

Thomson R. Bryant, Jr. (B.S., '40) is a Surgeon in Lexington. He received his M.D. from Harvard Medical School.

Walter V. Cropper, Jr. (M.S., '40) is presently Director of Developmental Operations at the American Society for Testing and Materials, Philadelphia, PA.

Charles B. Williams (B.S., '41) is in disability retirement and spends his time mainly writing and studying.

Earle C. Fowler (B.S., '42) is Head of the Physics Department at Purdue University, West Lafayette, Ind. Currently, he is the secretary-treasurer of the Division of Particles and Fields, American Physical Society. His research with Fermi National Lab is "Test of Identity of Neutrinos from Decay of π and k Mesons." He received an A.M. ('47) and Ph.D. ('49) in Physics from Harvard University.

Raymond L. Patterson (B.S., '42) is the President of the House of Lowell, Inc., Greenville, Ohio, a manufacturer of skin and hair care toiletries. Previously he had been at Proctor and Gamble for a period of 17 years where he was in product development, detergents, and fats for animal and poultry feeds.

Thomas H. Shelley, Jr. (B.S., '41; M.S., '42) is Director, Central Research Laboratory, Johnson and Johnson Domestic Operating Co., New Brunswick, N.J. He received his Ph.D. from Cornell University.

Russell A. Hunt, Jr. (B.S., '42; M.S., '43) has recently been appointed Manager of Technical Services for Standard Oil Co. (Indiana) at the Amoco Research Center, Naperville, Ill. He has been with Standard Oil since '43; in '69 he was named manager of facilities and services at the Whiting, Ind. laboratories; and in '73 was appointed manager of new facilities coordination at the Amoco Research Center.

Thomas E. Earle (B.S., '45) is currently a Senior Foreign Patent Correspondent for Standard Oil Co., Chicago, Ill.

Robert L. Anderson (B.S., '48) is a Group Leader in Chemicals and Plastics, R and D Dept., Union Carbide Corp., South Charleston, W. Va.

Carolyn C. McMeekin McConnell (Mrs. Richard L.) (B.S., '48) is a homemaker in Kingsport, Tenn.

Richard L. McConnell (B.S., '48) is a Research Associate in the Research Laboratories of Tennessee Eastman Co., Kingsport. He is currently coordinator of the Olefin Polymers and Adhesives Applications Research Lab. March '76 marked his 25th year at Eastman. He received an M.S. and Ph.D. in Organic Chem. from the Univ. of Virginia.

Clifford J. Webster (M.S., '48) is a Laboratory Supervisor, Monsanto Textiles Co., Research and Development, Decatur, AL.

Robert E. Klie (M.S., '49) is a Senior Instrument Engineer at Shell Oil Co., Wood River, Ill., where he is concerned with on line process measurements. He is an AIChE lecturer in continuing education.

William E. Sweeney (B.S., '49) is Director, Plastics Laboratory, Texas Eastman Co., Longview, TX.

Charlotte B. Reed Ward (B.S., '49) is an Associate Professor of Physics at Auburn Univ., Auburn, AL. She was recently the first woman to be either nominated or elected to the position of Chairman-Elect of the University Senate; she assumed the position of Chairman in May. She received her M.S. ('51) and her Ph.D. ('56) from Purdue Univ.

Theodore A. White (B.S., '44; M.S., '49) is a Senior Advisor, Public Affairs Dept., Exxon Chemical Co., New York, NY.

Harrison R. Cooper (B.S., '50) is the President of Harrison R. Cooper Systems, Inc., Salt Lake City, a producer of IR process monitoring instruments—"Audn." He received his Ph.D. from the Univ. of So. California.

Mary T. Kinsley (M.S., '50) is a Research Chemist at Brookhaven National Lab, Upton, NY.

Norman O. Long (Assoc. Prof., '48-'50) is now a Professor Emeritus at Central Methodist College, Fayette, Mo. He was a Professor on the Kentucky Contract Team with Indonesia ('57 to '59). He received his Ph.D. from the Univ. of Buffalo.

Curtis H. Ward (M.S., '50) is a Professor of Chemistry at Auburn Univ., Auburn, AL. Recently he was one of several principal investigators on the NSF-sponsored Solvent Refined Coal process research, studying coal products by gc, nmr, and ir. He received his Ph.D. ('54) from Purdue Univ.

Robert F. Johnson, Jr. (B.S., '51) is a Professor at the Univ. of Minnesota, St. Paul. He received an M.S. in textile chemistry from Georgia Inst. of Tech. in '58 and a Dr. s. techn. (Engineering Chem.) from Eidgenössische Technische Hochschule, Zurich, '63.

Albert L. Stone (M.S., '51) is a Senior Chemist, Tennessee Eastman Co., Kingsport, Tenn.

Carl Berger (Ph.D., '52) is the President of Unican Electrochemical Products, Ltd., Montreal, Quebec, Canada.

W. E. "Welly" Walker (B.S., '53) is a Research Scientist, Research and Development, Union Carbide, Charleston, W.VA. He received an M.S. from Marshall College.

Ray T. Reynolds (B.S., '54) is Chief, Theoretical Studies Branch, Space Science Division, NASA-Ames Research Center, Moffet Field, CA. He received an M.S. in Physics from UK in '60.

Arthur E. Hess (B.A., '56) is presently a Sales Representative for National Collieries, Inc., Grundy, VA, where he represents his company in the purchase of coal from independent producers in Virginia, W. Virginia, Tennessee, and Kentucky. He received a M.Ed. from Univ. of Virginia in '63.

Frank M. Tilton (B.S., '56) is a clinical Neurologist at the Wichita Clinic, Wichita, Kansas. He received his M.D. from the Univ. of Louisville and spent six years as a Resident in Neurology at the Cleveland Clinic.

Eddie C. Smith (B.S., '59) is Professor and Vice-Chairman of Chemistry at Oklahoma Univ., Norman. He received his Ph.D. from Iowa State Univ. in '63.

Thomas L. Dawson (M.S., '58; Ph.D., '60) is currently Group Leader and Technology Manager in the Chemical and Plastics R and D of Union Carbide, Corp., South Charleston, W.VA. He has been at Union Carbide since '60, and has had the positions of Chemist, Project Scientist, and Research Scientist; the last promotion came in 1975 to Group Leader and T.M.

Achmad Amiruddin (Ph.D., '61) is presently a Rector at Hasanuddin University, Ujung Pandang, Indonesia.

George R. Jurch, Jr. (M.S., '61) is an Associate Professor of Chemistry at the Univ. of South Florida, Tampa. He received the Ph.D. in '65 from the Univ. of California, San Diego.

Robert A. Noel (B.A., '61) is a Physician of Family Medicine, in Louisville. He received his M.D. from the Univ. of Louisville in '65.

Djong-Gie Oei (Ph.D., '61) is a Principal Research Scientist Associate, Research Staff—Chemistry Department, at the Ford Motor Co., Dearborn, Michigan.

Richard C. Sheridan (M.S., '61) is a Research Chemist, Division of Chemical Development, Tennessee Valley Authority, National Fertilizer Development Center, Muscle Shoals, Alabama.

John D. Baxter (B.S., '62) is currently an Assistant Professor of Medicine and Biochemistry at the Univ. of California, San Francisco and is part of the Metabolic Research Unit. He received an M.D. from Yale in '66.

Richard M. Harrison (B.A., '62) is the Head of Reproductive Physiology, Delta Regional Primate Research Center, Tulane Univ., Covington, LA. He received an M.S. ('71) and a Ph.D. ('73) from Michigan State Univ.

Charles E. Terry (B.A., '62) is a Physician at the Estill Medical Clinic, Irvine, KY. He received his M.D. from Vanderbilt Univ.

Michael B. Hargrove (B.S., '63) is an Assistant Professor of Management Science-Statistics, College of Business and Management, Univ. of Maryland, College Park, MD. He received a Ph.D. in economics from UK.

Thomas M. Stoeckinger (B.S. '63; Ph.D., '68) has his own business which produces media for growing bacteria.

Peter A. Diachun (B.S., '64) is the President of Comco Co., Youngstown, N.Y. He received an M.B.A. from SUNY at Buffalo.

W. Duke Meyers (B.A., '64) is a Lt. Col. and is Chief of the

Renal Branch, U.S. Army Institute of Surgical Research, Brooke Army Medical Center, Ft. Sam Houston, San Antonio. He was recently certified by the Amer. Brd. of Int. Medicine in internal medicine and nephrology after spending six years at Walter Reed Army Medical Center, 2 years of which he had a fellowship in nephrology. He currently serves as a consultant to the Army's Burn Center in addition to teaching house staff and doing research on kidney failure. He received his M.D. from Univ. of Louisville in '68.

Thomas C. Vanaman (B.S., '64) is an Associate Professor of Microbiology and Immunology, Duke University Medical Center, Durham, N.C. His research includes the structure, function and evolution of proteins with specific interest in RNA tumor virus proteins, oncogenesis, neurosecretory mechanisms, and regulation of cyclic nucleotide phosphodiesterases. He received a Ph.D. in Biochemistry from Duke University in '68 and spent two years as a post-doc at Stanford.

David V. Boyer (M.S. '65) is currently a Process Improvement Group Leader at Carolina Eastman Co., Columbia, S.C. He received an M.S. in Chemical Engineering from the University of Rochester.

Bobbie P. Cooper (M.S., '65) is presently an Assistant Professor of Chemistry at Dalton Junior College in Dalton, Georgia.

Bruce J. Gaddie (B.A., '65) is an Optometrist in the Louisville area. He is currently sect'y-treas of the Kentucky Optometric Association and a past President of the Louisville Optometric Assoc. He received an O.D. from the Univ. of Houston in '68.

John B. Neale (B.S., '65) is a Project Manager in the Neutron Devices Dept., General Electric Co., St. Petersburg, Florida. He is presently engaged in engineering and development activity on a thermally activated battery utilizing a non-aqueous electrolyte system and a pyrophoric heat source.

James D. Nelson (B.S., '65) is an Assistant Professor of Mathematics at Western Michigan Univ., Kalamazoo. He received his Ph.D. in math from UK in '70.

Gerald R. Roehrig (M.S., '65) has recently been promoted to Professor of Chemistry at Aurora College, Aurora, Ill. He is also the Chairman of the Division of Natural Science and Mathematics. His research concerns compounds similar in structure to Cytoxan I and Chlorambucil I anti-cancer drugs. He received his Ph.D. from the Univ. of Indiana.

Richard H. Cox (Ph.D. '66) is currently an Associate Professor of Chemistry at the University of Georgia, Athens. He did postdoctoral work at Mellon Institute, Pittsburgh, Pa.

Joseph M. Fisher (M.S., '66) is a Regional Product Specialist for Perkin Elmer Corp., Cincinnati.

Thomas J. Gallagher (B.A., '66) is currently a Post-doctoral Fellow in Anesthesiology at University of Miami School of Medicine, Florida. He received an M.D. from UK in '70.

Richard W. Johnson (B.A., '66) recently completed a residency in Internal Medicine. He received an M.D. from UK in '70.

James L. Setser (M.S., '66) is Chief Program Coordinator, Environmental Protection Division, Dept. of Natural Resources, Atlanta, Georgia.

Judith K. York Smith (B.A., '66) writes that she is a housewife in Durham, N.C. She has received an M.A. in Teaching from Duke University.

Michael W. Barnes (Ph.D., '67) is presently a Supervisor, in the Propellant Research Section of Thiokol Corp. in Brigham City, Utah. From '67-'71 he was in the Rocket Propulsion Laboratory at Edwards AFB, and '71-'72 an instructor at the Air Force Academy.

Carter B. Carr (B.A. '67) is presently a Physician-Internal Medicine at Lexington Clinic. He received his M.D. from UK.

Keith A. Edmonson (Ph.D., '67) is a Research Chemist at Union Carbide Chemical Co., Oaklawn, Ill.

John B. Bates (Ph.D., '68) is a Group Leader in the Solid State Division at Oak Ridge National Laboratory, Oak Ridge, Tennessee. His research activities include Raman scattering in irradiated inorganic crystals; Raman and IR spectroscopy of defects and impurities; and spectroscopy of excited states.

John R. Elkins (Post-doc, '67-'68) is an Associate Professor of Chemistry at Bluefield State College and Concord College, Bluefield, W. Va. He recently completed a sabbatical leave in the Department of Plant Pathology and Physiology at V.P.I. and S.U. to study the chemical basis of host-parasite relationships in chestnut blight. He received the Ph.D. from University of West Virginia.

William M. Fisher (Ph.D., '68) is presently a Research and Development Chemist for Dexter Chemical Corp., Bronx, N.Y.

Arthur M. Ihrig (Ph.D., '68) is a Senior Research Chemist at the Lorillard Research Center, Greensboro, N.C., where he does research in tobacco smoke chemistry and filter development. Previously he

was a Research Associate at North Texas State University where he had several papers on 13-C NMR.

R. A. Nadkarni (Post-doc, '68) is a Research Manager, Analytical Facility, Dept. of Chemistry, Cornell University, Ithaca, N. Y.

Alan C. Sproles (B.A., '68) is a dentist in Diamond Bar, Ca. He is also engaged in research at the Univ. of Southern Calif. Dental School in salivary biochemistry and physiology. He holds the positions of Assistant Clinical Professor and Research Associate, Dept. of Physiology, USC. He received his DDS from USC in '73.

Douglas M. Becker (B.A., '65, M.D., '69) is currently an Assistant Professor of Pediatrics at the Univ. of South Alabama, Mobile, Alabama.

Laurence A. Danzer (M.S., '63; Ph.D., '69) is an Assistant Professor at the Univ. of Kansas School of Medicine, Dept. of Pathology. His work involves developing new blood chemistry testing procedures for the clinical laboratories at the medical center.

Clyde A. Heflin, Jr. (B.A., '69) is a physician in the Navy. He received his M.D. from Vanderbilt in '73.

David M. McKown (Ph.D., '69) is a Leader in the Neutron Activation Analysis Group, Research Reactor Facility, University of Missouri, Columbia.

Glen G. Possley (Ph.D., '69) is a Manager in Development, Texas Instrument Co., Stafford, Texas.

John B. Southard, Jr. (B.A., '69) is a Circuit Trial Counsel in the 7th Circuit Trial Judiciary Dept. of the Air Force, APO San Francisco, where he serves as Prosecutor for Pacific Air Forces. He received a J.D. from the University of Louisville.

Ronald D. Weddle (B.A., '69) is a Family Practice Resident at Riverside Hospital affiliated with the Medical College of Virginia, Newport News, Va. He plans to return to Kentucky and do Family Practice Medicine. He received his M.D. from UK in '73.

James L. Alderfer (Ph.D., '70) is on the faculty at Johns Hopkins Univ., Baltimore.

Kenneth E. Blick (Ph.D., '70) is in Clinical Chemistry at Medical Heights, Lexington.

Charles A. Girard (M.S., '61; Ph.D., '70) is on the faculty at Centre College, Danville, KY.

Nabeel F. Haidar (Ph.D., '70) is an Assistant Professor of Chemistry at Beirut University College, Beirut, Lebanon, and does consulting for a Lebanese Cosmetics Company.

Thomas R. Kemp (B.A., '65; Ph.D., '70) was recently promoted to an Associate Professor in the Horticulture Dept., UK. His research involves cytokinins (modified nucleosides) and transfer RNA.

Clarence Randall Lewis (B.S., '70) is currently an Advanced Environmental Engineer in the Central Engineering Dept. of 3M Co., St. Paul, Minn. He is actively involved in the design and specification of pollution control facilities for 3M manufacturing sites. He writes that the skiing and snowmobiling are wonderful. He received a B.S. ('71) and M.S. ('73) in chemical engineering from UK.

Clifford D. Miller (Ph.D., '70) is an Associate Professor of Chemistry at Pikeville College, Pikeville, Ky. He writes that he teaches courses in analytical, inorganic, and general physics, and mining technology course and mine water quality analysis.

Lawrence L. Robey (B.S., '70) is currently a resident physician at the Albert Chandler Hospital, UK. After he completes 3 years of residency in internal medicine he plans to go into private practice. He received an M.D. from UK in '75.

Stanley Forston, Jr. (B.S., '71) is a resident in Pediatrics at the University of Alabama Children's Hospital, Birmingham. He received his M.D. from UK.

David E. Gillum (Ph.D., '71) has recently been promoted to Associate Professor with tenure at Ashland Community College, Ashland, Ky.

John T. Gormley (B.S., '71) is presently a Technical Service Representative of the Pigments Divisions for the Sun Chemical Corp., Cincinnati, Ohio where he is in charge of the fluid ink and coatings section of the technical service laboratory. Prior to joining Sun Chemical in July '75, he spent three years as a research chemist for the Printing Ink Division of Bordon Chemical.

David L. Greene (Ph.D., '71) is an Assistant Professor of Chemistry at Rhode Island College, Providence. He has recently been elected Chairman of the Department of Physical Science.

Frederick C. Nahm (M.S., '71) is the Director of Alumni Affairs at Centre College, Danville, Ky. His responsibilities include alumni services and newsletter, career consulting, student recruitment, and gifts.

Mary M. Burgess Tipton (B.S., '71) writes that she is a housewife in Auburn, Alabama, and she is "working on advanced degrees in

patience and organization due to twin boys born in '73 and a girl in '75."

Ainslee T. Young Jr. (Ph.D., '71) is a Research Chemist, Mead Corporation, Central Research Labs, Chillicothe, Ohio.

Susamma Cherian (M.S., '72) is currently a Research Assistant for Dr. T. Z. Csaky in the Department of Pharmacology at UK.

Alvin R. Crook (B.S., '72) has spent 2½ years teaching with the Peace Corps in Liberia.

Thomas L. Hearn (B.S., '69; M.S., '70) is a Chemist in the Clinical Labs, UK Medical Center.

Jerry L. Hedrick (M.S., '72) is in his last year of medical school at UK.

Hugh L. Huffman (Ph.D., '72) is a Research Chemist at Exxon Research and Engineering Co. He did post-doctoral work with Joseph A. Caruso at the Univ. of Cincinnati.

James A. Kuhlenschmidt (M.S., '72) is a Coordinator for Miles Laboratories, Elkhart, Ind.

David P. Moore (M.S., '72) is an Instructor of Computer Science at Transylvania University, Lexington.

George W. Pandygraft (Ph.D., '72) is a Patent Lawyer in New York City. He attended Columbia Law School.

Ward R. Rice (B.S., '72) is both a graduate student in Biochemistry and a medical student at the Univ. of Chicago. He will complete his M.D. in June '78 and expects to finish his Ph.D. work this year on anion transport across red blood cell membranes under T. L. Steck.

Ronald K. Sensmeier (M.S., '72) is currently at the Department of Biochemistry, Purdue University, West Lafayette, Ind.

John D. Wallen (M.S., '72) is a Chemist at Merck, Sharpe, and Dohme, Philadelphia. He was recently married.

James W. Williams III (B.S., '72) is a Research Assistant, State's Attorney, 30th Judicial District, Louisville and Jefferson County. He received his J.D. from University of Louisville in '76.

Ke-Chang Chen (M.S., '73) is a Chemist in the Dept. of Toxicology, UK Medical Center.

Vasilios C. Groutas (Ph.D., '73) is an Assistant Professor of Chemistry at the University of Wisconsin, Eau Claire. Previously he had been a post-doc at Cornell University for 2 years.

Tracy B. Harris (M.S., '73) is currently a Research Chemist at Lubrizol Corp., Wickliffe, Ohio; and is attending night school at Cleveland-Marshall Law School.

Martin A. Langhorst (M.S., '73) is a Research Chemist at Dow Chemical Co., Midland, Michigan. He has been involved in process and product research in inorganic chemicals; and he was recently one of 18 invited people to complete an "Engineering for Chemists" course sponsored by Dow and the University of Michigan.

Charles E. Matkovich (Ph.D., '73) is a Senior Analytical Chemist in the Dyes and Chemicals Division of Crompton and Knowles Corp., Reading, Pa.

John P. Motlow (Ph.D., '73) is currently a Research Chemist at Abbott Laboratories, North Chicago.

Earl R. Price (B.S., '73) is a Senior Chemist at H. K. Porter, Inc., Richmond, Ky. He is attending Graduate School at Eastern Kentucky University on a part time basis.

Wayne L. Cook (Ph.D., '74) is a Research Associate in the Division of Medicinal Chemistry, College of Pharmacy, Ohio State University, Columbus.

Paul E. Cranley (M.S., '74) is a chemist at Dow Chemical Co., Midland, Michigan. He was recently married.

Gilbert Downs (B.S., '74) is currently a graduate student in Chemistry at the University of Louisville, after working for a year at Dow Chemical Co., Midland, Michigan.

David L. Nickel (M.S., '74) has recently received a Ph.D. in Education from Indiana University.

Gerald M. Woltermann (Ph.D., '74) is a Research Associate, Engelhard Minerals and Chemicals Corp., Edison, N.J. He was a Post-doc at the University of Illinois from '73 to '75.

Phillip H. Davis (Ph.D., '75) is presently a Research Chemist at Environmental Science Associates in Burlington, Mass.

Michael D. Miller (B.S., '70; Ph.D., '75) is an Assistant Professor in the Physical Science Dept. at Glassboro State College, Glassboro, N.J.

David P. Wesley (Ph.D., '75) is a Senior Research Associate at the Institute of Mining and Minerals Research (IMMR) at UK.

Stephen A. Winkle (B.S., '74; M.S., '75) is a Graduate Student in Chemistry at the University of California, Berkeley.

J. Preston Miles (Ph.D., '76) is a Senior Chemist at Ross Laboratories (Division of Abbot Labs), Columbus, Ohio.