

Badger chemist : a newsletter from the Department of Chemistry--University of Wisconsin--Madison. Newsletter 24 October 1977

University of Wisconsin--Madison. ; Dept. of Chemistry
Madison, Wisconsin: Dept. of Chemistry, University of Wisconsin,
October 1977

<https://digital.library.wisc.edu/1711.dl/66YCJIVSAA6SF8S>

<http://rightsstatements.org/vocab/InC/1.0/>

For information on re-use, see

<http://digital.library.wisc.edu/1711.dl/Copyright>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

BADGER CHEMIST

A Newsletter from the Department of Chemistry—University of Wisconsin—Madison

Newsletter 24

October 1977



THE CREW IN THE MACHINE SHOP

L. to r. Bill Meier, Bob Schmelzer, Tom Lloyd, Ron Koopman (student asst.), Russ Riley, Ken Spielman, Leo Rogers (deceased), Bob Lang. The picture was taken in 1973. The

editor thanks Professor Walters for calling it to his attention in the thesis of Jimmy Wayne Hosh, PhD '75. Tom Lloyd and Professor Bender independently produced usable prints.

THE SHOP CREW

In this issue we take the opportunity to pay tribute to a cooperative and devoted crew whose activities are of great importance to the success of the chemistry program, yet who have their contributions go unrecognized since their names do not appear on scholarly publications. Many Badger Chemists can look back with gratitude to the input of members of the shop to the success of their research.

The present shop, with a six-member crew, developed from humble origins. Certainly, the oldest alumni can remember the days when grad students blew their own glassware, made their own apparatus, and synthesized many of their own starting materials. While this was valuable experience, it cut down on the amount of scientific

work that could be accomplished and it restricted greatly the kinds of problems that could be studied.

The shop had its origins in a single room in Old Chemistry, sometime prior to 1929. Lee Henke was the first mechanic. He ultimately became the autocratic operator of a spacious shop in the east basement of the section of the building completed in 1929. Students and professors frequently built a substantial part of their apparatus with Lee offering advice and criticism. As demands on the shop became more sophisticated, additional machine tools were added. Professor Mathews, as chairman of the department, was always very supportive of such facilities.

Records and memories are somewhat vague but the work load ultimately exceeded Henke's capacity. One Karl E. Baumann was on the

scene as assistant mechanic in 1935 but the name then faded into oblivion. Lloyd Lincoln became a member of the shop personnel around 1942 and Len Pirwitz was briefly a member. Tom Lloyd joined Henke and Lincoln in 1946 and has been in the shop ever since. His retirement is treated elsewhere in this issue.

Lee Henke's health deteriorated rapidly in the forties and he was forced to retire in 1949. Milo Robertson was hired from Madison Kipp Corp. to head the shop as supervisor. At least two other mechanics from Madison Kipp, Frank Kite and Elmer Kraft, joined the shop about this time. In 1952 the Sandia Company decimated the shop by attracting Robertson, Lincoln, Kite, and Kraft to New Mexico.

Russell Riley, who was then as-
(Continued on page 2, col. 2)

BADGER CHEMIST

Published by the Department of Chemistry of the University of Wisconsin, Madison, with the financial assistance of its faculty, alumni and friends.

Editor Emeritus

Henry A. Schuette, Ph.D. '16

Editor

Aaron J. Ihde, Ph.D. '41

Editorial Associates

Edwin M. Larsen, B.S. '37

V. W. Meloche, Ph.D. '26

Editorial Assistants

Leta Roettiger

Bette Germann

Harold Schimming

Please address all communications to

Aaron J. Ihde, Editor
Badger Chemist
2201 Chemistry Building
Madison, WI 53706

THE EDITOR SPEAKS

1977 has been a good year—the Editor is still at large! The printer didn't help a bit. The bill went up \$300 for a smaller #23. The BC faithful met the challenge—well almost. The departmental faculty came up with the final \$200 to get the bills paid, for the second successive year that they've bailed out their colleague who has a penchant for deficit financing.

Badger Chemist No. 24 is, as usual, being prepared on faith—the same faith that kept Dr. Schuette going for 11 years, and Emory Fisher for five. We hope that that faith in the good will of Badger Chemists continues to be sound. In other words, keep the green stuff coming!

A few other thoughts. We have moved to third class mailings for the sake of economy. Undelivered newsletters are not returned so we never find out if your copy fails to reach you. We do assume, however, that most of you are in contact with alumni who remark about receiving the newsletter. If yours fails to arrive within a few days, let us know so that your address can be updated.

Also, send in news about your recent activities, and about alumni in your circle of friends. This 'n' That is clearly the most popular

Shop Crew

(Continued from page 1)

sistant mechanic in the Physics Department, transferred to chemistry as shop supervisor. With Tom Lloyd, who resisted the attraction of Sandia, Russ built up the loyal and talented group pictured on our cover. Leo Rogers' unfortunate death in 1974 was reported in BC #21. Several others who were with the shop more briefly include: Ivel Reithmeyer who has his own shop in northern Wisconsin, Lloyd Ochalla who is with the Physics Department, Paul Zajicek with the Engineering School, and John Keenan who died of cancer. Of the present staff, Ken Spielman joined the group in 1968, Bob Lang in 1966, Bill Meier in 1968, and Bob Schmelzer in 1955.

The early shop was administered quite casually. Faculty supported the shop since it was clearly supportive of the research program. Professor Mathews took general responsibility for its oversight. When Farrington Daniels became chairman in 1952 he created a Shop Committee as a standing committee in the department with Professor Paul Bender as chairman. He provided outstanding leadership in anticipating innovative improvements in machines and operations. Paul continued in the chairmanship until recently when John Walters took over.

The shop saw its major expansion when the Theoretical Chemistry Institute was organized when Professor Hirschfelder returned to the campus after World War II. TCI had a strong experimental orientation at the time. At this time large amounts of war surplus material were available and some excellent machine tools were procured at small cost, for example, the Do-All Band Saw and the Monarch Lathe which are still operative.

Recent years have seen a progressive shift in nature of operations from lathe work to work on vertical milling machines. There has also been a shift in nature of structural materials being processed—from rolled steel and brass to aluminum alloy, brass, and stainless steel as well as exotic materials such as machinable glasses.

part of the newsletter. In fact, it has been responsible for renewal of numerous college friendships. A.J.I.

An ultrasonic milling unit has been useful in drilling and slotting refractory materials while Heliarc and Plasmarc units have enhanced welding capability, particularly in building vacuum system components.

Another important innovation was the creation of the Student Shop under the supervision of Bob Schmelzer in 1956. This shop provided facilities where students were able to participate in building certain types of apparatus for their experiments. It started out on a very modest basis but had steady growth and now has impressive quarters in the sub-basement of Daniels Chemistry Building next door to the main shop which continues under the supervision of Russ Riley.

THE UNIVERSITY COLLECTION OF ANALYTICAL BALANCES

Over the past 15 years, Professor Walter Blaedel has collected several dozen obsolete analytical balances. Although such balances no longer have technical value, they are already beginning to have historical value. These beautiful instruments have, for several centuries, been a central part of man's scientific effort, but they are now rapidly disappearing from the scene through neglect, loss, and destruction. It is Walt's intent to recondition and to preserve some of these instruments.

In any case, the collection has now grown sufficiently to warrant being called the University Collection of Analytical Balances, and Walt has been appointed as custodian. He would like to increase the scope of the collection. If anyone has a balance that he would like to have put into safekeeping, Blaedel would be very happy to accept it for inclusion in the Collection, with due recognition to the donor. In fact, any balances no longer in use are candidates for the Collection, as are balances that are poorly stored, or that are no longer wanted by their present owners. Even non-functional balances can be used for parts. Call (608) 262-3033 for mode and conditions of transfer, or for general information.

This 'n' That About Our Alumni

Steven Aasen, PhD '77, is now with the 3M Company.

Sukumar Aditya is spending 3 months in Madison to pursue research in radiochemistry. On earlier occasions, '53-'55 and '64-'65 he has worked in Professor Willard's lab. Dr. Aditya is Professor of chemistry at U of Calcutta.

An item in Badger Chemist No. 22 about Frank Andrews, who was a member of the physical chemistry faculty for four years before going to University of California, Santa Cruz, raised a correspondence between Ed Fitchett, BS '24, and Frank's father, A. Clinton Andrews, BA '24, PhD '38, to renew a friendship which had been dormant after both finished their bachelor degrees. Clint taught high school chemistry in Tonopah, Nevada for a year after graduating and then returned to Wisconsin to take a job with the Tractor Trailer Company in Edgerton, WI where he established their analytical control lab and married the boss' secretary. A year later, he and his wife moved to Manhattan, KS where he spent the rest of his career as a member of the chemistry faculty at Kansas State. He took 1½ years leave to finish his PhD and a further 9-month leave to serve as chief chemist for the U.S. Ordnance Division at the munition plant near Pryor, Oklahoma in World War II. In commenting on doing his senior research under Professor Daniels he writes, "There was a great man—one of God's few anointed." He also has nice words to say about J. W. Williams who was his major professor for the PhD. Clint is now retired and lives at 902 Ratone, Manhattan, KS 66502.

Paul R. Austin, BS '27, is Adjunct Professor of Marine Studies at the University of Delaware where he has been directing studies on chitin in shellfish. The University of Delaware recently completed licensing arrangements with G. D. Searle & Co. for use of patented chitin preparations. There are at least 20 known uses for chitin and its derivative, chitosan, including the improvement of wet and dry strength of newsprint, paper towels and other paper products. It has also found use in the treatment of glass fibers to make them hold dyes. Chitosan is useful in clarifying waste water from food proc-

essing and for clearing up muddy water for undersea operations such as photography.

Charles F. Bailey, PhD '30, writes from Kalamazoo that they are managing to get in about two trips a year, one to Florida and the other somewhere else. He mentions that in 1975 they spent several pleasant days visiting Walter Kutz, PhD '30, and his wife Dorothy at their retirement home at Santa Rosa, CA.

George C. Bailey, BA '09, (PhD Yale '16) sends best wishes to Henry Schuette and others from Elizabeth, NJ. He reports that he is now 91.

Robert "Buzz" Baldwin, BA '50, reports that he continues his work in biochemistry at Stanford. Two sons are 10 and 8.

Richard L. Baughn, PhD '76, is a postdoc at M.I.T.

Lyman A. Beeman, BS '18, is Chairman of the Board of Finch, Pruyn & Co., Inc. in Glens Falls, NY. He writes, "We have had a very interesting time here in our pulp mill developing a new type of pulp." It is a modernization of the old sulphite pulping process which utilizes continuous digestion leading to a much better yield of bleached pulp.

R. Byron Bird, PhD '50, who is Vilas Research Professor of Chemical Engineering at the UW, recently received an honorary degree from Delft Institute of Technology in Holland.

William B. Blanchard, BS '67, is Associate Senior Organic Chemist at Eli Lilly & Co., where he works under R. T. Rapala, PhD '49. Bill took his masters degree at Purdue in '72.

Toby Block, PhD '76, is Visiting Professor during the past year at UW-Stevens Point where she is replacing Professor C. Marvin Lang, MS '64, who has been on leave at Iowa State.

A contribution was received from Edward G. Bohlman, BS '39, MS '41, without news from 10733 Sallings Rd., Concord, TN 37405.

Archie Bolstad, PhD '51, has retired from the 3M Company and has settled in Chancellor (PO Box 98) AL 36316, where he has been planning to undertake a fish farming project during his retirement,

although a recent letter expresses a certain disenchantment with fish farming.

David A. Brant, PhD '62, has been on the faculty at University of California-Irvine since 1965 when he completed his postdoc with Professor Paul Flory at Stanford. Dave reports that Bob Doedens, PhD '65, and Larry Overman, PhD '69, are colleagues of his in the UCI Chemistry Department. Larry was recently named recipient of a Dreyfuss Foundation Fellowship.

Stephen W. Brewer, Jr., PhD '69, spent the past year on the campus during a sabbatical which he used in writing a textbook for undergraduate analytical chemistry.

Walter Brummond, Jr., PhD '73, is now in medical school at U of Pennsylvania.

Clifford J. Burg, BS '37, and his wife Laura (Dresher), who was a departmental secretary in the mid-thirties, write from Whittier, CA sending a photograph of the Chemistry Department faculty and graduate students as of '31. The Editor is delighted to have the photograph since it includes full identification of all of the graduate students and will be a valuable picture for use in the projected history of the chemistry department. We have been notified that after June 3, '77, the Burgs' address is 1625 E. Glendale, Appleton, WI 54911.

Michael J. Camp, PhD '72, is forensic science administrator at Northeastern University in Boston. He reports to Professor Larsen that he is the entire graduate program in forensic chemistry, all courses being taught in the evening with Saturday AM labs.

William T. Carnall, PhD '54, has been at Argonne National Laboratories since he finished his work with Professor Willard in '54. He is senior chemist and group leader in heavy elements chemistry.

Rick L. Carpenter, PhD '77, has taken a position at General Tire & Rubber.

Albert S. Carter, PhD '27, writes from Fort Lauderdale, FL, that he recently gave up a lung for the pleasure of smoking for nearly 60 years. He writes, "As usual the Badger Chemist is full of timely news and is much appreciated."

Yak-Fa Cheung, BS '73, has com-
(Continued on page 7, col. 1)

SUMMER OF CHANGE

The year 1977 has been one of change in Wisconsin. The state has a new governor. The university has a new president. The Madison branch of the university will soon have a new chancellor. The chemistry department has a new chairman, and a new associate chairman.

GOVERNOR SCHREIBER

The new governor is Martin J. Schreiber who succeeded to that post when second-term Democrat Patrick Lucey resigned to accept President Carter's appointment to the Ambassadorship to Mexico. Lucey had been elected to a 4-year term in 1970 and was re-elected in 1974. Schreiber, who had served parallel terms with him as the elected Lieutenant Governor, was therefore in line to succeed Lucey as Acting Governor.

The Lucey governorship was characterized by a tough, hold-the-line policy on state expenditures. In his first budget message in 1971 he advocated, on economy grounds, the merger of the State University System (the former State Teachers Colleges) into the University of Wisconsin. Despite substantial opposition from the Madison unit of the University and from certain other quarters, the governor was successful in bringing merger about. A new Board of Regents was appointed for the merged institution and, during the following years, focused on creating a set of missions for the various units of the system. The Madison campus has been designated as part of the Graduate Cluster and continues to stress both undergraduate and graduate studies.

Governor Schreiber took office on July 5 in the midst of a strike of state employees which involved classified employees in state institutions and included a number of university workers who joined the picket lines. The dispute was settled about two weeks later when both sides agreed to mediation.

The Governor takes office as a somewhat unknown quantity. He was born in Milwaukee in 1939, received a BA in urban affairs at UW-Milwaukee in 1960 and his law degree at Marquette three years later. He was elected as a Democrat to fill an unexpired term in the State Senate in 1962 and was re-elected in 1964 and 1968 before running for Lieutenant Governor. While in the Senate he served as chairman of several key committees; as Lieutenant Governor he chaired several councils and committees set up by Governor Lucey.

PRESIDENT YOUNG

H. Edwin Young, who served as Chancellor of the Madison campus since 1968, was selected by the Board of Regents to succeed John C. Weaver to the Presidency of the University. He took office on July 1 when President Weaver stepped down from the presidency at age 62.

Young came to the UW as a graduate student in 1947, earning his PhD in 1950. In his field of labor economics he studied with Selig Perlman, Edwin Witte, and Don Lescohier. Young was born in



Newfoundland 60 years ago, but was raised and educated in Maine. His first degrees were taken at the University of Maine (BS '41, MA '42). During the next five years he was an instructor in economics at his alma mater.

Upon completion of his doctorate in '50, Young became consultant in industrial relations for the U.S. State Department, then returned to the UW as Director of the School for Workers and the Industrial Relations Center. Following nine years as chairman of the Economics Department, he succeeded Mark Ingraham as dean of the College of Letters and Science in 1962. Three years later he returned to the University of Maine as its president.

In 1968 President Fred Harrington recommended Young for vice-president of the UW and he returned to Madison. Soon after his return he was made Chancellor of the Madison Campus.

During Young's chancellorship the Madison Campus underwent profound changes, the most significant having been the merger. John Weaver became president of a four-campus UW (Madison, Milwaukee, Parkside, Green Bay) in 1970, stepped down from the presidency of a 27-campus UW made up of a federation of two-year, four-year, and doctoral institutions with a total student body of 143,740, third largest in the nation. The Madison Campus registered over 38,000 in the fall of 1976, about 25,700 of them being undergrads.

The most readily obvious changes on campus during Young's chancellorship have been shrinkage of green space as buildings have been completed, mostly on the edge of the campus remembered by earlier classes. These are Elvehjem Art Center, Helen White Library (undergrad), Steenbock Library (ag), Kurt Wendt Library (engineering), Union South, Vilas Communications Hall, Humanities Bldg., Educational Center. A Clinical Science Center is being completed on the former university farms area beyond the Forest Products Laboratory and adjacent to the Veterans' Hospital (and across the road from Professor Sorum's home on University Bay Drive). The Clinical Science Center is the largest building project ever undertaken by the state and will house the hospital and clinical programs of the Medical School and the allied health programs.

The recent years have also seen the development and growth of new programs, particularly noteworthy being those in Environmental Studies, Poverty Research, Family Medicine, Sea Grant, and Energy. The traditional Madison programs continue to receive high ranking in national surveys. In the latest study of quality of graduate programs made by the American Council on Education (1969), Wisconsin ranked among the top fifteen universities in 31 disciplines, among the top eight in 20 disciplines, and among the top five in 9 fields. Chemistry was ranked in an 8th place tie with Chicago, Columbia, and Cornell. Biochemistry was ranked 5th; Chem. Engineering first.

The past nine years also included
(Continued on page 5, col. 1)

Summer of Change

(Continued from page 4)

the last part of the era of student protest, culminating in the Sterling Hall bombing in August, 1970. The bombing, with its injuries and a loss of life, had a sobering effect on campus radicals. While student protest is still evident to a certain degree, it has become much more responsible.

PROFESSOR WEAVER

Although John Weaver has left the presidency he retains his university ties as Professor of Geography and plans to engage in teaching activities in his remaining years before retirement. During the coming year he will be away from the state as Visiting Professor of Geography at University of Southern California.

CHAIRMAN EVANS

When Richard Fenske decided to give up the Chemistry Departmental chairmanship in order to focus more fully on his teaching and research, a search and screen committee chaired by Professor Edwin Larsen and made up of Professors Charles Casey, Phillip Certain, and James Taylor canvassed the faculty for an appropriate successor. The choice of the faculty fell on Professor Dennis Evans of the Analytical Division. His name was recommended to Dean Cronon who concurred in the choice. Dr. Evans took over on June 1.



Dennis H. Evans joined the department as assistant professor in 1966. Born in Grinnell, Iowa in 1939, he has a BS from Ottawa U in Kansas and took his AM and PhD degrees at Harvard, the latter in '64. He remained at Harvard as an instructor until coming to Wisconsin. His research interests are in electroanalytical and organic electrochemistry. Recent work has been concentrated in the area of coupling reactions (1,3-diketones and α , β -unsaturated ketones), anodic oxidation of phenols, and the effect of metal ions on the electrochemical behavior of organic substrates. Some of the fundamental information acquired is being used to develop sensitive analytical

techniques for the determination of food additives.

Professor Evans was married in 1958 to Ruth Turnbull of Alton, Illinois. They have three children, Susan Katherine 14, John Hyde 12, and Andrew 10.

* * *

Professor Evans becomes the ninth chairman since the creation of the chemistry department in 1880. The first three chairmen (W. W. Daniells, 1880-1907; Louis Kahlenberg, 1907-19; J. H. Mathews, 1919-52) served a combined total of 72 years. In the past 25 years there have been five chairmen (Farrington Daniels, 1952-59; John Ferry, 1959-67; Irving Shain, 1967-70; John Willard, 1970-72; Richard Fenske, 1972-77). These facts raise an interesting question. Were the first three chairmen supermen or has there been deterioration in the quality of chemists in modern times! Or is the modern faculty made up of such cantankerous chemists that the average survival time of a chairman is down to five years?

In a more serious vein, all of us in the department join in wishing Dennis a long, harmonious, and productive chairmanship.

PROFESSOR FENSKE

Richard Fenske's rationale for leaving the chairmanship was based on the fear that spending more than 5 years in administration would restrict his capacity to continue a viable research and teaching program.

Fenske's research interests lie in the application of molecular orbital theory to transition metal complexes. His theoretical work relates closely to an experimental program in photoelectron spectroscopy for obtaining ionization energies for electrons in molecules.

He plans to return to teaching in the general chemistry program, an area which he had to abandon when he became chairman. His strength in that field is attested by his receipt of the Steiger Award for Distinguished Teaching in 1967.

Dick was educated at Marquette, BS '52, and Iowa State, PhD '61. Industrial work and army service were interspersed between the two degrees. He came to Wisconsin in '61, became chairman in '72.

ASSOCIATE CHAIRMAN LARSEN

When Professor Kotch decided to leave the department last spring (see elsewhere) the void created in the departmental office by the resignation of Professor Fenske as chairman became much larger. Fortunately, Professor Edwin M. Larsen has been agreeable to taking the associate chairmanship and entered upon his new duties on July 1.

The associate chairmanship position was created in 1952 when Farrington Daniels assumed the chairmanship. Since Daniels was entering the presidency of the ACS at the time, and since he was worried about the deterioration of his research program, he persuaded his faculty and administration to permit him an associate who might be responsible for some of the chairmanship obligations. Professor M. L. Holt was selected for the position and served Daniels and Ferry through their terms of office.

Professor Kotch was brought into the department in 1967 when Irving Shain became chairman. He continued in that position under John Willard and Dick Fenske while teaching in the organic chemistry program.

Dr. Larsen, born in Milwaukee in 1915, took his undergraduate work in Madison, BS '37, then spent a year with Rohm & Haas. He left industry to take grad work at Ohio State where he served as a TA while doing research in inorganic chemistry under Conrad Fernelius. Upon completing his PhD in '42 he returned to Madison as an instructor in the freshman chemistry program.

In 1943 he took a three-year leave of absence in order to serve as a group leader in the Monsanto-administered program of the Manhattan District located in Dayton.

He returned to Wisconsin in 1946 as assistant professor to resume his teaching and research. He has had a broad interest in inorganic chemistry with a particular focus on the chemistry of zirconium and hafnium. Recently he has also had a renewed interest in nuclear reactor chemistry and is a member of the university team working in that field. He has become a member of the American Nuclear Society and reports that the academic vs. industry fragmentation characteristic of chemists is not evident among nuclear engineers.

In 1946, Ed married Kathryn
(Continued on page 6, col. 1)

NEWS ABOUT OUR FACULTY

Walter J. Blaedel gave invited talks on his electroanalytical and bioanalytical research at the Universities of Georgia and Florida, and also at the Seventh Technicon International Congress (New York City), the Thirtieth Annual Summer Symposium on Analytical Chemistry (Amherst, MA), and the Great Lakes Regional Meeting (Stevens Point, WI) where he was honored by the Walter J. Blaedel Symposium in Analytical Chemistry.

There were also vacation trips. In July 1976 he and his wife Barbara had a family reunion with their three sons and their wives in Würzburg, Germany, where their oldest son Mark is stationed in the Army as a pediatrician. Son Ken (a mechanical engineer at the Livermore Laboratories) and his wife flew from California, and son Bob flew from Oregon with his bicycle, with which he toured through Europe afterwards.

Phillip Certain and John Schrag received attention in the Aug. 6, 1976 issue of *Science* in a news story dealing with computational chemistry. They had established substantial economies in computer costs using a mini-computer (the Lawrence Berkeley Laboratory computer) as against the use of the university's Univac 1110.

Lawrence F. Dahl gave lectures at the Gordon Research Conference on "Inorganic Chemistry" in Au-

gust '76 and on "Metals in Biology" at Santa Barbara in January. After participating as an invited speaker at the third Workshop on Vitamin D held at Asilomar, California in January '77 he gave lectures at Stanford, Berkeley and UCLA. He has also been active with lectures to ACS Sections in the prairie states and in the east. In May '77, he was in Montreal for a Symposium on Transition Metal Hydrides.

Dennis Evans presented invited papers during the past year at the Japanese-American Seminar on Electrochemistry which was sponsored by NSF in San Francisco last May. He also presented papers at conferences on electrochemistry in Ottawa, Canada, Pitlochry, Scotland and the Thrashymachan Biochemistry Conference at French Lick, Indiana.

John D. Ferry recently received the 1977 Technical Award of the International Institute of Synthetic Rubber Producers for outstanding services to the rubber industry. The award was presented at Monte Carlo, Monaco. Afterwards Professor and Mrs. Ferry visited Yugoslavia as guests of the Serbian Chemical Society. He has also given invited lectures at the Great Lakes Regional meeting of the ACS, the Akron Polymer Lecture Group, and at the Society of Rheology Annual meeting.

Joseph D. Hirschfelder was awarded the National Medal of Science by President Ford in a ceremony at the White House on Monday, October 18, 1976. He was cited for his many significant contributions to science in the area of theoretical chemistry. The Department of Chemistry is very pleased to join in congratulating Professor Hirschfelder on receiving this prestigious award.

A member of the faculty at the University of Wisconsin-Madison since 1940, he was named the Homer Adkins Professor of Chemistry in 1962 and has been Director of the Theoretical Chemistry Institute since its founding after World War II. He was awarded The Peter Debye Award in Physical Chemistry by the American Chemical Society in 1966 and is a member of the National Academy of Sciences.

M. Leslie Holt and his wife, Gretchen, attended his 50th class reunion at St. Olaf College. He reports, "we were guests of the college and were royally treated."

Aaron Ihde, invited speaker at the Southeastern Regional ACS meeting at Gatlinberg, Tenn. in November '76 had the pleasure of hearing seven of his former grad students on the program. He and his wife, Olive, had a happy reunion with Al Costa, PhD '60 (at Duquesne); Stan Becker, '67 (Bethany); Dan Jones, '69 (Oregon State); Shel Kopperl, '70 (Grand Valley State, Allendale, Mich.); Bob DeKosky, '72 (UW-Milwaukee, now Kansas); John Parascandola, '68 (UW-Madison), and Reese Jenkins, '66 (Case Western Reserve). In May '77 Ihde was a speaker at the 75th Anniversary Meeting of the American Electrochemical Society in Philadelphia where Erwin Hiebert, '53 (Harvard) was also an invited symposium participant. Hiebert's paper dealt with Nernst's contributions to electrochemistry. Ihde dealt with Louis Kahlenberg's opposition to the theory of ionization.

Marion O'Leary is taking a sabbatical year from his teaching and other university duties in order to focus his attention on isotope effects in enzymatic reactions, moving into the area of carbon isotope fractionations associated with photosynthesis. He will spend most of the year in Madison but will make short-term visits to other laboratories to learn useful techniques.

Bassam Shakhshiri was honored in May as the recipient of the Kiehofer Distinguished Teaching Award. He has also been selected for a sabbatical semester in order to work on a program for the enrichment of the freshman chemistry lecture demonstrations. On September 17 he celebrated the 20th anniversary of his arrival in the U.S. (from Lebanon). His *Workbook for Audio-Tape Lessons* was recently published by Saunders. Rodney Schreiner and Phyllis Anderson Meyer are co-authors.

Barry Trost received the ACS Award Pure Chemistry at the National ACS meeting in March. Attention was called to his selection in last year's *Badger Chemist*. The citation read, "In recognition of his outstanding contributions in the identification and syntheses of natural products, to the development of new chemo- and stereo-selective synthetic reactions, and to the synthesis of theoretically significant molecules." He also presented a plenary lecture on "Se-

(Continued on page 8, col. 1)

Summer of Change

(Continued from page 5)

Marie Boehm whom he met while in Dayton. They have three children. Robert, the eldest is a student in Law School in Madison. Lynn, a graduate of Luther College worked in the Washington office of Senator Clark of Iowa and more recently in Governor Lucey's office in Madison. She is married to Brady Williamson who was also a member of the governor's staff but is now in the Madison law firm of LaFollette, Sinykin, and Anderson. He was recently appointed to the State Elections Board. Lynn is associated with a state committee codifying job rules in the health professions. The youngest son, Richard, is a senior in meteorology at the UW.

This 'n' That . . .

(Continued from page 3)

pleted his PhD at M.I.T. and is postdocing at Stanford.

Peter Chiang, PhD '61, is at Westinghouse where he is working on uranium recovery processes.

Dr. Jae Ho Choi, MS '61, is a scientist at the Korean Atomic Energy Research Institute with the responsibility for improving textile properties by radiation grafting of monomers onto a polyester base.

Dr. Sang Up Choi, Postdoc '57, is Vice-President of Sogang University in Seoul, Korea. He recently completed a two-year term as president of the Korean Chemical Society and is a member of the boards of the Korean Institute of Science and Technology, the new Korean National Science Foundation and the Korean Institute of Advanced Studies in Science. Dr. Choi was a postdoc with Professor Willard.

Dr. R. F. C. Claridge, Postdoc '63, has recently been on leave from the University of Saskatchewan and spent time at Canterbury University in Christchurch, New Zealand.

David M. Coleman, MS '72, PhD '76, is Assistant Professor of Chemistry at Wayne State U in Detroit.

Milford A. Crowley, PhD '33, writes of his interest in the article about Badger Chemists at Rohm & Haas since he remembers **Loren Hurd**, PhD '29 and **Ralph Connor**, PhD '32, as fellow graduate students. Milford is now retired from UW-La Crosse.

Michael J. Curry, PhD '48, was recently elected Vice-President and Program Chairman of the Association of Consulting Chemists and Chemical Engineers. Curry spent the greater part of his industrial career with the Celanese Corporation in plastics research, but is now President of Michael J. Curry Associates, a consulting firm. The news was sent in by Jack Weikart.

Timothy Cutler, PhD '77, is doing research at Eastman Kodak.

Guido H. Daub, BS '44, PhD '49, is co-author of a second edition of his textbook *Basic Chemistry* published by Prentice-Hall. Guido is Chairman of the Chemistry Department at University of New Mexico where he has been a faculty member since completing his PhD.

A. de Meijere, Postdoc ?, reports that he is actively teaching and do-

ing research with a group of eleven graduate students at Göttingen.

Paul B. Dekker, MS '76, is working in analytical chemistry at Abbott Laboratories, North Chicago.

Allen A. Denio, who was visiting professor in SS '70 and later, is co-author with Richard W. Joslin of *Chemistry for Clay and Pottery Students*. Both authors are professors at UW-Eau Claire, Allen in

chemistry, Richard in art.

James D. D'Ianni, PhD '38, has been associated with research at Goodyear since leaving Wisconsin. Since 1965 he has been Director of Research and recently received the Charles Goodyear Gold Medal Award from the Rubber Division of the ACS. His picture appeared in CEN last November 29 in connection with an item on guayule

(Continued on page 8, col. 1)

TOM LLOYD RETIRES

Thomas R. Lloyd, veteran instrument maker in the Departmental Shop, retired on August 26 after serving us for 31 years. Tom was born in Madison and educated in the public schools. After graduating from Madison Business College he turned his back on business administration and served as mechanic with the Forest Products Laboratory during the war years. Then, after a year with the Gordon Engineering Co. in Madison, he joined Lee Henke and Lloyd Lincoln in the chemistry shop in 1946.

Tom is credited with building many items of research equipment over the years which often in-

cluded the design and planning of construction. Many former graduate students will remember Tom for his dedication to his work and his cooperative attitude to assist them to gain their Doctorate.

Lloyd said, "It's been a pleasure and a great satisfaction to me to be part of this support role."

Tom and his wife have moved to a new home at 2233 Middlecoff Dr., Mesa, Arizona 85205. The home is located in the Apache Wells development, an area designed for leisurely living. His associate Bob Schmelzer says, "You've earned your retirement Tom. Best wishes in your new venture." All of us in the department enthusiastically support these sentiments.

SCENE AT TOM'S RETIREMENT PARTY



Left, Prof. John Walters, present Chm. Shop Committee, and his wife Barbara. Center, Tom Lloyd and his wife Dorothy.

Right, Prof. Paul Bender, longtime Chm. Shop Committee, and his wife Margaret who is Assoc. Scientist in the Meteorology Dept. where she is associated with the C-14 dating program.

Photo: Courtesy of John Rentner.

This 'n' That . . .

(Continued from page 7)

which is receiving renewed interest as a potential source of natural rubber.

Edgar A. Dieman, MS '33, sent his contribution with the remark, "your humble request should be heeded by all." He reports being turned off by dozens of requests for handouts, many of them starting with a \$100 bottom figure.

Gerard C. Dismukes, PhD '75, is on a postdoctoral appointment at Berkeley and will be presenting a paper at the International Photo-

synthesis Congress in England in September.

Dietrich Döpp, postdoc '65-'67, holds a chair in Organic Chemistry at Gesamthochschule Duisburg in West Germany. He writes of feeling strongly that his scientific development profited greatly from his postdoctoral experience with Professor Zimmerman. His wife, Heinrich, was a postdoc in natural products chemistry at the same time and he reports that "a husband and wife team can have much professional and joyful experience together." The Döpps live in Kaiserslautern with an adopted son of three and a younger baby girl whom they plan to adopt.

Margaret R. Draeger, BS '70, is completing her residency training in obstetrics and gynecology at the Geesinger Medical Center in Danville, PA. She is married to a surgeon and will join him in private practice upon completion of her residency. She writes, "I'd sure like to see Dr. Shain return to the Madison campus."

Walter H. Dreger, BS '63, continues to be deeply involved in foreign patent practice with Syntex Corp. in Palo Alto.

Heinz Dürr, Postdoc '61-'62, is now Professor H3 at the University of Saarland in Germany.

(Continued on page 10, col. 1)

Faculty . . .

(Continued from page 6)

lectivity in Organic Synthesis" at the 5th International Symposium on Medicinal Chemistry in Paris and a plenary lecture on the same subject at the meeting celebrating the 75th Anniversary of the Serbian Chemical Society in Belgrade, Yugoslavia. While in Europe, he presented a number of other lectures and has lectured recently at the Gordon Conference as well as given various seminars to universities and industrial groups in the U.S.

John P. Walters' research group authored 16 papers during the past year and has been issued 2 U.S. patents. In addition, John has written a chapter which will appear in Volume II of Contemporary Topics in Analytical and Clinical Chemistry and was a lecturer on a national S.A.S. tour this spring.

Robert C. West spent the second semester at University of California-Santa Cruz. While on the west coast he lectured extensively to ACS sections in the coastal and Rocky Mountain areas. His lectures included such titles as, "Human Values, Ethics and Nuclear Power; Aromatic Properties of Cyclic Polysilanes; Natural Nuclear Reactors; and Revolutionary Chemistry."

John Willard was honored at the fall meeting of the American Chemical Society by a symposium on radiation effects which was organized by former students and associates. The symposium, which consisted of five half day sessions, was put together by an organizing committee consisting of William Carnall, PhD '54, Richard Fire-

stone, PhD '55, John R. Miller, PhD '71, and Myron C. Sauer, Jr., PhD '59. A Wednesday evening picnic for John and his wife on August 31 brought together numerous former students and colleagues. The picnic was held at Bill Carnall's home in La Grange. The symposium speakers included, besides the organizers, the following, of John's former students: G. A. Takacs, J. C. W. Chien, R. J. Hanrahan, R. L. Strong, R. Arce, D. R. Miller, A. C. Ling, G. M. Harris.

John Willard also participated in the Faraday Discussion on Radiation Effects of Liquids and Solids at the University of Leicester, England in March and the Miller Conference on Radiation at Portmerion, North Wales on the same trip. Last June, he and Mrs. Willard spent 37 days in Japan and 3 in South Korea visiting 24 universities and scientific institutes and giving 14 lectures. He reports that they met many former Badgers, including 7 former members of his research group. He reports finding a "Mendota Club" in the city of Seoul.

Howard E. Zimmerman has added laser research to his photochemical studies. He and his group have encountered some new photochemical reactions and developed new photochemical theory. Howard has also been exceedingly active on the lecture circuit ranging from U of Alberta to U of New Mexico to U of Virginia. He chaired a session on Organic Photochemistry at the Gordon Research Conference last July and presented Plenary Lectures at the Chicago ACS Meeting before the Organic Division and the Education Division. He now reports that half of his graduate students are students of former students.

FACULTY WIDOWS

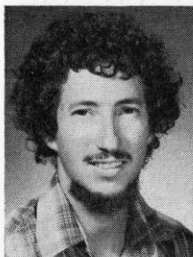
Olive Daniels was forced to slow her pace when she suffered an ankle fracture at the Daniels' cottage in Door County. She has had a rapid recovery and has returned to her apartment at Attic Angel Tower in Madison where she is now putting the finishing touches on the biography of Dr. Daniels.

Marie Fisher, widow of the late Emory D. Fisher, PhD '35, is moving to Palatine, Illinois where her son-in-law is a Dean at William Rainey Harper Jr. College. This brings her closer to her children and grandchildren. Emory will be remembered as Editor of the *Badger Chemist* between '65 and '69. Marie reports having a good visit with Walter T. Schrenk, PhD '22, who was department head at Missouri School of Mines when she and Emory joined the faculty at Rolla. She also reports attending the retirement party held for Bill Webb (see This 'n' That).

Helen McElvain, widow of Professor S. M. McElvain has recently moved into the Attic Angel Tower at 602 N. Segoe Road, Madison 53705. She was also looking forward to attending the wedding of her oldest granddaughter this summer. The rest of her grandchildren are all in college.

Dorothy D. Walton, widow of James H. Walton who was active in the general chemistry program from 1907 to 1947 lives with her daughter Marcia at 115 Central Park West, New York 10023. She has lived in New York since 1951 but gets back to Madison nearly every year to visit her daughter Judith who practices psychiatry here.

ARTHUR ELLIS JOINS INORGANIC GROUP



The inorganic division added Arthur B. Ellis to its faculty this summer, immediately after he completed his PhD at Massachusetts Institute of Technology. He was a student of Professor Mark S. Wrighton and completed a thesis entitled, "Stabilized Photoelectrochemical Cells and their Use in Energy Conversion Devices."

Ellis was born in Lakewood, OH in 1951, but grew up in Hialeah, Florida where he graduated from high school in 1969. While an undergraduate at California Institute of Technology his summers were spent as an engineering assistant with Texon in South Hadley Falls, MA, as an assistant in paper chemistry with Stevens Paper Mills in Westfield, MA, and in water pollution control with Texon in Möchmühl, West Germany.

Following receipt of his BS in '73 he became a Fannie and John Hertz Fellow at MIT for 4 years. During this period, in association with Professor Wrighton, he became the co-author of fourteen published papers and four others currently in press. They deal with optical energy conversion using a variety of semiconductor electrodes.

Arthur is married to Susan Trebach who majored in biology at SUNY-Buffalo before turning to journalism. They met in the Boston area where Susan was a reporter on the Lowell Sun. She is now a correspondent for the *Capital Times*.

STAFF ASSOCIATES

There are a number of people who lack permanent faculty status but are nevertheless important in the successful operation of the Chemistry Department. Some of these people are associated with faculties elsewhere and are in the department temporarily to help get certain essential jobs done, while at the same time benefiting from association with the departmental faculty and departmental facilities. Others are highly trained persons who have permanent appointments

in the department and who are responsible for the smooth operation of certain teaching and research functions. The names of these chemists are listed below.

Roger W. Alder is Visiting Professor who is teaching one of the organic courses this fall. He is from Bristol University in England.

Joseph C. Calabrese, PhD '71, is Project Associate and focuses on instrumentation, particularly x-ray.

Martha L. Casey, PhD '68 MIT, is part-time Lecturer in the Organic Division.

Glen E. Dirreen, PhD '72, is Project Associate in association with the General Chemistry program.

David F. Hillenbrand, PhD '74, is Project Associate in Instrumentation.

Robert R. Lavine is Specialist—Analytical Laboratories.

James P. O'Connor, currently completing his graduate studies, is part-time Lecturer in the General Chemistry program.

Manfred T. Reetz is Visiting Associate Professor in the Organic Division during the first semester. Dr. Reetz is a faculty member of Phillips University in Marburg, Germany.

Paul F. Schatz, PhD '71, is Project Associate—Organic Laboratories.

Edwin M. Turner, PhD '70, is Project Associate—Physical Laboratories.

Lloyd G. Williams, PhD '76, is Lecturer in General Chemistry.

All of these people are playing an important role in departmental activities and we are pleased to give them recognition.

Others who served in such capacities during the '76-'77 academic year are:

Derek A. Davenport, Professor of Chemistry at Purdue, who combined a second-semester sabbatical with a Visiting Professorship in the General Chemistry program.

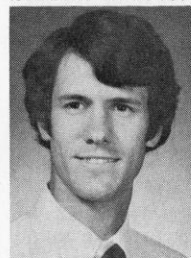
Wolfgang Beck, Professor of Chemistry at the U of Munich, spent the second semester with the inorganic division where he taught the course in advanced inorganic chemistry.

Wesley D. Smith completed three years as lecturer in the general chemistry program and has taken an assistant professorship at Illinois State University at Normal, IL. Wes took his PhD at Brigham Young in '73, then postdoc'd a year with Jack Simons at U of Utah before coming to Wisconsin.

FLEMING CRIM JOINS PHYSICAL DIVISION

F. Fleming Crim joined the physical chemistry division as assistant professor this summer. He is a 1974 PhD from Cornell University who has spent 18 months at the Western Electric Engineering Center in Princeton, NJ, and more recently been a Postdoctoral Staff member of the Los Alamos Scientific Laboratory.

Crim was born in 1947 in Waco, Texas where he was educated in the public schools. He did his undergraduate work in chemistry and physics at Southwestern University in Georgetown, Texas, taking the BS in '69. His graduate studies were pursued at Cornell where he received the Departmental Teaching Award in '71 and the Eastman Kodak Scientific Award for the Outstanding Chemistry Graduate Student in 1973.



While at Cornell his major professor was George A. Fisk. Crim's research focused on inelastic scattering and energy transfer of vibrationally excited potassium

bromide. His study of molecular beam phenomena has involved design and operation of apparatus, computer analysis of data, and calculations to compare experimental results with energy transfer models. His thesis was titled, "Dynamics of Single Collision Energy Transfer from Highly Vibrationally Excited Potassium Bromide."

His current interests are in experimental molecular dynamics, particularly gas phase energy transfer and elementary reaction kinetics. He plans to work on the dynamics of molecules prepared in specific states by laser excitations.

Fleming has been married for eight years to Joyce Wileman, a classmate in elementary education at Southwestern. While they were in New Mexico she began work on an architectural degree and hopes to continue her interests in the field.

Richard D. Olmsted, PhD '74, served as Lecturer in physical chem and as project associate in TCI.

Thomas A. Dixon, PhD '77, served as Lecturer in physical chem

(Continued on page 10, col. 1)

Staff Associates

(Continued from page 9)

while completing his research with Professor Woods. He is now a postdoc at Harvard with Prof. Wm. Klemperer.

Mary C. Whing, a grad student with Professor Yu also served as Lecturer in p. chem.

This 'n' That . . .

(Continued from page 8)

William S. Eaton, PhD '75, is at the Air Monitoring Center of Rockwell International.

Luis Echegoyan, Postdoc '75, left Union Carbide in January '77 to become Assistant Professor of Chemistry at the U of Puerto Rico, his PhD alma mater.

Carl W. Eggert, BS '31, reports that Charles Naeser, BS '31, (PhD IL) has retired from the faculty of George Washington University.

William D. Ehmman, MS '54, has returned to full time teaching and research after serving as department chairman at University of Kentucky for four years. He made a return to Australia in August '76 to attend the International Geology Congress in Sydney.

R. P. Eischens, BS '42, is now Senior Scientist and Head of Catalysis Research for Texaco. He has been with Texaco since receiving the PhD from Northwestern in '49.

Edmund J. Eisenbraun, BS '50, PhD '55, is Regents Professor at Oklahoma State University in Stillwater. He reports pleasure in the kind things said about Professor McElvain and Ed Smissman. He reports that Claude Judd, BS '54, PhD '57, has moved from Lakeside Labs in Milwaukee to the Richardson-Merrell Labs in Cincinnati. He reports seeing Dick Laramy, MS '59, from time to time. Dick is with Conoco Research & Development at Ponca City, OK. At the time of writing Dr. Eisenbraun was preparing for a sabbatical leave.

Dorr Etzler, BS '35, is Department Manager of Research services with Chevron Research Co. in Richmond, California.

Sallie A. Fisher, PhD '47, has been particularly good about passing on news of her activities and

PROFESSOR KOTCH JOINS SERI



Professor Alex Kotch has been appointed Assistant Director for Information and Education of the Solar Energy Research Institute (SERI) that will be estab-

lished on South Table Mountain in Golden, Colorado. The contractor chosen by ERDA to operate the SERI is Midwest Research Institute (MRI), which submitted a proposal in cooperation with the State of Colorado. Twenty proposals from states and organizations in all sections of the country were submitted to ERDA. Prof. Kotch was one of the five key personnel in the MRI/Colorado proposal who, with MRI executives and Governor Richard D. Lamm, participated in the site visit in Denver conducted by ERDA's Source Evaluation Board on December 7-9, 1976. In announcing the MRI/Colorado selection ERDA Acting Administrator, Robert Fri, said, "ERDA received a number of strong proposals for the solar institute. The evaluating board was unanimous in the findings presented to me concerning MRI/Colorado. After careful consideration, I agree that the MRI/Colorado proposal is the best and offers an outstanding team and concept for managing and operating this vitally important solar facility."

Dr. Paul Rappaport, Director of RCA's Process and Applied Laboratory in Princeton, New Jersey, will be the Director of the new research center. SERI will have an initial staff of 75 and a budget of about \$6 million when it starts this year and is expected to have a \$20-million annual budget within three years. Kotch will have responsibility in his directorate for the data bank, technology transfer, education, consultation with other organizations, international cooperation and the library. The other three directorates are: Analysis

and Assessment; Research; and Administrative and Technical Services.

Prof. Kotch received his undergraduate training in chemistry at Bucknell Junior College (now Wilkes College) and at Penn State, where he received a BS degree in '46 and an MS degree in '47. At Penn State he was named an Evan Pugh Scholar for outstanding academic achievement and was named salutatorian of his graduating class. After receiving the PhD degree in organic chemistry at the University of Illinois at Urbana in '50, he spent a year of postdoctoral study as a Fulbright Fellow at the Technical University in Delft, The Netherlands, where he learned the Dutch language, which he still speaks fluently. He continued his postdoctoral training at M.I.T., where he was awarded the Arthur D. Little Postdoctoral Fellowship in '51. He was then employed for 7 years as a research chemist at the Central Research Department and the Organic Chemicals Department of the DuPont Company in Wilmington, Delaware. He was Chairman of the Wilmington Organic Chemists Club in '59.

Kotch spent the next 8 years in Federal service: 6 years as Program Director for Organic Chemistry at NSF; one year as Chief of the Biosciences Division at the Office of Saline Water; and a little more than a year as Staff Associate in the NSF "Centers of Excellence" Program.

On July 1, 1967, he was appointed Professor and Associate Chairman of the Department of Chemistry at the University of Wisconsin-Madison. Since '69 he has served as a Consultant-Evaluator for the North Central Association of Colleges and Schools. He is the current Chairman of the Wisconsin Section of the American Chemical Society.

Although he did not plan his career to be so varied, he notes that it has evolved to include experience in industry, government, academia and now a research institute. Professor Kotch will assume his new position in Colorado on July 1, 1977, and his family will join him in August.

Edmund M. Fitchett, BS '24, spent the winter in Reno where he served as scorer for the American Bowling Association meetings. Ed made it entirely clear that his trip to Reno was not for the usual pur-

(Continued on page 12, col. 1)

those of her Badger Chemist friends. She was a recent visitor to Madison when she spent time with Professor Meloche and Patty. News items from her correspondence will be found in other parts of "This 'n' That."

In Memoriam

Howard N. Calderwood, PhD '23, died at Verona, WI on July 15, '76 at age 88. He joined the Forest Products Lab in 1916 and served as a chemist there while completing his doctorate. From 1924 to 1937 he was instructor and assistant professor of chemistry in association with Professor Kahlenberg. On leaving Wisconsin he was with the U.S. Bureau of Fisheries, the Chemical Warfare Service, and a Florida industrial experiment station until 1948 when he returned to Madison as a wood utilization consultant.

Lillian Rickaby Dykstra, widow of Clarence Dykstra, former University President (1937-45), died in Philadelphia on January 5, 1977 at age 83. Mrs. Dykstra was a warm, friendly president's wife and was popular with faculty and students. She opened the president's house to students the first Wednesday of every month.

H. Hiemke, BS '26, MS '33, his death is reported in the winter issue of *The Hexagon* without further information.

Alice Hall, widow of the late Professor Norris F. Hall, passed away at age 90 in Wilmot, New Hampshire on Friday, April 8, '77. The Hall's left Madison upon Professor Hall's retirement in '56. After he spent two years with the Argonne National Labs they moved East to live near their daughter in Wilmot. Mrs. Hall was active in Madison with the Planned Parenthood Association, Wisconsin Children's Aid Society and the Madison Civics Club. During World War I she served in France with the American Friends Service while Norris was among the Americans in uniform assigned to Madame Curie's mobile x-ray unit.

David Klein, died on April 13 at age 92. He held a BA and MA from Illinois before undertaking grad work at Wisconsin in 1907. In 1910 he became assistant professor in the UW department, leaving four years later to become State Chemist in Illinois. In 1918 he was a major in the U.S. Sanitary Corps, then became an associate professor

of food chemistry at Johns Hopkins. In 1920 he began a long association with Wilson Laboratories in Chicago; from 1932 until his retirement he was General Manager.



Otto Louis Kowalke died in Madison on December 28, '76, three weeks short of his 99th birthday. His death marks the end of a long association with the University during which he served as Chairman of the Chemical Engineering Department from 1914 until 1940. He played a strong role in developing the department and bringing it to its number one ranking among graduate programs in chemical engineering. He was born in Manitowoc and educated at Oshkosh Normal School (now UW-Oshkosh). After 5 years as teacher and elementary school principal in Fond du Lac, he enrolled at the UW in '02 in order to study applied electrochemistry. He took his BS in that field in '06 and the professional degree of chemical engineer in '09. He joined the Chemical Engineering faculty as an assistant in '06 and had an unbroken tenure in that department until retirement in 1948. His research included work on pyrometry, combustion, gas technology, calorimetry, and the metallurgy of iron and ferrous alloys. He took particular pride in his course in chemical manufacturing. A picture in CEN for March 18, 1968, page 90, shows Kowalke receiving 90th birthday congratulations from Farrington Daniels and J. H. Mathews.

Kenneth J. Kuebler, PhD '26, of La Crosse, according to a notice in the *Wisconsin Alumnus*.

Paul H. Phillips, longtime Professor of Biochemistry died recently at age 78. He came to the campus in '29 and earned his PhD in Biochemistry and Animal Husbandry in '33. He was a member of the Biochemistry Department until his retirement in '64 and made notable contributions to the rela-

tion of diet to tooth decay, in mineral metabolism, animal nutrition, and to the development of artificial insemination in dairy cattle. He was recipient of the Borden Award in 1944.

Robert B. Reynolds, PhD '28, died on April 12, 1977 at Montrose, Alabama at age 85. He came to Wisconsin after taking his BS at Alabama Poly in '23 and teaching in Georgia for a year. He was on the faculty at Northwestern from '28 to '40, then joined Hollingsworth and Whitney Co. where he became research director in '46.

Cowin C. Robinson, PhD '43, died on May 1, 1976. Robinson served as an instructor in the freshman chemistry program at UW in 1942-43. He was on the faculty of Smith College following his PhD and then worked in industry before joining the faculty of North Carolina State University in '48.

Yvonne Marie Dauplaise Town, class of '15, the widow of **George Galloway Town, BS '18, PhD '22**, died recently in Madison. She was mentioned in BS #21 as the eldest coed on campus when she registered for an art class. She was active for many years in Republican Party political circles. Her husband, who died in 1965, was chairman of the chemistry department in the UW Extension Division in Milwaukee until the merger with Milwaukee State Teachers College to form UW-Milwaukee. He then became an administrative member of the department in Madison where he was responsible for chemistry in the Extension Centers until his retirement.

Lewis G. Weeks a 1917 graduate of the University became one of the world's leading petroleum geologists. Several years ago Weeks gave \$2.5 million to the UW Foundation for a new geology and geophysics building at the corner of Dayton and Charter Streets. This building was dedicated as the Lewis G. Weeks Geology-Geophysics Building in 1974. At the time of his death, Weeks was chairman of Weeks Natural Resources Ltd., a Bermuda-based oil exploration company.

This 'n' That . . .

(Continued from page 10)

pose but for the Bowling Congress. He was recently searching for an assay balance for donation to the Virginia City Museum.

Michael S. Foster, BS '69, sent his contribution from 1322 Shattuck, Apt. 401, Berkeley, CA 94709. No news.

Stephen E. Freeman, BS '31, PhD '35, reports that he has just retired from active work at the Freeman Chemical Co. where he has been President and Chairman of the Board. Freeman Chemical manufactures synthetic resins for coatings, reinforced plastics and foams, and produces 5 and 6 million pounds of resin per month. Laboratories and production facilities are near Port Washington, Wisconsin, with production near Chatham, Virginia and in Cheshire, England with licensors in Japan, France, Australia and New Zealand. Steve sends his greetings to Professor Meloche.

William G. French, PhD '69, sent an item "to help forestall foreclosure" and reports that he is still working on optical fibers at Bell Laboratories.

Dr. Shigetada Fujii, Visiting Scientist '68-'70, is now on the faculty of University of Shinshu in Nagano, Japan. He was formerly at the Governmental Industries Research Laboratories in Nigoya.

Patrick K. Gallagher, PhD '60, of Bell Laboratories was the recipient of the '76 Mettler Award in Thermal Analysis. The award, which includes a \$1000 honorarium, was presented at the annual North American Thermal Analysis Society Conference held at Princeton University.

Steven A. Goldstein, PhD '73, is involved in time-resolved spectroscopy of electron beam fusion at the Sandia Laboratories.

Eleanore Benner Gray, BS '32, wrote when Niagara Falls was suffering through its worst winter in years. She writes, "Reminds me of trudging knee deep in snow to a Sat. morning class with that freezing gale off the lake, while my sorority sisters slept in warmth!" She continues to experiment with the idiosyncrasies of acrylics on canvas.

Frederick M. Granberg, BS '39, is Vice President of Charles A. Lee Associates, Inc., consulting engineers in Knoxville, TN 37918.

Russell D. Hageman, PhD '70, writes from Raleigh, NC without news of his activities. We were pleased to send him a copy of Newsletter #20, which he reported missing from his files.

Stanley L. Hager, PhD '74, has been at the Technical Center of Union Carbide since completing his doctorate with Dr. Willard. He is responsible for the Thermal Analysis and Rheological Testing Lab for polymer characterization in South Charleston, WV.

Neil Hakala, PhD '43, retired May '77 as President of the Exxon Research and Engineering Company in Florham Park, NJ according to Professor Williams.

Lester A. Hansen, PhD '34, of Olympia, Washington writes that he enjoys reading the *Badger Chemist* but sends no news of his activities.

J. Fred Hazel, PhD, '31, asks to be put back on the mailing list and sends "Regards to all the gang, but to Hank Schuette and Mel and Jack Williams especially." Fred is on the faculty at University of Pennsylvania.

Lawrence J. Heidt, PhD '30, who is Emeritus Professor with the Chemistry Department at MIT is now associated with U.S.-Japan Solar Energy Research in Tokyo.

William B. Herdle, PhD '75, sent his contribution from Mount Kisco, NY 10549, but included no news about his activities.

Eugene L. Hess, MS '42, PhD '48, is Executive Director of Federation of American Societies For Experimental Biology in Bethesda, MD.

Steven J. Hildebrandt, PhD '76, is research chemist at Engelhard Minerals & Chemicals Corp. in Menlo Park, New Jersey where he is involved in the fabrication and modification of cracking catalysts for the petroleum industry.

Stephen S. Hixson, PhD '70, is on the staff of University of Massachusetts, Amherst.

Harrison H. "Red" Holmes, PhD '34, sends "regards to Professors Holt, Sorum and Williams." He comments, "as your forthcoming history will show, the greatness of UW-Chemistry is basically in the faculty's concern for the welfare of their students."

Jimmy Hosch, PhD '75, has completed a postdoctoral appointment with Professor E. H. Piepmeier at Oregon State and is now associated with Texas Instruments in Dallas.

Monie S. Hudson, MS '39, of South Carolina was recently awarded a large National Cancer Institute grant for the testing of tree sap for value in chemotherapy. Since '67 he has tested sap samples from every type of tree in North America. Of these, 5.7% were shown to be active in retarding cancerous growth. He moved his research to Costa Rica in '71 and with the new grant will move his research to the headwaters of the Amazon in Peru. In Costa Rica, he tested saps from 1800 species of trees, finding more than 160 with distinct activity against cancer.

Carl A. Hultman, BS '66, is currently Assistant Professor of Chemistry at Gannon College in Erie, PA. He took his PhD in physical chemistry at Penn State and spent three years directing a rehabilitation program for the Pennsylvania Bureau of Corrections and two years at the Altoona campus of Penn State U.

Peggy Hurst, PhD '56, writes from Bowling Green State U in Ohio that she was pleased to be reminded of the Chemical Education meeting in Madison last summer.

Catherine Hurt, PhD '76, held a temporary position at Knox College following completion of her doctorate. She is now on the chemistry faculty at Hobart College in NY.

John Ihde, BS '64, recently received the Distinguished Teacher Award conferred by the Central Wisconsin Section of the ACS. He is teaching chemistry at Wausau West High School.

Harold A. Jeskey, PhD '42, has been named the first occupant of the Robert Sherman Lazenby Chair in Chemistry at Southern Methodist University where he has completed more than 30 years. Between 1962 and '72 he was Chairman of the Chemistry Department. In 1967 a group of former students established the Harold Jeskey Scholarship to be awarded to an outstanding chemistry major. The named chair which Harold occupies was made possible as a result of a bequest of approximately 1.6 million dollars to the SMU Chemistry Department by Mrs. Virginia Lazenby O'Hara who died in April '75. The bequest was in honor of Mrs. O'Hara's father, a Waco chemist who founded the Dr. Pepper Company.

(Continued on page 13, col. 1)

This 'n' That . . .

(Continued from page 12)

Donald R. Johnson, PhD '54, who heads the instrument development division at Du Pont has been returned to the mailing list through the kindness of **John Neptune**, PhD '52.

Thomas L. Johnson, MS '44, PhD '46, recently passed his 30th anniversary as a patent agent for Sterling Drug, Inc. He reports frequent visits to the Wausau area as a consultant with Zimpro, Inc., a Sterling subsidiary, and promises to stop in Madison some time. He has not visited Madison since his brother **William S.** left the UW chemistry faculty in '60.

Guilford Jones II, PhD '70, was recently promoted to Associate Professor at Boston U.

We have processed an address change for **Daniel F. Juers**, BS '64, PhD '71, who resides at 23 Misty Pine Ln., Fairport, NY 14450, but we have no news of his activities.

Gary E. Keck, PhD '75, is Assistant Professor of Chemistry at University of Utah in Salt Lake City following a postdoctoral year at Harvard.

John A. Keenan, BS '30, MS '32 (PhD '34 Biochem) writes from Fort Madison, Iowa, "No particular news. A little more retired than the last time I wrote you. I might come up for a crew race in the spring." He evidently didn't make it in '77.—Ed.

Dr. Wan Kyue Kim, Visiting Scientist '59, is professor at Soong-Jun University in Seoul, where he has been building up the programs in chemistry and engineering.

Dr. Toyooki Kimura, Postdoc '74, has a fellowship in the Radiation Chemistry Group of the Engineering College in University of Nagoya, Japan.

James Kinsinger, PhD '72, who has taught at Tugaloo College since graduation, has been spending the past year as a postdoc with Professor Taylor.

Donald A. Kita, BS '44, PhD '51, just completed 25 years with Pfizer, Inc.

Michael D. Kluetz, BS '71, is now on the faculty at the U of Idaho after finishing his PhD at Illinois.

Robert T. Klun, PhD '77, is with Dow Chemical in Midland, Michigan.

Stephen W. Koontz, PhD '76, is postdocing at M.I.T.

Sheldon Kopperl, PhD '70, enclosed a check saying, "I'd hate to see the editor drawn and quartered." Shelly was recently promoted to Associate Professor in the School of Health Sciences at Grand Valley State College in Michigan.

Brigita E. Kore, BS '54, of Milwaukee writes, "Enjoyed reading Badger Chemist."

Carl H. Krieger, BS '33 (MS '38 Biochem, PhD '40) has taken mandatory retirement at Campbell Soup Co. where for the past 15 years he has been corporate vice president. Carl spent 21 years at WARF followed by 21 at Campbell. In spring of '77 Carl was honored by the UW Alumni Association with its Distinguished Service Award. He is a past president of the Alumni Association.

Charles J. Krister, BS '37, MA '39, completed 40 years at Du Pont last March. He is proud of having started three UW chemists on interesting careers—**Al Pavlic**, PhD '42, **Russ Peterson**, PhD '42, and **Harold Snyder**, PhD '45. He reports, "The students always outdo the instructor!"

Theodore J. La Chapelle, Jr., BS '43, 1070 Grandpa Dr., Orange, CA. Fred is now retired from BASF Wyandotte Corp. and lives in his childhood home town of Koenigsutter about 8 miles from the East German border with his German bride. He sends affectionate greetings to Professor Schuette.

Gerrit Levey, PhD '50, sends no report with his contribution, but is presumably continuing his work at Berea College.

William E. Loeb, PhD '54, sends no news from Martinsville, NJ, but includes regards to Professors Zimmerman, Goering and the editor.

Harley C. Loeffler, BS '34, received the 1976 Award of the Milwaukee ACS Section for outstanding contributions to chemistry in the Milwaukee area. Harley contributed his check of \$200 to the UW Chemistry Department for purchase of books for the library. A special book plate has been prepared for the books purchased from the fund.

Roger H. Lueck, MS '21, has been occupying some of his time in retirement in preparing reviews of the history of the canning industry.

Robert E. Lyle, Jr., PhD '49, has left the University of New Hamp-

shire to become Chairman of the Chemistry Department at North Texas State U.

Gustav C. Maasen, BA '28, has been made an honorary member of the American Society for Testing and Materials.

Donald Macalady, PhD '69, is Associate Professor of Chemistry at Northern Michigan U. He spent 1975-76 at the Rosentiel School of Marine and Atmospheric Science as an NSF Faculty Fellow where he redirected his activities toward oceanography. Don's wife took her masters in behavioral disorders at the UW in '66. They have three children.

Blair Mac Queen, BA '22, MS '23, hoped to attend the 55th class reunion. His class included a lively bunch of Alphi Chi Sigmas according to his letter.

Patrick S. Mariano, PhD '69, is Associate Professor at Texas A&M.

Ralph R. Marquardt, BS '28, sent his contribution from Sauk City, WI but without news of his activities.

David Marten, PhD '74, spent the past year at the University of Iowa, but is moving to a new faculty position at University of Oklahoma this fall.

Eldor A. Marten, BS '25 (PhD '28 Biochem) of Marysville, OH hopes to be in Madison for his PhD anniversary in '78. He reports that he frequently sees **R. Jerome Timmons**, PhD '62, who is with O. M. Scott in Marysville.

Bruce N. McBane, MS '41, sends "assistance" from 4213 E. Ewalt Rd., Gibsonia, PA.

Keith Meyer, PhD '76, and **Phyllis Anderson Meyer**, MS '69, who have been at Westminster College in Fulton, MO during the past year, are moving to Waukesha, WI where Keith will be teaching physical chemistry at Carroll College. Phyllis is completing a doctoral dissertation in history of science which deals with the history of the Delaney Amendment to the Food and Drug Act.

Pamela A. Meyer, BS '73, reports that the newsletter serves a useful function in keeping touch with the University, but sends no news of herself.

Nels Minne, PhD '52, who is President Emeritus of Winona State U enclosed his usual help with Seasons Greetings.

(Continued on page 14, col. 1)

This 'n' That . . .

(Continued from page 13)

G. Therold Moeller, PhD '38, sends greetings from Arizona State U in Tempe.

Stephen D. Morton, BS '54, PhD '62, has published a book on water pollution.

Hans Musso, who was the Organic Division's first visiting professor some years ago, returned to the campus in late August to present an ACS lecture on "Mushroom Pigments, their structures and chemistry." He is an editor of *Chemische Berichte* and a leader on the German organic chemistry scene. He was at Marburg at the time of his Wisconsin sabbatical, but has now moved to Karlsruhe. Dr. Musso is a member of a group in Germany referred to as the "Wisconsin Gang" because of former sabbaticals at the UW.

Philip T. Newsome, PhD '26, sends thanks for the Badger Chemist from 488 Sagamore Drive, Rochester, NY, but includes no news about his activities.

Ambrose R. Nichols, Jr., PhD '39, retired from the faculty of Sonoma State College after 37 years in the California State College System in 1976. Soon thereafter he and his wife flew to Europe, picked up a new car in Munich and spent the next five months touring Britain, France, Spain and Portugal with a side trip to Greece without the car. He reports that during the past year they had visits from **Elmer R. Johnson**, PhD '40, and **Roberta**, and from **James L. Hall**, PhD '39 and **Betty**. They also visited **Earl Amott**, PhD '38, and **Roberta** on their farm near Roseburg, Oregon. The Nichols plan to remain in Santa Rosa where they have had their home for 16 years.

J. Burton Nichols, PhD '27, reports that he has just finished 10 years of retirement from DuPont and is raring to go for the next 10. He ice skates regularly, does his own tree trimming and had an exciting trip to Russia last year.

Stephen W. Nicksic, PhD '52, continues his research on tertiary recovery of petroleum with the Chevron Oil Field Research Co. He is also active in Americans for Energy Independence.

Warren D. Niederhauser, PhD '43, is Director of Pioneering Research with Rohm & Haas and serves as ACS Director for Region III.

Wayland E. Noland, BA '48, MS '50 (PhD '52 Harvard) comments that while "**William Stebbings**, PhD '72, didn't report on his activities, his office mate **Bob Williams**, PhD '73, did." Wayland continues his teaching and research in organic chemistry at University of Minnesota.

Mary Jane Oestmann, MS '48, PhD '54, sends in a note of correction about her activities as reported last year. She has been an Environmental Project Manager since '71 at the former Atomic Energy Commission and now the Nuclear Regulatory Commission. She reports being responsible for the licensing of the Consolidated Edison's Indian-Point Nuclear Power Plants on the Hudson River, the Kewaunee Nuclear Plant in Wisconsin and the Palisades Plant in Michigan as well as other plants under construction. In 1976, she transferred to the Inspection & Enforcement office of NRC in Glen Ellyn, IL. She is involved in inspecting nuclear power plants in the midwest. In 1975, she received an honorary D.Sc. from her undergraduate alma mater, Denison U. The school had awarded her its Distinguished Alumnae Citation for 1971.

Marshall V. Otis, BS '42, has completed 30 years of service with Eastman Kodak Co. in the Research Laboratories of Tennessee Eastman. Their three sons include an M.D., an O.D. and a student in Seminary. During the bicentennial year "I was listed in Notable Americans of Bicentennial Era and recognized for contributions to Bicentennial Activities with Sons of the Revolution organization."

James R. Owen, PhM '37, reports having three enjoyable careers with Phillips Petroleum. Twenty-one years of research on heterogeneous catalysis, four years as Technical Superintendent of the Phillips Uranium Mill at Grants, NM and seven years in technical liaison work between the inventors and lawyers, "You speak legal out of one corner of your mouth and scientific out of the other corner!" He took early retirement in '69 at age 59 and has been consultant in the field of heterogeneous catalysis since then. His letter included the missing address of **Jack G. Roof**, PhD '38, at 2017—46th Street, Galveston, TX.

James R. Payne, PhD '74, is at the Bodega Bay Marine Laboratory in California. He and his wife recently announced their first child, a son.

POSTSCRIPT ON STERLING HALL BOMBING

A third member of the team responsible for the Sterling Hall bombing in August 1970 is now serving a prison sentence. **Dwight Armstrong** was sentenced to a seven-year prison term in June 1977 after pleading guilty of a state charge of second degree murder. He then received a second seven-year term in federal court with the two terms to be served simultaneously. The fourth suspect, **Leo Burt**, is still at large.

Dwight's older brother, **Karleton**, is serving a 23-year term at the state prison in Waupun and **David Fine** drew a seven-year term a year ago.

David W. Pelle, PhD '71, has shifted to a new position at Abbott Laboratories. He is now a production supervisor at the Abbott Park location.

David Perlman, BA '41, MS '43, PhD Biochem '45, is the editor of Volume 21 of the recently announced *Advances in Applied Microbiology*. Dave has stepped down from the deanship of the UW School of Pharmacy in order to devote more time to his research. He is also serving as Chairman-elect of the Division of Microbial & Biochemical Technology in the ACS.

Fredus N. Peters, Jr., PhD '25, and his wife **Helen** have left their apartment overlooking Sarasota Bay and moved into nearby Plymouth Harbor, a retirement home at 700 John Ringling Blvd., Sarasota, FL 33577, where they also have an excellent view of the bay. Pete reported a visit from **Marion Veazey**, PhD '26, and his wife **Daisy**. Pete has further reported that **Helen** was interested in the comment on WHA-TV carried in the last *Badger Chemist* since she worked for Professor Lighty of the Extension Division from 1922-25 when Radio Station WHA was in its pioneering days. He writes, "What a thrill **Mike Klein** and I got when our home built radios picked up WHA loud and clear."

Deanna Peterson, BS '74, has returned to Madison to undertake work in analytical chemistry.

Herbert E. Pleuss, BA '37, sends a new address 1357 Kellner Street, Manitowoc, WI, but includes no news about his activities.

(Continued on page 15, col. 3)

ULTRACENTRIFUGE ROTOR TO SMITHSONIAN

Arrangements have recently been completed to donate the back-up ultracentrifuge rotor to the Smithsonian Institute in Washington. There it will be placed on display as a critical part of an instrument

which was largely responsible for development of Wisconsin's leadership in the field of colloids and high polymers. In 1936 the UW obtained a Svedberg ultracentrifuge which was housed in a specially built un-



Professor Williams with the working ultracentrifuge rotor and, at right of picture, the prototype optical centrifuge built by Svedberg's group in 1923.

which played a key role in the development of colloid chemistry.

The ultracentrifuge was conceived on the Madison campus in 1923 when Professor Mathews brought The Svedberg to Wisconsin as Visiting Professor. Svedberg and students in his graduate group built an electrically driven prototype model of an optical centrifuge which tested the principle. On his return to Uppsala, Svedberg designed and built a full-scale, oil-driven ultracentrifuge which, after many problems were resolved, became a working tool for study of sedimentation of high polymers such as proteins.

The members of Svedberg's student group went on to pioneer in the serious development of colloid chemistry in America. These chemists included J. B. Nichols, Alfred Stamm, Marion Veazey, E. D. Fahlberg, O. H. Schunk, E. O. Kraemer, W. Koehler, B. Stein, N. D. Scott, and J. W. Williams.

John W. Williams became a member of the chemistry faculty after receiving his PhD in '25 and

derground laboratory off the southeast basement of the previous chemistry building (present Chamberlin Hall). For more than two decades the Wisconsin instrument was involved in a heavy research program under the direction of Professor Williams.

During World War II the colloid chemistry lab was heavily involved in research on blood proteins. Under an OSRD contract, the work led in 1944 to a simplified procedure for the separation of gamma globulin antibodies in good yield during the large scale fractionation of human blood plasma.

Wisconsin's Svedberg ultracentrifuge was decommissioned in 1962 after simpler ultracentrifuges became available. The rotor being transferred to the Smithsonian is a back-up rotor which was purchased in the early forties in order to have a spare in case the working rotor exploded. This never occurred so the back-up was never removed from its shipping case.

The working rotor will remain permanently in the Chemistry De-

partment. It is now mounted on a plexiglas frame which stands on Professor Williams' desk. This fall it and related materials will become part of an exhibit in a case in the main hallway of the Chemistry Building.

This 'n' That . . .

(Continued from page 14)

Alfred F. Preuss, PhD '53, now operates his own chemical company which manufactures ion exchange resins in Canada (Aldex Chemical Ltd.).

Armand J. Quick, BS '18 (PhD IL '20, MD Cornell '28, DSc honorary Marquette '73) has been invalidated as a result of a hip fracture, but continues his interest in chemistry and clinical medicine. During '76 he saw publication of two books: *Bleeding, Drugs, Vitamins: Their Impact on History* and *Detecting and Managing the Vitamin K-Deficient Patient*.

Manfred G. Reinecke, BS '56 (PhD '59 Berkeley) taught briefly at University of California-Riverside before joining the chemistry staff of Texas Christian University in '64. He was promoted to a full professorship in '73. He reports that they have a small but active PhD program and he has been able to pursue research in heterocyclic chemistry. He recently spent a year as an NSF sponsored visiting professor at Tuebingen. He was Chairman of the Dallas-Ft. Worth Section of the ACS in '76.

Chong Kon Rhee, PhD '76, has taken a position at the B. F. Goodrich Company and has a new daughter born in May '77.

Reuben D. Rieke, PhD '66, has moved to the University of Nebraska. He had formerly been at U of North Carolina-Chapel Hill.

Steven C. Rifkin, PhD '71, is employed as a research chemist at Exxon, Linden, NJ.

Frederick W. Riley, BS '48, sends a card from West Germany with the greetings "Alles Gute for the future" and inquires about classmates, as follows:

Sam Slifkin, BS '42, 1303 Park Place, Plymouth, MI.

Jim Price: inquiry turns up James M. Price, BSA '43, % Abbott Labs, 14th T Sheridan Rd., N. Chicago, IL.

(Continued on page 16, col. 1)

This 'n' That . . .

(Continued from page 15)

David C. Roberts, BS '7, has completed his PhD at MIT and is postdocing at UCLA.

Robert W. Rosenthal, PhD '49, is enjoying semi-retirement as an Adjunct Professor in Organic Chemistry at Florida International University. His son **Ned**, Med '74, is recently a student in the New England College of Optometry and his son **Charles** is a medical student at the U of Florida.

Harold P. Rusch, BA '31, MD '33, has been Director of the UW Clinical Cancer Center since '72 following 26 years as Director of the McArdle Laboratory for Cancer Research. He was recently featured in a Wisconsin State Journal article in which he reminisced about the early days of cancer research when he had to go to Dr. Middleton to ask for \$25 to buy laboratory mice in order to test the effect of tobacco smoke on the animals. When they died after he blew tobacco smoke on them for a half hour he had to tell Dr. Middleton that he had wasted his money.

Harold K. Salzberg, PhD '29, has been retired for ten years as Senior Scientist of Borden Chemical Division and is living an equally busy life at 3708 Cape Coral, FL.

Gilbert Samberg, PhD '72, has completed law school at the UW and is now associated with a law firm in New York City.

Christopher Samuel, Fellow, has accepted a position of lecturer at Warwick University in England.

Ernest R. Schierz, BS '16, PhD '22, has been assisting an employee of Dow with the translation of letters written by German Evangelical Lutheran missionaries in 1852-3. The letters were written from a mission at Bethany in Gothic script and refer to the Methodist missionaries as their arch enemies. The state of Michigan plans to publish the letters and distribute them to libraries of the State. Dr. Schierz, who lives at 1707 Dakota Drive #103, Rapid City, SD 57701, has been designated Abstractor-Emeritus in recognition of more than 53 years of volunteer service to *Chemical Abstracts*. His P.S. sends greetings to fellow members of his classes of '16, '17 and '22.

E. J. Schwoegler, BS '33, PhD '39, of the E. J. Schwoegler Laboratories, Inc. of Munster, IN, writes, "we cannot afford to let the Badger Chemist lag or cease to exist. In a limited way it does help me to keep in touch with my classmates." He sends regards to Professors Holt, Willard, Meloche, Sorum, Schuette and others.

Ralph W. Scott, BS '47 (PhD '52 Biochem) writes, "the thought of you in jail has moved me to act (also, it is the Christmas season)."

Jacob Sedlet, PhD '45, is remembered by **Sallie Fisher** to be another of her ASTM D-19 people. He claims to have found out about Sallie's Wisconsin background through the *Badger Chemist* and sends regards to Henry Schuette and Ed Larsen.

Dalton L. Shinn, PhD '35, sent a contribution to help maintain the editor's credit rating. Dalton retired in 1970 after 35 years in the research department of Crown Zellerbach Corp. in Camas, WA. He remains active with amateur radio and teaches a course in the subject in the Adult Education program in the Camas school system. His wife **Winnie** is a reporter and columnist for the local weekly. He speaks proudly of a son and daughter and 5 grandchildren.

Herbert J. Sipe, Jr., PhD '69, is serving his second two-year term as department chairman at Hampden-Sydney College. He sent a copy of a "Report on Teaching—CHEMISTRY" which appeared in the March '76 *Change Magazine* reporting on the chemistry program offered with laboratory work for more than 160 years. The department motto is "Our students do chemistry as it's done by chemists today." During a 4-year series of laboratory projects the student learns to define scientific problems, devise solutions with the aid of faculty and library resources, design and carry out relevant experiments, analyze and interpret experimental data, and communicate research findings both orally and in writing.

Sam C. Slifkin, BS '42, operates The Slifkin Company in Ann Arbor, MI. After fifteen years of consulting in the area of unconventional photography and Reprographics, he formed Specialty Coatings, Inc. He then sold his interest to Ozalid Group Holdings, Limited with whom he continues a consulting agreement. He reports that "after years of straight manage-

ment, it is fun to work at the bench." The Slifkin family, composed of wife Gail, and three children, have a mad passion for showing Saddlebred Horses, of which they now have fifteen.

Rev. John R. Smith, BS '69, reports a change of address to Route 3, Benson, MN 56215, but without news of his activities.

Alfred J. Stamm, MS '23, PhD '25, gave two papers at the Centennial ACS meeting in San Francisco and continues doing research part time at North Carolina State even after eight years of retirement. Al was the subject of an excellent profile given by **Harold Tarkow**, PhD '39, for the Great Lakes Regional meeting of the ACS in Stevens Point last June. Harold was co-chairman with **Aaron Ihde**, PhD '41, of a Symposium on the History of Timber Resources which covered two half-day sessions at the meeting. The Stamm profile, the only biographical paper at the symposium, developed the outstanding role which Al Stamm played in the application of physical chemistry to the study of wood. Stamm was a graduate student at Wisconsin in '23 when The Svedberg was visiting professor at Wisconsin and conceived the ultracentrifuge principle.

Charles H. Stammer, PhD '52, is Professor of Organic Chemistry at Georgia. According to **John Neptune**, he and Shirley were at the ACS meeting in San Francisco and took the ACS sponsored tour of Hawaii after the meeting. Chuck expected to spend part of the present year in England on sabbatical.

Martha C. Stamper, PhD '52, had her 25th anniversary with Eli Lilly last March. During the past five years she has been in the Process Research & Development Division. She reports, "it is nice to be working in organic chemistry again after so many years in Antibiotics Purification Development. She reports seeing **Howard Burkett**, PhD '42, from De Pauw U "once in a while."

Frederick J. Stare, BS '31 (PhD '34 Biochem, MD Chicago '41) writes, "I finally reached the age where at Harvard I may no longer have any major administrative responsibilities in the Department of Nutrition, which I founded in '42." He continues full time as Professor of Nutrition.

Roger A. Strehlow, BS '47, PhD '50, spent 10 years in the Physics

(Continued on page 17, col. 1)

This 'n' That . . .

(Continued from page 16)

Branch of the Ballistic Research Labs in Aberdeen Proving Ground, Maryland, the last two as Chief. In '60 he came to University of Illinois-Urbana as Visiting Professor of Aeronautical & Astronautical Engineering where his major interest is in combustion. He enclosed a brochure announcing the 17th International Symposium on Combustion to be held in Leeds, England in late August 1978. Roger is General Program Chairman for that meeting.

Robert Strong, PhD '54, was a departmental visitor in July. He is at Rensselaer Poly.

Dr. Masaaki Takehisa, Visiting Scientist '62-'63, is an associate director for research at the Takahasi Research Establishment of the Japan Atomic Energy Commission, charged with investigating methods for application of radiation chemistry in industry.

Odell Taliaferro, BS '33, reports no news of earthshaking consequence in the past year, only that he has had a lack of success on his research toward a shotgun technique for the treatment of arthritis. We wish him luck and can report that Tally continues busy as ever in his support of worthwhile causes.

Harold Tarkow, PhD '39, retired from his longtime position with the U.S. Forest Products Laboratory in Madison. After taking his doctorate with Professor Williams, Harold was briefly associated with the Portland Cement Association and then joined the faculty of Bradley University in Peoria. While at Bradley his classes included a Viennese immigrant girl Liesl, who became his wife and who will soon be retiring from her position as Director of the Indonesian Student Program at the UW. The Tarkow's have two sons, Ted, Professor of Classics at University of Missouri and Stephen who is doing welfare work in California. For further news of Harold's activities, see item under Alfred Stamm in 'This 'n' That'.

David R. Taylor, PhD '76, is a postdoc with Professor Natusch at Colorado State U.

Charles C. Templeton, PhD '48, reported "that his immediate reading of the *Badger Chemist* made him feel so good that he immediately acted to encourage the editor in his efforts." Chuck continues

50-YEAR MEMBERS OF THE ACS

Phyllis A. Bott, BA '23, MS '24 (PhD '30 Penn), RFD 1, Box 412, Green Lane, PA 18054. She was chairman of the biochemistry department for many years at the Women's Medical College of Pennsylvania.

Ralph Friess, BS '18, 2708 Lakeland Avenue, Madison, WI 53704. Formerly with Ray-O-Vac in Madison.

Lawrence T. Hallett, PhD '28, General Aniline & Film Corp., Gangor, PA 18013.

Samuel Lehner, BA '24 (PhD '26 U of London), ScD '59, 1900 Woodlawn Avenue, Wilmington, DE 19806. Dr. Lehner was Vice-President for Research at DuPont from 1955 until his retirement and is a director on the WARF board.

Dr. Lila Miller, BA '26, MS '27, 413 West Hoover, Ann Arbor, MI 48103. She was on the faculty of U of Michigan Medical School.

Roland A. Ragatz, BS '20, MS '23 (PhD '31 Chem Engr), 5101 Mineral Point Rd., Madison, WI 53705. He was professor of chemical engineering at Wisconsin and for 16 years, chairman of the department.

Rex J. Robinson, PhD '29, 7324 16th Ave. N.E., Seattle, WA 98115. He spent his entire career as a faculty member at U of Washington.

Edwin O. Wiig, MS '25, PhD '27, 184 Herberle Rd., Rochester, NY 14609. On the faculty of U of Rochester from '32 until retirement in '65. Served as chairman '55-'64.

with Shell Development Co. where he is working on well stimulation, that is, on the kind of vile brews to pump down oil wells to increase their productivity. He was recently made Chairman-Elect of the Southeastern Texas Section of the ACS. This section has more than 2000 members.

Laren M. Tolbert, PhD '75, is on the chemistry staff at U of Kentucky, Lexington.

Donald L. Towns, PhD '62, decided four years ago to expand his horizons outside of research. After obtaining his Professional Engineering license, he transferred to the manufacturing department of FMC's Agricultural Chemicals Division. From a lonely start as a process engineer, he has had steady promotions and is now General Op-

erating Superintendent of the plant in Lockport, NY. With his wife Joyce and two children, he enjoys western New York with its skiing and boating.

Charles H. Trotman, PhD '72, is Assistant Professor of Chemistry at Jackson State University, Jackson, Mississippi where he has recently served as a faculty sponsor of the Senior Centennial Class. The school, through an antecedent institution, has just completed its 100th year. Charles has just been granted an NSF Award to run a program on Student Science Training for High Ability Secondary School Students. He has also received a substantial NIH Award to study the chemistry of compounds of toxaphene and the biochemical toxic action of these compounds.

Oscar R. Trubell, BS '31, sold his small chemical business in Houston and retired. He is living at 2016 Main, #1803, Houston, TX. His business dealt with development and manufacture of adhesives.

Roland A. Trytten, PhD '41, was General Chairman of the 11th Great Lakes Regional meeting held at UW-Stevens Point in June '77. One of the program co-chairmen was **C. Marvin Lang**, MS '64 (PhD '70 Wyo.), also a member of the Stevens Point faculty. A large number of Badger Chemists were in attendance.

Ralph F. Turner, BS '39, sends regards to Chuck Watson, Professor Meloche and others. He was sorry to hear of the death of Mary Peterman. Ralph is associated with the School of Criminal Justice at Michigan State.

Carl Turnquist, PhD '72, is Senior Chemist in Research & Development with U.S. Catheter & Instrument Corp. His group is involved in research on artificial arteries made of knit or woven Dacron or Teflon.

Carl W. Umland II, BS '52, PhD '54, is Environmental Health Coordinator with Exxon Chemical Co. in Houston. His wife, **Jean Blanchard Umland**, PhD '53, teaches at the University of Houston where she is involved in developing the Course in Basic English on account of many foreign students. They have two daughters, the elder having started Carleton College a year ago.

Frank Urban, BS '26, PhD '28 (MD U of IL '44) proudly sent a summary of the UW connections

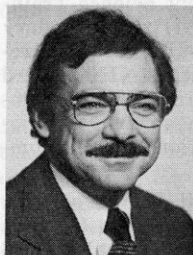
(Continued on page 18, col. 1)

This 'n' That . . .

(Continued from page 17)

of his family. His wife, Helen, BS '29; his sons Frank H. Urban, BS '51, MD '54, James G. Urban, BS '57, MD '60; and two grandchildren, Barbara and Michael, being undergraduates at the present time.

Marion H. Veazey, PhD '26, spent last winter in Florida where he and Daisy visited the Fredus N. Peters, PhD '25. Marion sent news of several classmates, this appearing elsewhere.



Robert E. Visco, BS '55, MS '57, (PhD '63 IL) was named Director of Engineering Research at Western Electric's Engineering Research Center in

Princeton, NJ. His organization is responsible for developmental activities in additive processes for the manufacture of printed wiring boards, plastics processing, the reprocessing of precious and semiprecious materials, environmental characterization, non-destructive testing methods and engineering applications of computers. Bob began his professional career as a member of the technical staff of Bell Telephone Labs in Murray Hill in '61. His present promotion follows an assignment at the company's Richmond, VA plant. He and his wife and their three children now live in Princeton.

Thomas J. Wacek, BS '66, is Director of Inoculum Research with the North American Plant Breeders in Princeton, Illinois. He thanks us for the faithfulness with which the Badger Chemist has followed him around for 10 years. He says that it is a reminder "that being a Wisconsin chemist is to be included among some very fine and gentle men."

Carol Hermann Wallace, PhD '49, reports a son working on his doctorate at Purdue in electrical engineering. A daughter is at Kent State with a double major in French and Elementary Education.

Charles C. Watson, PhD '38, has retired from UW Department of Chemical Engineering. He and his wife, the former Jean Mathews, continue to live in Madison.

Gary R. Weisman, PhD '76, is Assistant Professor of Chemistry at U of New Hampshire.

BADGER CHEMISTS IN THE CALIFORNIA STATE UNIVERSITIES

John A. Neptune, MS '49, PhD '52, was motivated, following receipt of the last *Badger Chemist*, to prepare a list of Badger Chemists who are associated with units in the California State University System. We are indeed grateful to John and would appreciate similar listing of Badger Chemists in universities and industrial firms. John's kindness has also been helpful in getting Badger Chemists back on the mailing list. The listing, which may possibly have omissions, is as follows:

Edwin N. Becker, PhD '53, Physical, Long Beach

Warren R. Biggerstaff, PhD '48, Organic at Fresno

Joseph Bragin, PhD '67, Physical, Los Angeles

Theodore J. Hauptert, PhD '69, Analytical, Sacramento

Gene A. Hiegel, PhD '65, Organic, Fullerton

Barbara H. Kalbus, BA '53, PhD '59, is head of the chemistry department at Long Beach City College.

Gene Kalbus, BS '53, PhD '57, Analytical, Long Beach

Lee H. Kalbus, PhD '54, Dean of Graduate Studies, San Bernardino

Leon Kelley, BS '48 (Ag), MS '49, PhD '51, General, San Jose

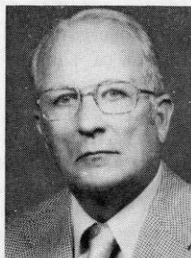
Darwin L. Mayfield, PhD '50, Organic, and currently Director of the Office of Research, Long Beach

Ralph H. Petrucci, PhD '54, Dean of Academic Planning, San Bernardino

John Neptune, MS '49, PhD '52, San Jose

John also sent news of another Badger Chemist in the Southern California area.

Alan W. Cobb, PhD '36, Professor of Physical Chemistry at California Polytechnic Institute in San Luis Obispo.



William H. Webb, PhD '49, retired from the faculty of University of Missouri - Rolla on March 1, 1977 after nearly 40 years in the Chemistry Department. He

was honored at a reception at the Miners' Lounge. In retirement remarks Bill included Professor V. W. Meloche as one of the outstanding men who had a profound influence on his professional career. He came to Rolla fresh from his BS in chemistry at Mississippi State in order to undertake graduate work. Becoming a full time instructor within one year on the campus of the old School of Mines, he became a fixture on the Rolla faculty, being away only for four years as a commissioned officer with an anti-aircraft artillery unit during World War II and for a short leave of absence to complete his PhD at Wisconsin. He also spent five summers at the Oak Ridge National Laboratory and did contract work for the AEC on separation of fission products. In '64 he became chairman of the Chemistry Department. The Webbs entered retirement in a new home in Louisville, Mississippi, about nine miles from

the farm where Bill grew up. The Webbs have 4 children and 4 grandchildren.

Ellen Whitman, who was associated with *Badger Chemist* several years ago in a secretarial capacity, sends greetings to the newsletter staff from Somerville, MA.

Paul E. Whitson, PhD '74, is Assistant Professor of Chemistry, University of South Florida, Tampa, Florida. He has developed (with Professor Evans) an ACS short course on electroanalytical chemistry.

Bennett R. Willeford, Jr., MS '49, PhD '51, sent something to help keep the editor out of jail with the remark, "But if you have to go, have them send you to Lewisburg where you can put my name on your visitor's list!" Ben expects to have his sabbatical in '77-'78 from his position at Bucknell U. He hopes to spend some time at Munich and Oxford.

Robert A. Willihnganz, BS '37, wrote of plans to retire from General Motors to devote his attention to the practice of law, and thereby take advantage of the J.D. received from Wayne State in '68. He hoped to focus on environmental law, an area in which he has been involved during the past 12 years. He was recently elected chairman

(Continued on page 19, col. 1)

This 'n' That . . .

(Continued from page 18)

of the committee on environmental quality of the ACS-Detroit Section. He included a news clipping describing an electrochemical clean-up treatment for oily wastes being developed at the General Motors Technical Center. The process also received a note on page 22 of CEN for October 11, '76.

Lloyd L. Withrow, PhD '25, who retired in '63, was recently elected a Fellow of the Society of Automotive Engineers. During his 37 years with General Motors, Lloyd designed the first high speed motion picture camera used to photograph the combustion process in a gasoline engine. He also directed the construction of GMRL's smog chamber, and did pioneering studies on effects of combustion chamber pressure influences on engine noise and vibration. **Marion Veazey** has passed on the information that Lloyd played right guard on the Oberlin College football team in autumn of '21. The Oberlin team defeated Ohio State, but the latter went on to win the Big 10 championship.

Warren D. Woessner, PhD '71, who is a research chemist at Miles Laboratories in Madison, has won another award for his poetry from the Wisconsin Arts Board. An earlier federal grant took him to Alaska where he explored wilderness areas and wrote about ecology. He has now published six books of poetry and is co-founder and editor of *Abraxas* magazine. Warren's father **Warren W. Woessner**, PhD '40, was in Madison recently for treatment at University Hospitals. We are hopeful that he is doing well.

Dr. Masuo Yagi, Visiting Scientist '68-'69, is in charge of the radiochemistry group utilizing the 30 MeV linear accelerator at the University of Sendai, Japan.

Stephen D. Ziman, PhD '71, remarks, "Like most PhD's, I really consider Wisconsin my alma mater, even more so than my undergraduate school—like many, I met my wife there and have fond memories." He sends regards to one of his roommates, **Alan Rocke**, PhD '75.

Gary A. Zimmerman, PhD '65, is Dean & Director of Clinical Chemistry in the School of Science & Engineering at Seattle U. He was recently elected to the Board of Directors of the American Asso-

ciation for Clinical Chemistry and is serving as secretary-treasurer of the newly incorporated Commission for Accreditation in Clinical Chemistry.

Duane F. Zinkel, BS '56 (PhD Biochem '61) presented a paper on "The History of Naval Stores" at the Symposium on History of Timber Resources which was held last June at the Great Lakes Regional Meeting of the ACS. Duane is at the Forest Products Laboratory where he pursues research on softwood extractives and derived products.

Mary E. Zosel, MS '70, is now Assistant Professor of Education, Carroll College, Waukesha, WI. She earned her PhD in educational psychology from Marquette University.

PROMOTIONS

The promotion list for summer 1977 contained the following names of department members.

To Associate Professor

Frank A. Weinhold, physical and TCI

To Professor

Charles P. Casey, organic
Edwin Vedejs, organic
R. Claude Woods, physical

HOCKEY TEAM TAKES CHAMPIONSHIP

The UW hockey team drew enthusiastic attention in 1977, ending the season as the champions of the Big Ten, the Western College Hockey Association, and the NCAA. Other athletic squads failed to approach these achievements, although several of the minor sports (known to Athletic Director **Elroy Hirsch** as "non-income producing sports") had credible records. The swimming team ranked second in the Big Ten to perpetual champion Indiana. The wrestling team also had a strong season, with one NCAA champion. Football continues in the doldrums. Basketball, under a new coach, was exciting but fell short of a winning season.

Hockey coach **Bob Johnson** returned to the university after a year's leave as coach of the U.S. Olympic Team in 1976. Wisconsin lost its first game to Michigan in overtime, then went on to establish a 37-7-1 record for the total season. They ended the season with

two overtime victories in Detroit's Olympia Stadium to take the NCAA championship over Michigan.

It may be remembered that Professor **V. W. Meloche** played an important role in the restoration of hockey to the intercollegiate athletic program when he was a member of the Athletic Board in the early sixties. Professors **Sorum** and **Holt** also served terms on the Athletic Board.

ORGANIC LECTURES

The Organic Chemistry Division now sponsors three major lecture series. The **James M. Sprague Lecture Series** brought Professor **Orville Chapman** of UCLA to Madison last March. His three lectures were titled:

"Novel Molecules by Unusual Methods"

"Synthesis and Characterization of Molecules on the C₆H₆ Energy Surface"

"Chemical Communication in Lepidoptera: The Chemical Basis and the Implications"

The **Samuel M. McElvain Lecture Series** was completed during the 1977 Summer Session. The overall focus of the McElvain series dealt with "Recent Work in Synthetic Organic Chemistry." Chosen as lecturer for this series was **Gilbert J. Stork**, PhD '45, for many years a distinguished member of the chemistry faculty at Columbia University. The titles of Dr. Stork's lectures were:

"The Synthesis of Prostaglandins from Glucose"

"Problems in the Synthesis of Cytochalasins" I and II.

The **Karl Folkers Lecture Series** sponsored former faculty member **William S. Johnson** who has been at Stanford since 1960. The lectures were given in October '76. Dr. Johnson's lecture title was "Biomimetic Polyene Cyclizations" and the three lectures included a survey of the major developments in this field of nonenzymic biogenetic-like polyene cyclizations with emphasis on recent developments. Attention was focused particularly on the use of allylic cations to initiate and acetylenic bonds to terminate these intramolecular telomerizations. The effectiveness of the strategy was illustrated by the stereospecific total synthesis of a number of steroids.



News Flash

Shain Becomes Chancellor

On September 9, after copy for this *Badger Chemist* had gone to the printer, the University Board of Regents announced that Irving Shain, formerly professor of Chemistry at UW-Madison and presently Provost at the University of Washington, will become Chancellor of the University of Wisconsin at Madison. The announcement revealed not only that Shain had been offered the position, but that he has accepted the opportunity to return to Madison. It is expected that he will take office sometime in November. Until then, Dean Glenn Pound of the College of Agriculture will continue to serve as Acting Chancellor, a responsibility he took on July 1 when Chancellor Edwin Young moved up to the university presidency.

A faculty Search and Screen Committee considered dozens of names during the early summer. A list of four was sent to President Young for transmittal to the Board of Regents in August. Those on the list were Shain (with the unanimous vote of the committee), Robert M. Bock, Henry Koffler, and Morton Weir. The latter, a child psychologist, is currently vice-chancellor for academic affairs at U of Illinois-Champaign. The other three have had previous UW connections. Bock has been on the Madison faculty since taking his doctorate in chemistry with Professor Williams in 1952 as professor

of biochemistry and molecular biology. Since '67 he has been Dean of the Graduate School. Koffler took his PhD in bacteriology at Wisconsin in '47, then joined the bacteriology faculty at Purdue where he became administrative head of the Biological Science Department in '59. Two years ago he moved to U of Minnesota where he is vice-president of academic affairs.

Shain joined the analytical division of our chemistry department in 1952, fresh from his PhD at U of Washington in Seattle where his major professor was A. L. Crittenden. His undergraduate work, also at Seattle, was interrupted by four years in the U.S. Army during World War II. At Wisconsin he developed an impressive program of teaching and research which led to a full professorship in '61 and the departmental chairmanship in '67. His resignation from the latter in '70 resulted from his appointment to the vice-chancellorship for academic affairs. In the latter role he distinguished himself by his sound judgment in dealing with medical school problems and his leadership in presenting budgetary matters before the state legislature. Shain left Wisconsin in '75 to take the provost position at his alma mater.

At Seattle he again proved a leader in dealing with faculty and legislators. A Washington regent was recently quoted as saying, "No one can say our budgets have ever been put together and explained to the regents, legislators, public and university faculty as well as Dr. Shain has done. We'd be very sorry to see him go." There have

also been rumors that Shain was under consideration for a top position at U of Illinois and at Cal Tech.

While at Wisconsin, Shain's research dealt with rates and mechanisms of electrode reactions, with applications in electroanalytical chemistry. Besides publishing numerous papers on the subject, he was widely sought as a lecturer. He was an advisory editor of *Analytical Chemistry* and served as a consultant and panel member for the National Science Foundation.

Professor Evans has passed on an item of interesting information regarding the impact of at least one of his publications, "Theory of Stationary Electrode Polarograph" with R. S. Nicholson as coauthor, which appeared in *Analytical Chemistry*, 36, 706-723 (1964). The Institute of Scientific Information, publisher of *Science Citation Index*, reported that in 1972 the Nicholson and Shain paper ranked 27th among the most frequently cited papers in chemistry and chemical engineering. The survey included 4.7 million citations appearing in 350 journals and citing 2.6 million separate papers. The paper deals with single scan and cyclic methods applied to reversible, and kinetic systems.

He was married to Mildred R. Udell in 1947. Their four children are Kathryn Ann, 27, Steve, 22, John, 17, and Paul 14.

All of us who were associated with Irv in the chemistry department join in welcoming the Shain's back to Madison and wish him fruitful and distinguished years in his new position.

Badger Chemist is made possible as a result of the financial help of friends of the Chemistry Department (see editorial, p. 2). Costs continue increasing. Your continuing financial support is not only appreciated but necessary to keep the editor from such troubles as currently face the U.S. Director of the Office of Management and Budget. Send offerings and news to:

Aaron J. Ihde, Editor
Badger Chemist
Department of Chemistry
1101 University Avenue
Madison, WI 53706