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BADGER CHEMIST

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

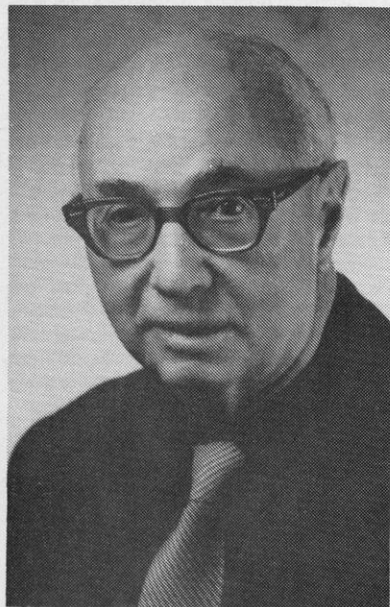
Newsletter 28

UNIV. OF WISCONSIN October 1981
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JOE RETIRES

Professor Joseph Oakland Hirschfelder "retired" at the end of the last academic year but those familiar with his intellectually active mind realize that he will continue to be active in molecular quantum mechanics even though he bears the title of Emeritus Professor and Director of the Theoretical Chemistry Institute. His retirement was celebrated on June 18-20 in Madison with an international symposium described elsewhere in this BC by Phil Certain.

Joe was born in Baltimore on May 27, 1911. His father, Arthur D. Hirschfelder, was then an associate in pharmacology in



Hirschfelder in 1981

the Johns Hopkins Medical School and Hospital who became Professor of Pharmacology at U of Minnesota in 1913 and had a distinguished career there. Joe spent two years as an undergrad at Minnesota, then transferred to Yale where he took his BS in '31. He undertook grad work at Princeton where he worked with Eugene Wigner in physics but soon became fascinated with the work of Henry Eyring in physical chemistry. He ended up taking degrees in both physics and chemistry when his PhD was conferred in 1936. His thesis dealt with the quantum mechanics of the H_2 molecule, H_3^+ ion, and the chemical kinetics of the system.

Joe remained at Princeton another year, then came to Madison where he held a WARF fellowship in the chemistry and physics departments. In 1940 he was made an instructor in both departments and a year later the chemistry department made him an assistant professor.

With the onset of World War II, Joe held a number of positions with the Natl. Defense Research Council where he advised and worked on interior ballistics and rocketry. At Los Alamos (1943-45) he was a group leader on the atomic bomb project and was the first to predict fallout from A-bomb explosions. He was chief phenomenologist at the Bikini test in 1946. Later, he edited the AEC handbook, *The Effects of Atomic Weapons*.

In 1946 the chemistry department made him a full professor and further honored him in 1962 with the Homer Adkins Professorship. Upon returning to the campus in '46 he became director of the newly created UW Naval Research Laboratory. This was renamed the "Theoretical Chemistry Laboratory" in '59 to take account of its much broader scope of inquiry than naval research. Many Badger Chemists will recall the cement-block building which housed Joe's group near the Biochem Bldg. In 1962, the Laboratory became the Theoretical Chemistry Institute and the group rejoined the department when it moved into the second floor of the new Research Building on Johnson St. (now the Mathews Lab). When the adjacent tower (F. Daniels Chemistry Bldg.) was opened in '68, TCI moved into new quarters on the eighth floor.

In his early years at Wisconsin Joe analyzed experimental data on second virial coefficients and Joule-Thompson coefficients of many gases. After the war he sought more accurate information about intermolecular forces by investigation of transport properties since these are more sensitive to details of intermolecular potential than are equilibrium properties. In a period when computers were still somewhat primitive, Joe and his associates utilized various innovations to gain solutions to intermolecular problems where experimental measurements were difficult.

Joe has also had a deep interest in the nature of flames and detonation. He and Chuck Curtiss were associated for many years in studies on the theoretical structure and propagation of flames and detonations.

The theoretical studies on intermolecu-
(Continued on page 9, col. 1)

V. W. MELOCHE 1895 — 1981

Another of the Departmental pillars of strength has been lost through death. Villiers Willson Meloche, who has been Emeritus Professor since 1966, died on March 20, 1981 in Tucson, Arizona where he and Patty had been spending winters for several years. He had suffered a stroke a year ago from which he had shown good recovery and spent the summer and fall in Wisconsin. The stroke of last March took him very quickly.

Mel was born in Port Huron, MI on Dec. 31, 1895, the son of John Baptist



Meloche in 1969

and Mary Anne (White) Meloche. In 1905 the family, which included Clifford C. (age 20), Rhea (18), and Gladys Louise (13), moved to Madison to take advantage of better educational opportunities. All four graduated from the UW and both sons went on to doctorates there. Both boys took their degrees in chemistry, C. C. was BA '10, MA '11, PhD '14; V. W. was BS '21, MS '23, PhD '25; Gladys took studies in chemistry - BA '16, before turning to home economics. All three did a senior thesis in analytical chem-

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BADGER CHEMIST

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

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THE EDITOR SPEAKS

Keep it Coming!

As is well known to all but the newest readers of *Badger Chemist*, the newsletter is made possible by the financial support of alumni and friends of the Department. This has been true since 1953 when the first issue was prepared by the late Professor H. A. Schuette as a 6-page, printed newsletter. Expenses of \$100 covered cost of printing and mailing; the 100 was put up by an anonymous friend of the department. (We can now reveal that it was the late Farrington Daniels who had recently become chairman. Ed.) That issue was so well received that the newsletter became a standard item of contact between the department and its alumni. During these 29 years an issue has been prepared annually (except '61) and has been printed without use of university funds. The bills have been paid primarily by voluntary contributions of alumni plus faculty contributions which made up the shortfall (in recent years the shortfall has been covered from the Chairman's Discretionary Fund which is provided from non-governmental sources). Last year the bills of \$1,660 were covered primarily by alumni contributions, but it was still necessary for the Chairman to cover a shortfall of \$165.

The newsletter goes to 3,000 addresses but we have no way of knowing how many are delivered since the postal service no longer returns undelivered copies. A modest number of alumni contribute annually, others at less frequent intervals. Sad to say, some never contribute, nor do they notify us to take names off the list because of disinterest. We do not remove names from the mailing list for non-contribution

OVERVIEW 1981

The year 1980-81 saw a continuation of large enrollments (42,000 at Madison this fall), tight budgets, The Greek Tragedy, and industrial mergers. New developments include: the probability of firms doing genetic research settling in the area with the University probing possible conflict of interest where faculty members are also employed on a regular basis by such firms. Current news also includes cases of faculty — medical school, not chemistry — guilty of misuse of funds. Chem Dept news includes the retirement of Prof. Hirschfelder and the hiring of James Weisshaar.

State of Wisconsin

Governor Lee Dreyfus continues to battle with budgetary crises associated with his campaign promises to return the state surplus inherited from previous governors to the citizens, while promising to raise no new taxes. Pressed in one direction to live up to his campaign promises — in the opposite direction by decreased tax revenues, state employees

since we find that non-contributors often become contributors after their financial status improves.

The above paragraphs provide information about the financial state of BC. As you can see, we struggle along from one crisis to another, with the Editor doing most of the worrying. His hair has been gray since he took the assignment; now most of it has fallen out! He isn't suggesting that you contribute for a toupee! Merely keep the greenstuff coming so that his future may be less stressful.

Endowment Fund Created

Last year's editorial, "A Trial Balloon," published a letter from Ambrose Nichols, Jr. which suggested the creation of an endowment fund of about \$20,000 for the generation of an annual income which would cover costs of issuing the *Badger Chemist*. The editorial ended by asking for reactions to the proposal.

Almost no letters of reaction were received but a peculiar reaction occurred nevertheless. There were a few letters with a favorable reaction, none were negative. An equal number of letters simply enclosed checks of \$100 for "the endowment fund," and one alumnae sent \$25 as a first installment. Several of the contributions included a company match.

This response generated \$1,300 which has been set aside with the Wisconsin Foundation as a Badger Chemist Endowment Fund. We propose not to draw on this Fund to pay for current *Badger Chemists* but to turn income back into principal

pushing for pay raises to keep up with inflation, local communities complaining about loss of state and federal aids, lack of funds to maintain deteriorating roads and bridges, the Governor's face has taken on the same color as his famous red vest which proved such an effective campaign gimmick. The no-new-tax promise began crumbling when the legislature was persuaded to increase auto license fees by 39% and gasoline taxes by 50% in order to face up to the road maintenance problem.

City of Madison

The city has had little success in resolving the problems mentioned in the last two issues of BC. Downtown remains a rough area at night. A stabbing occurred on the Square only two weeks ago. Fortunately, daytime activities are comparatively safe and a highly successful Farmers' Market operates there every Saturday during the summer. (Bob Willard, a son of Prof. Willard is in evidence every week with apples from the orchard which he and a cousin operate in Southeastern Wis-)

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to help build up the Fund, hoping in the meantime, that alumni will continue to build up the Fund until it becomes self-sustaining. We are also adopting the policy of depositing all company matches into the Endowment Fund rather than into the Current Operations Fund.

All contributions to the Endowment Fund will be received graciously! Remember, however, that it is the Current Operations Fund which will be paying the bills in the immediate future so it should have first priority, especially for those making small contributions.

Warning — Two Years to Report

As indicated last year, we plan to trim the BC mailing list after the mailing in 1983. We are sure that many copies never reach their intended destination because address changes have occurred. The postal services does not forward bulk mail, nor does it notify the sender.

We therefore set the 5-year policy in order to cut down on mailings which never reach the addressee. If we have had no communication from you between 1979 and 1984 we shall drop your name from the active file, assuming that, (1) your address is no longer valid, or (2) you are not interested.

If you wish BC to keep coming, keep in touch! Your letter need not contain a contribution to be welcome. Just a word about what you are doing is fine, although contris are always received graciously.

AJI

This 'n' That About Our Alumni

Leslie H. Andrews, BA '27, MA '28 (PhD '32 Pittsburgh), reports that his wife Dora and he are in good health, but have been saddened by the loss of their daughter Mary, (BS '61), to cancer a year ago. Her oldest son Peter Fisher has completed his sophomore year at UW-Madison.

Gary B. Aspelin, PhD '66, has moved from Bridgewater, NJ to Arlington, Texas in connection with the corporate move of the headquarters of Surgikos, Inc., a subsidiary of Johnson and Johnson. Gary has corporate responsibility for Technical Service at Surgikos which manufactures medical disposals for operating rooms.

Paul R. Austin, BS '27 (MS '29 Northwestern, PhD '30 Cornell), is semi-retired but is still active in chemical research as Adjunct Professor in the U of Delaware College of Marine Studies.

George C. Bailey, BA '09 (PhD '16 Yale), reports the death of his wife who was born in Germany where her father was a pharmacologist with a PhD from Königsburg. He is continuing his residence at 260 West Jersey Street, Elizabeth, NJ where he does his own cooking with the comment, "all chemists can cook if they want to."

Myrna (North) Bair, MS '66, PhD '68, was successful in her Republican candidacy in the Sixth Senatorial District in Delaware. Myrna is the wife of Tom Bair, PhD '66, and mother of two children. She has served as a member of the Board of Directors of Delawareans for Energy Conservation and considers energy one of her principal interests. We convey our congratulations.

Merton D. Baird, PhD '69, was promoted last year to full professorship at Shippensburg State College in Pennsylvania.

A. Albert Baker, (PhD '64, Hist. Sci.), reports having a pleasant Caribbean Cruise in late December '80 on Song of Norway. Al is head of the Seaver Science Library at University of Southern California.

Robert L. (Buzz) Baldwin, BA '50 (PhD '54 Oxford) was elected to the National Academy of Sciences in Spring 1980, much to the joy of Jack Williams and Buzz's father, Ira Baldwin, who was Professor of Bacteriology at Wisconsin and served as vice-president under E. B. Fred.

Lyman A. Beeman, BS '18, sent congratulations to the editor following his retirement from faculty.

Judith (Fahey) Benham, PhD '78, is with 3M Company in St. Paul.

Mary (Lutzow) Bernard, BA '49, writes about activities from Aurora, Illinois. A son graduated from Valparaiso a year

ago, a daughter is restored to good health and designs machines for International Harvester, and the family enjoyed some exciting hiking in the Rockies.

Blake R. Bichlmeier, PhD '73, is in the Textile Research Lab of du Pont.

David R. Biggins, (MA '73 Hist. Sci.), writes that he has been keeping busy with his teaching activities at Griffith University in Australia.

R. Byron Bird, PhD '50, gave the Otto LaPorte Lecture of the American Physical Society's Fluid Dynamics Division. Bird was also one of the seven lecturers for the British Chemical Society's residential school in Aberystwyth. In May 1980 he was awarded an Honorary Doctorate in Science from Clarkson College. Last February he spoke before the local Alpha Chi Sigma group on his travels to Mainland China and Taiwan.

Patricia A. Bitnar, MS '78, is working in Product and Process Development of Procter & Gamble.

Daniel E. Blake, BS '70, is Quality Control and R&D Manager with Northern Laboratories, Inc. in Manitowoc, Wisconsin.

Carl L. Blesch, BS '74, is now working at Bell Telephone Laboratories (Naperville, IL) as a public relations representative. Work involves preparing news releases and in-house newspaper articles on technical developments at Bell Labs. He joined the company in 1976 after completing his MA in journalism at UW-Madison. Between '74 and '76 he worked in Jim Larsen's University-Industry Research Program, Science Writing Division, and studied science-writing in Prof. Wilmott Ragsdale's specialized reporting program.

Steven J. Borchert, BS '72 (PhD '77 Harvard), sent his contribution from 1706 Whitby Avenue, Portage, Michigan without news.

Nila Bremer, MS '75, continues as a forensic chemist at the Iowa Criminalistics Laboratory in Des Moines. She is appreciative of the listing of people receiving degrees.

Gerald S. Brenner, PhD '61, is Director of Pharmaceutical Research in the Merck Sharp and Dohme Research Division at West Point, Pennsylvania.

Hans Breuer, BS '47, MS '48, is now an annual visitor in Madison when he picks up his son who is an undergraduate here. Hans is with Carter Products in Cranbury, New Jersey.

Lynn E. Brower, MS '71, is among those who appreciate the transfer of BADGER CHEMIST funds to the Wisconsin Foundation since they are now

able to take advantage of their employee matching program. Lynn is with SOHIO.

Bertie L. Browning, PhD '28, sent his contribution without news about himself.

Barry Brueggeman, PhD '81 with Schrag, is now with Hooker Chemical Company.

H. D. Bruhn, BS '33, sent his contribution from 54 Lake Mendota Drive, Madison, but without news. He is Emeritus Professor of Agricultural Engineering at the UW.

Archibald, PhD '78, and **Michelle Buchanan**, PhD '78, report enjoying the BADGER CHEMIST since graduation. They are in Knoxville, Tennessee.

David H. Buchanan, BS '64, PhD '69, reports that one of the best features of being an alumnus of Wisconsin is the chance meeting of other BADGER CHEMISTS on professional travels. He was in Poland for five weeks a year ago and spent several days with Dr. Borys Dzoentjev from the University of Moscow who spent several months in Professor Ferry's lab in the middle sixties at the same time that Dave was a student with Professor Whitlock and their paths failed to cross in the Chemistry Building. Dave is at Eastern Illinois University.

Clifford J. Burg, BS '37, and his wife Laura, who as Laura Drescher was departmental secretary in the thirties, report having a family reunion at their daughter Jean's summer home on Vashon Island in Puget Sound last July. "Four couples and five grandchildren had a fun filled week." Laura reports that seeing pictures of Mrs. Daniels and Professors Hirschfelder, Holt, Willard, and Sorum revived many pleasant memories. She offers to be of assistance in preparation of the Departmental History. She has already been helpful in identifying students on a staff picture taken in the thirties.

Howard B. Burkett, PhD '42, and his wife Lucille helped her parents celebrate their 65th Anniversary (while their own 44th went almost unnoticed!). They enjoyed seeing all ten of their grandchildren during the past year. Howard is nearing retirement at De Pauw University in Greencastle, Indiana.

Anand C. Burman, BS '74, (PhD '80, KS) is with Dabur, Ltd. in India. He reports taking his doctorate in Pharmaceutical Chemistry under **Takeru Higuchi**, PhD '43.

Bruce E. Bursten, PhD '78 with Fenske, and his wife **Marian**, MS '78 with Casey, recently reported from Columbus, Ohio where Bruce is Assistant Professor at Ohio State following a two-year postdoc with Al Cotton at Texas A&M. Marian took

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Meloche

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istry with Victor Lenher and the boys stayed with him through the PhD. Clifford, now in his mid-nineties, was on the analytical faculty at U of Michigan from 1915 until his retirement. Gladys took an MS in home economics, and became a Clothing Specialist in the University Extension Division. She retired in 1956 and died in 1965.

V. W. graduated from Madison High School (later known as Central High) and began Chem Course. When the war began, Professor Lenher recommended him for an analytical job with Carnegie-Illinois Steel Co. so he was in the Gary area for the duration. He returned to Wisconsin to complete his first degree and continued for grad work, serving as a TA during the next four years. Mel carried out studies on telluric acids and potassium tellurate for his doctoral thesis.

He accepted an instructorship in chemistry in 1925 and continued in the department until retirement as Emeritus Professor in 1966. He faced heavy responsibilities in the analytical division very quickly, following the death of Lenher in 1927 and of George Kemmerer in 1928. The latter's sudden death one weekend in October forced on Mel the full lecturing and administrative responsibility for the sophomore quant course — as vividly remembered by Ye Ed, Fred Stare, Elbert McLoud, Carl Eggert, Charlie Naeser, Fred Orcutt, Konrad Krauskopf, Elmer Klug, John Dorsch, Ludwig Krchma, and other sophomores that fall. Although relief was secured the next fall with the hiring of Norris F. Hall from Harvard, Mel always carried heavy responsibilities for successful functioning of the analytical division up to the time of retirement.

Teaching

Mel's interest in the undergrad quant course is reflected in the frequency with which he took responsibility for that course, even after others joined the division. With George Town, director of the chemistry program at the Milwaukee Extension and later at the Extension Centers around the state, and his colleague, N. F. Hall, Mel was coauthor of *Quantitative Chemical Analysis*, (1943) a manual which was used many years in the quant labs. Later he was coauthor with Walter Blaedel of a comprehensive *Elementary Quantitative Chemical Analysis* which went through two editions (1957, 1963).

He was a friend of students in the best sense of such friendship. To quote from the Memorial Resolution prepared for the UW Faculty by Paul Bender, chm., and professors Frederick Haberman (Speech and Athletic Board), Ihde, Larsen, and Taylor, "His interest in and influence with students extended well beyond the classroom; his sound advice and friendly coun-

sel helped many academic generations shape decisions which vitally affected their personal and professional lives."

Early in his career Mel was responsible for development of a departmental placement service which coordinated the meshing of job-seeking by students with chemist-seeking by industrial employers. For many years he was responsible for arranging appointments for interviewers and hosting them while they were in Madison. During most of those years he took them to lunch at his own expense. Although many offered to pick up the check he insisted that as guests they were his respon-



Mel on Trout Lake in 1925

sibility. (Departmental professors finally contributed to a fund for sharing his expenses.)

Chem Course students of the twenties and early thirties will also remember him as the leader, chaperon, disciplinarian, and father-confessor of the Senior Industrial Trip which was a graduation requirement. The classes of '29 and '30 caused so much delay of the bus by failure to be on deck for the morning start in Milwaukee that Mel issued an edict that everyone must stay at the same hotel in Milwaukee so that a prompt start could be made the second day. Students with parents and relatives in Milwaukee protested to Mel without results. They then appealed to Chairman Mathews who, in the light of Depression problems, showed understanding of the student's position. Mel was called to confer with the group in Matty's office and was persuaded to abandon his position when Matty suggested that anyone not at the bus on time for boarding would be left behind — and would not graduate that spring! The '31 tour successfully visited paper mills in the Fox River Valley the first day and broke up at the headquarters hotel in Milwaukee that

evening. The next morning those who stayed at homes in Milwaukee boarded the bus well ahead of departure time. The students who stayed at the hotel were aboard on schedule. Guess who was missing? Finally, ten minutes later, a thick cloud of cigar smoke emerged from the hotel, the cigar was tossed aside at the bus door, and a man with an impish grin settled into the front seat with full command of the situation and announced, "The first stop is Gallun Tanneries."

Instrumental Program

Meloche was a pioneer in the application of instruments to chemical analysis. At the time that he was a student, a few instruments such as the polarimeter, refractometer, spectroscope, and calorimeter had been in analytical use for a half century, but at a primitive level, and analytical uses were specialized and limited. With the full support of Chairman Mathews, Meloche created what may be the first college course in instrumental analyses. Instruments of advanced design were procured as they became available — pH meters, polarographs, automated colorimeters, sophisticated spectrographs — including instruments utilizing U-V, I-R, as well as visual light — and later, gas chromatographs, mass spectrographs, NMR, and ESR. Students, including undergrads, had the opportunity for hands-on experience with advanced analytical tools. The instrumental analysis program had strong support after 1942 with the addition of Paul Bender to the faculty and, over the years, the analytical division took on a stronger and stronger instrumental profile.

The instrumental laboratory also performed a service function, not only for all divisions within the department, but for science departments across the campus and, on occasion, government agencies and industrial firms. Mel never looked upon the instruments as show pieces but as tools to be used in solving scientific problems. As a single example, Meloche students collaborated in measuring I-R spectra of fatty acids, aliphatic alcohols, and ketones prepared over many years by Schuette students.

Research

Meloche's research program led to the education of 44 students at the PhD level. Further, he was always available for the direction of senior thesis students (136) and candidates for masters degrees (26).

In his early career he was closely associated with E. A. Birge and Chancey Juday in their limnological studies. He not only advised on chemical problems in analysis of lake waters but took an active part in the summer studies at the station at Trout Lake. He frequently recruited talented undergrads in the quant course for summer jobs at the station.

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Meloche

(Continued from page 4)

Trout Lake was a site for renewal. In later years Mel had a cottage on the lake which was used as a site for relaxation from the rapid pace at Madison. He remarked to a reporter in 1962 "A man has to get away from this three-ring rat race ever so often. He has to get out of doors, away from the human race, and get his mind working in proper perspective."

Besides the work on water chemistry, Meloche's early research reflected the interests of Victor Lenher on the inorganic chemistry of the lesser studied elements. Mel and his students made studies on selenium, tellurium, rhenium, and molybdenum. His later research became more strictly analytical and was focused on application of spectral and polarographic techniques for determination of small concentrations. His method of microdetermination of fluorine had a role in the movement for fluoridation of municipal water supplies. Mel served on the committee which made the decision to fluoride Madison's water.

Meloche's capacity as a research advisor was clearly demonstrated on February 22, 1966 when a surprise dinner was arranged for him by former grad students at the conference on Analytical Chemistry and Applied Spectroscopy in Pittsburgh.

AXE and other Organizations

V. W. Meloche was initiated into Alpha Chi Sigma early in his undergraduate years and was always a faithful member of the fraternity. He held responsible offices in the local chapter and in 1936-38 was Grand Master Alchemist of the national organization.

He was also a loyal member of the American Chemical Society and frequently urged chem majors to become members and start reading the journals. Other memberships included American Society of Testing and Materials, AAAS, and the honor societies — Sigma Xi, Phi Lambda Upsilon, and Phi Kappa Phi. He joined the Wisconsin Academy of Sciences, Arts, and Letters early in his career and published a number of water analysis papers in its *Transactions*. The Academy elected him to Honorary Membership in 1965.

Public Citizen

Meloche was not merely a chemist's chemist but felt a desire and obligation to contribute to the welfare of the university and the community. He was a member of the Board of Directors of the University YMCA, including a period as president. He was President of the University Club, a member of the University's committees on Human Rights, Personnel, Functions, and Policy.

As a member of the Athletic Board for ten years, six as chairman, he was an able guardian of the Wisconsin tradition of

This 'n' That...

(Continued from page 3)

her PhD at Texas A&M with David Bergbreiter and now holds a position with

faculty control and of the principle of total honesty in conduct of the intercollegiate program. The period of his chairmanship, 1960-66, was a splendid period in Wisconsin athletic history, including a Big Ten football championship and Rose Bowl trip. It was also in this period that hockey was reinstated as a Wisconsin sport. Mel had an important part in this move and hockey has been the most successful income-producing sport at Wisconsin ever since (the 1981 team won another NCAA championship). During the 10 years of Mel's service on the Board the football team participated in the Rose Bowl in 1959 and 1962, Gym Unit No. 2 was constructed, the outdoor running track was built near the Forest Products Lab, and the Stadium was enlarged twice to increase capacity from 52,000 to 77,000. Mel gained a reputation as the chairman with the "fast gavel."



Mel in 1956

Mel married Alice King in 1936. On various occasions he remarked that he considered their marriage the most rewarding step of his life. She is known to virtually everyone as Patty. Their marriage was an exemplary one since she complemented him in friendliness, understanding, and character.

The Faculty Memorial characterized Mel in these words, "...he was at once the conservative and the liberal in the best sense of each term — conservative in seeking to retain the best of the past, liberal in the consistent promotion of constructive change."

Ashland Chemical in Columbus. Bruce writes "I hope all is well in idyllic Madison. . .you beg with a great deal of panache!"

Russel C. Calkins, BS '48, PhD '53, continues as analytical research chemist at the Kaiser Aluminum Center for Technology in Pleasanton, California. He reports that **Jerry Seim**, PhD '49, is head of the Central Analytical Department and **Henry J. Wittrock**, MS '49, is another co-worker.

Albert S. Carter, PhD '27, reports that the last BADGER CHEMIST found him at the same address in Ft. Lauderdale and the same activities — fishing and growing orchids.

Kenneth G. Caulton, PhD '68, has been on the chemistry faculty at Indiana since '69. His research group of 13 is examining mechanistic features of transition metal catalysis in the Fischer-Tropsch reaction. A trip to Poland in September, 1980 enabled him to set up plans for a cooperative research project related to the catalyzed conversion of coal.

Michael W. Chen, PhD '79, sent sweetener. He is a Senior Research Chemist in polyolefin catalysis at Union Carbide. He did his MS with Dahl, his PhD with Gaines.

A change of address has been reported for **Chris Cheng** (m.n. Kuo), MS '72. She is in Boulder, Colorado.

Dr. Larsen reports that **Peter Chiang**, PhD '62, who is with Westinghouse in Monroeville, Pennsylvania, is working on materials resources for nuclear power plants.

Yow Nan Chuah, PhD '72, is associated with the Port of Singapore Authority working on the handling and sea carriage of hazardous materials. He spends his vacations on Penang Island, Malaysia visiting his parents.

Judy Coleman, PhD '66, was a departmental visitor one day in August '80 when Ed. was away. Left some green-stuff, for which, Thanks!

Kenneth Collins, PhD '62, writes "please keep my name on the list."

Ralph Connor, PhD '32, of Sun City, Arizona inquires "What does it take to make you click your heels on the way up?" The editor replied, "I click my heels on the way up whenever an alumnus has a two-year sequence of \$25 checks."

Milford A. Cowley, PhD '33, reports that he and Mildred were delighted last summer when the **Fred Oppen's**, PhD '36, stopped at LaCrosse for a visit on their way home to Sturgeon Bay from a lengthy trip to the west coast. Milford and Fred had fun recalling some of the lighter moments in the food chemistry lab in the early 30's.

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Overview '81

(continued from page 2)

consin). Besides making available an abundance of fresh fruit, vegetables, flowers, plants, honey, sausages, cheese, and baked goods, the market also serves a social function in bringing Madisonians together in an informal atmosphere.

The face-lifting of State Street will be completed before winter, the city now being in the process of paving the two blocks between Lake St. and Gorham. As reported in earlier issues, the two blocks between Park and Lake were permanently closed to vehicle traffic six years ago and converted into a pedestrian mall and community area. The section between the Library, and Calvary Lutheran and St. Paul's churches, has become the site of numerous small businesses operating out of mobile stands selling handcrafted jewelry, fruit, cookies, lemonade, and T-shirts with obscene legends. The area also lends itself to impromptu soap-box lectures and rallies for all manner of causes.

When completed, the State Street project will result in a tree-lined street with broad walkways on each side of a narrow pavement running from Lake Street to Capitol Square. The pavement is restricted to buses and bicycles, with no access for private automobiles and commercial vehicles.

Last February the Evjue Foundation, the charitable arm of the *Capital Times* created by the will of the late editor and publisher, William T. Evjue, gave the University checks for \$226,000 targeted for 17 areas of special need on the Madison campus. Two of the grants endowed chairs for Bascom-Evjue professorships and the remainder were awarded for various purposes including the Elvehjem Art Center, the Arboretum, men's and women's athletics, minority student support, WHA television and the School of Music.

UW System

Enrollment in the system again increased this fall, to a final total of 158,000. President O'Neil told the Regents on Sept. 11 "It is unmistakably clear that UW campuses will have to serve substantially more students with fewer absolute dollars than they had last fall."

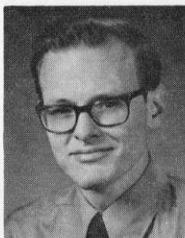
UW-Madison

Tuition in fall 1981 on a semester basis is:

Resident Undergrad	\$ 492.50
Non-resident Undergrad	1786.00
Resident Grads	685.00
Non-resident Grads	2143.00
Resident Dissertators	57.50/cr.
Non-resident Dissertators	91.40/cr.

(Continued on page 7, col. 2)

CONCERNING THE FACULTY



Certain

Phillip Certain has been named the new Director of the Theoretical Chemistry Institute, following the retirement of Professor Hirschfelder who had founded the Institute many years ago, at first under the title of Naval Research Laboratory. Phil gave an invited paper at the 14th Jerusalem Symposium on "Intermolecular Forces" in April '81 and also lectured at the Technion, Tel Aviv University, and the Weissman Institute. He and Chuck Curtiss were very much involved in planning the symposium which was set up to honor Professor Hirschfelder last summer.

Fleming Crim and **Arthur Ellis** were among eighty-nine outstanding young scientists and economists selected to receive two-year research fellowships of \$20,000 each from the Alfred P. Sloan Foundation. The selections were made from about 400 nominations on the basis of exceptional promise to contribute to advancement of knowledge early in their career.

Ian Dance, a former member of the inorganic division '68-75, was a departmental visitor in 1980. He is a faculty member at the U of New South Wales in Australia since leaving Madison. He was in the US to attend the Houston ACS meeting.

Dennis Evans has been busy since stepping down from the departmental chairmanship with numerous invited lectures, including the Gordon Research Conference on Radical Ions, the Heyrovsky Memorial Congress on Polarography in Prague, and the Organic Electrochemistry Symposium in Halifax, a UCLA Short Course in Organic Electrochemical Synthesis, besides completing a three-year term on the chemistry advisory committee NSF.

John D. Ferry gave the G. Stafford Whitby Memorial Lectures at U of Akron in September and received the Charles Goodyear Medal of the ACS Rubber Division last June. John recently saw publication of the 3rd edition of *Viscoelastic Properties of Polymers*.

Don Gaines spent a month at Strathclyde University in Glasgow with Dr. John Morris who had previously collaborated with Don while a Visiting Professor in '74. While in Scotland, Don lectured at the USIC Conference in Galashiels and did a little sailing in the Clyde estuary.

Among the 130 professorial promotions

we find the name of **John Harriman**, BS '59. John joined the physical chemistry faculty in 1964 with a parallel appointment in the Theoretical Chem. Institute. He is Harvard, PhD '63, with a year as postdoc with the quantum chemistry group in Uppsala. At Wisconsin he has been active in the Faculty Senate as a longtime representative of the chemistry department. He is the author of *Theoretical Foundations of Electron Spin Resonance* (1978).

Edwin M. Larsen gave an invited paper at the Joint Meeting of the Central and Great Lakes American Chemical Society Regions, May 20-22 in Dayton, Ohio. He dealt with the chemistry of Fusion Reactors Designed for the Generation of Electricity. This was part of a day-long symposium on "Chemistry of Emerging Energy Systems" of which **Layton J. Wittenberg**, PhD '53, Monsanto Research Corp., Mound Laboratory was a co-organizer. The co-author of Dr. Larsen's paper was **Mark S. Ortman** who is completing his work for the PhD with Larsen this summer. Ortman will take a position with Du Pont's Savannah River operation. This paper is an outgrowth of the participation of Larsen's group over the past 5 years in the Nuclear Fusion Program of the Nuclear Engineering Department.

Cathy Middlecamp, PhD '76, and **Elizabeth Kean**, PhD '74, have written a proposal to the Shaughnessy Scholars Program for a grant toward publication of a "skills development book" which will "teach students how to use appropriate learning, reasoning and problem-solving skills within the chemistry curriculum." This proposal comes out of their work with minority-disadvantaged students in the chemistry program. A late flash — it got funded. Betsy is officially the "Shaughnessy Scholar" and both now have funds to write the book in the next two years.

Stephen Nelsen spent four weeks in Berlin last January and returned for three weeks in August. Both trips were for collaboration with K.D. Asmus at the Hahn-Meitner Institute on pulse radiolysis studies of hydrogines.

Hans Reich visited both his B.Sc. and Ph.D institutions during the past year. He participated in the 50th Anniversary Symposium of the Chemistry Department at UCLA where both he and his wife, Ieva, received their Ph.D. degrees, and took the opportunity to visit U.C. Irvine where Professor Larry Overman (Wisconsin, PhD, '69) had just finished an elegant synthesis of Dendrobatid Toxin 251D. In January Hans visited the chemistry department at his undergraduate school, the University of Alberta in Edmonton, as

(Continued on page 7, col. 1)

Faculty . . .

(Continued from page 6)

part of a lengthy trip that included stops at Vancouver, several Texas universities, Atlanta and Puerto Rico. He presented lectures on his work on synthetic applications of silicon and selenium reagents at the Atlanta and New York ACS meetings. The latter was part of a symposium honoring the late Professor R. B. Woodward where he spent a post-doctoral year in 1969-1970.

John Schrag was co-chairman of a joint conference between the National Science Foundation and its French counterpart, CNRS, on the "Dynamics of Polymer Solutions and Melts" held in White Sand Lake, Wisconsin. Other participants included Professors John D. Ferry and Hyuk Yu of chemistry and R. Byron Bird of chemical engineering.

Bassam Shkhashiri is serving as Chairman of the ACS Division of Chemical Education as well as Chairman of the Wisconsin Section. He was recently elected to the Collegium of Distinguished Alumni at the College of Liberal Arts at Boston U. Volume 1 of *Chemical Demonstrations: A Handbook for Teachers of Chemistry* is scheduled for 1982 publication by the UW Press. He has also given numerous lectures during the past year and has conducted several chemical demonstration workshops, some of them in collaboration with Glen Dirreen and Fred Juergens.

Robert Sheridan received one of ten Camille and Henry Dreyfus Grants for newly appointed faculty in chemistry in autumn '80.

C. Harvey Sorum, who has been Emeritus since 1970, recently saw publication of the 6th Edition of his book *How to Solve General Chemistry Problems* by Prentice Hall. R. S. Boikess of Rutgers has joined him as co-author.

Paul Treichel's work in synthetic organometallic chemistry was recently reported in an article in *University-Industry Research*, a UW publication. The article reported on some of the unusual mechanisms of metal complexes such as those containing cobalt, chromium, manganese and molybdenum.

Barry Trost received the \$2,000 Award for creative work in Synthetic Organic Chemistry at the ACS meeting last spring. He was also an invited speaker at the 27th National Organic Symposium held at Vanderbilt U in Nashville last June.

Worth Vaughan and **Dan Cornwell** continue to be involved in the spring river trips on the Flambeau.

Robert West was a participant in the China-Japan U.S. Symposium on Organometallic Chemistry held in Beijing in June '80. While in China he also lectured in Nanjing and Shanghai and visited former

Overview '81

(Continued from page 6)

Dissertators are PhD candidates who have completed all requirements except dissertation. They must register for 3 cr. every semester until finished.

Non-resident grads who are on at least one-third time appointment as TA's or RA's have the non-resident tuition cancelled and are responsible for the same tuition as resident grads. The usual assistantship is a one-half time appointment. Last year all students were assessed a \$30 surcharge the first semester because of an arbitrary withholding of budgeted funds by the state. It is probable that this will occur again next spring.

The budget for the current year is \$2 million less than last and the legislature had not acted on a faculty pay package when classes began. Meanwhile, the state employees union has obtained a court injunction seeking to make money for faculty salary increases a part of the pool available for state employee raises. President O'Neil and Chancellor Shain are pointing out the difficulty of maintaining a first-class university on starvation income. Relations between the east end of State Street and the west end have been strained for more than a year ago when Governor Dreyfus cracked that the UW must learn to "curb its appetite."

Chancellor Shain recently noted that in the last 12 months the Madison campus has lost 122 professors, 64 of them full professors. This does not include those lost by retirement and non-renewals. Shain pointed out that salaries in the physical sciences average \$33,000, but outside offers in the area average \$50,300. The disparity in the biological sciences is

postdoctoral associates in Japan. While there he climbed Mt. Hodake, the highest peak in the Japanese Alps. During the spring semester of '81 he served as Visiting Professor at U of Utah. He recently reported that his group synthesized tetramethylsilane, the first compound containing a silicon-silicon double bond. Bob continues to be involved in various environmental, population, and human rights activities.

Mary Wirth now serves on the Advisory Editorial Panel of "Trends in Analytical Chemistry." Last August she presented results of her picosecond spectroscopy experiments at the Gordon Conference.

John Wright presented an invited paper on "Improved Selectivity for Fluorescence Analysis using Laser Techniques" at the Gordon Conference last summer and he also gave invited papers at Oak Ridge and NBS. We are particularly pleased to report that he received the 1980 William F. Meggers Award for the outstanding paper in "Applied Spectroscopy."

even worse, particularly when fringe benefits come into consideration.

Because of budgetary circumstances, the Veterinary College, scheduled to open in '83 will not open until a year later.

The UW Foundation's three-year "Forward With Wisconsin" fund drive surpassed its \$15 million goal last fall. Objectives such as the Clinical Science Center Fund and the Bascom Professorships had their goals reached early while certain other projects ran short of their goals. These included funds for the University Libraries and the Elvehjem Art Museum.

Two medical school professors, F. R. Heber and P. J. Flanigan, were found guilty by a jury last spring of 14 counts of conspiracy and conversion of federal program money to their own private uses. The diversion of funds amounted to \$165,000 over a period of 10 years. U.S. Attorney Frank Turkheimer, a UW law professor before being named to the justice department post by President Carter, won the case despite a prior precedent in California where a somewhat similar case was thrown out. Turkheimer demolished the defense argument which held that the professors were entitled to the funds as income by showing that neither reported them as income on their tax forms.

During his four years in office, Turkheimer focused on white collar crime. He successfully prosecuted Prof. James Allen, a medical school scientist who diverted grant funds to personal recreational use, and a Medical School secretary for embezzling more than \$70,000 from the surgery department. Turkheimer recently returned to his position in the Law School. Neither Allen nor the med school secretary are now with the UW.

Howard Zimmerman has been busy with colloquia at Marquette, U of Puerto Rico, Johns Hopkins, U of Chicago, Emory and Georgia Tech. He gave a Plenary Lecture at the Atlanta ACS meeting and at the Canadian Great Lakes Symposium on Photochemistry as well as attending his first National Academy meeting.

FIFTY-YEAR MEMBERS OF THE ACS

CEN for June 15 carried its annual list of members who have belonged to the Society for a half century. Badger Chemists were the following.

Fritz E. Bischoff, BS '20, MS '22, PhD '24, of Santa Barbara, Calif.

William M. Fowler, BS '20, of La Grange Park, Ill.

M. Leslie Holt, MS '28, PhD '30, of Madison, Wis.

Ray C. Houtz, BS '28, PhD '32, of Port Charlotte, Fla.

Nels Minne, PhD '32, of Winona, Minn.

WISCONSIN BUSINESS

State industries have figured prominently in the financial news during the past years. General Foods has purchased Oscar Mayer, G. Heileman Brewing Co. has purchased Schlitz, Borden, Inc. has decided to stop marketing natural cheese — a potential blow to Wisconsin's cheese industry, and two Agri-Genetics firms are planning to set up laboratories in Madison.

Oscar Mayer entered the Wisconsin scene in 1919 when the Chicago-based firm purchased a financially distressed farmers cooperative which had been operating a slaughter house in Madison. The operation was steadily expanded in Madison's east side to become Madison's major employer while becoming a major purchaser of livestock from farmers in Wisconsin and neighboring states. The firm prospered, became innovative in processing operations and marketing techniques, and expanded its operations in Madison while setting up new plants or acquiring operating ones elsewhere. In 1957 corporate headquarters were centralized in Madison and four years later the company became international. Its sales were \$1.8 billion in 1980, with plant and distribution centers in more than 40 cities. Marketing has concentrated on pork products and has focused on specialty items such as wieners, "Smokie Links," sliced bacon, various sausages, and smoked meats. From its beginning in 1883 the company has been family-operated. Its common stock was not listed on the New York Stock Exchange until 1971. In recent years, the size of the operation, coupled with labor problems, environmental problems, and decline of hog production in the midwest has led management to find corporate merger attractive. General Foods, which lacked meat products in its line of coffees, cereals, frozen foods, pet foods, dessert products, etc., made an attractive offer which was accepted. There is much speculation about the future of the Madison operation which had closed its hog-slaughtering plant in 1978. The Mayer family established roots in Madison and was a part of the community structure. General Foods, headquartered in White Plains, NY, is hardly likely to give Madison the same consideration.

G. Heileman Brewing Co. of LaCrosse, in sixth place among the nation's brewers, vaulted to third position by buying the Joseph Schlitz Brewing Co. of Milwaukee, ranked fourth. Milwaukee, long the brewing capitol of the world, lost that title to Los Angeles earlier in the year when Schlitz announced the permanent closing of its plant on the Milwaukee River following a June strike of about 700 brewery

workers. It is doubtful that Heileman will reopen that plant since it has more modern brewing facilities elsewhere. Schlitz, a brewing giant for many decades, recently began losing ground to its competitors when it introduced a speeded-up process for production which led to a product which lacked consumer acceptance. Sales in the last four years slipped 32%. Heileman, in the meantime, has grown from a small local brewer to a major competitor in the past two decades, principally by acquisition of regional breweries across the country. It purchased Milwaukee's Blatz from Pabst in 1969, Associated Brewery Co. in '72 (giving it Schmidt in St. Paul and Sterling in Evansville, IN), Ranier (Seattle) in '77, and National (Baltimore — Tuborg, Carling Black Label, and Colt .45 Malt Liquor brands) in '79. When it became evident that Heileman was after Schlitz, Mayor Meier of Milwaukee sought to encourage Pabst to purchase Schlitz in order to keep the business in Milwaukee but was not successful.

Borden, Inc. announced its decision to discontinue purchases of natural cheese from its 22 Wisconsin suppliers effective July 31, 1981. Last year its purchases in the state totaled \$170 million. The company opted to concentrate its future marketing on imitation and process cheese, which it characterized as growth areas. Wisconsin dairy spokesmen are not as concerned about the loss of a leading purchaser as they are about Borden's decision that artificial cheese is the wave of the future. In artificial cheese, vegetable fats are substituted for butterfat and converted to a cheese-like consistency with non-fat milk solids or with imported casein. Three-fourths of the states permit sale of such cheese without requiring it to be labelled "imitation." This can be a serious blow to Wisconsin agriculture since two-thirds of the milk produced by Wisconsin's 44,000 dairy farmers in 1980 went into 1.5 billion pounds of natural cheese, nearly two-fifths of the national total. The diversion of milk toward cheese production occurred after 1950 when margarine sales escalated following removal of taxes on that product. Margarine now claims three-fourths of the market which was formerly held by butter. Wisconsin agriculture has already shown a shift away from dairying in the light of consumer shifts away from dairy products. A few years ago Wisconsin lost the claim that it had more dairy cows than people.

Two genetic engineering firms are setting up laboratories in Madison. In April it was announced that the Denver-based Agrigenetics Corp. was opening a laboratory on Madison's east side. In May, Berkeley-based Cetus Corp. announced that they, too, were taking advantage of proximity to the University to establish an agriculturally-oriented research lab in



Joe in 1956

Madison. Chancellor Shain announced satisfaction at attracting such businesses to Madison, while expressing the view that close relationship between such companies and the university raised sensitive issues which need to be resolved. Both companies hope to employ part-time university scientists with expertise in the fields of genetics, biochem, bacteriology, and molecular biology and set up close but informal ties with the UW. Prof. Winston Brill of bacty, a member of the Cetus Board of Scientific Advisors, expects to reduce his university duties in order to work part-time in the Cetus' lab, while John Kelley of horticulture hopes for a similar arrangement with Agrigenetics. Both labs hope to develop agricultural crops which give better yields, are more nutritious, and have greater resistance to disease through genetic engineering.

The long-established Madison firm, the Ray-O-Vac company, Madison's producer of dry cells on the East Side, has announced a change of name of its parent company. The ESB Ray-O-Vac Corp. is now known as INCO ElectroEnergy Corp., reflecting concentration in electrical and electronic products, exclusively. The Madison Ray-O-Vac Division, which becomes the Ray-O-Vac Corp., operates 29 plants in 17 countries including nine in the U.S. ESB has been a wholly-owned subsidiary of INCO, the International Nickel Corp. of Canada, Ltd., since 1974. INCO ElectroEnergy will remain headquartered in Philadelphia as the parent company of Exide Corp. (storage batteries-Philadelphia), Ray-O-Vac Corp. (dry cells and portable lights-Madison), Universal Electric Co. (fractional horsepower motors-Owosso, MI), and Exide

(Continued on page 18, col. 3) ✓

Hirschfelder

(Continued from page 1)

lar forces, thermodynamic properties, transport properties, and combustion phenomena resulted in the book, *Molecular Theory of Gases and Liquids*, a collaboration of Joe with Chuck Curtiss and Bob Bird, published in 1954 and reprinted ten years later.

More recent studies have dealt with quantum mechanical studies of molecular structure and intermolecular forces and include contributions to degenerate-state perturbation theory, with application to energy of interaction of a pair of molecules. Other studies include interaction of molecules with external electromagnetic fields.

Joe was elected to the National Academy of Sciences in '53, to the American Academy of Arts and Sciences in '59, and to the Norwegian Royal Society in '65. At the symposium dinner it was announced that he had been elected an Honorary Fellow of the Royal Society of Chemistry (of Great Britain) and he was presented with the Silver Medal of the American Society of Mechanical Engineers. He holds honorary ScD degrees from Marquette U and USC, has been honored with the Debye Award of the ACS and the Edgerton Medal of the Combustion Institute.

Joe's Theoretical Chemistry Institute has been a Mecca for study of theoretical chemistry in the U.S. Besides grad students, the Institute has generally been host to postdocs and professorial visitors for varying periods of time.

In 1953 Joe was married to Elizabeth Sokolnikoff, a Wisconsin PhD in mathematics who had continued as a member of the math faculty. The marriage has been a splendid partnership, both personally and professionally. Their home has been the scene of lively scientific ex-



A Light Moment at Joe's Dinner

L. to R., seated, Chancellor Shain and Betty Hirschfelder, standing, J. O. Hirschfelder and Henry Eyring, immediately after Eyring finished "roasting" Joe.

change and cooperation for the world's leading theoretical chemists. This sentiment was frequently expressed by speakers at the symposium and the banquet, reflecting affection and admiration for both members of the Hirschfelder team.

(The Editor appreciates the assistance of Phillip Certain in preparing the above, particularly the opportunity to see the ms of the "Introduction" prepared by Curtiss, Bird, and Certain for the issue of *J. Phys. Chem.* dedicated to Joe and scheduled for publication in December. It is a pleasure to acknowledge the help from these sources).

SYMPOSIUM HONORS JOE

by Phillip R. Certain, PhD '69

"New Directions for the Molecular Theory of Gases and Liquids"

a conference held in Madison, June 18-20, 1981

The *Molecular Theory of Gases and Liquids*, authored by J. O. Hirschfelder, C. F. Curtiss, and R. B. Bird, first appeared in 1954 and has since had a pervasive influence in chemistry, physics, and engineering. The purpose of the Madison conference, which coincided with the seventieth year of J. O. Hirschfelder, was to consider the impact that new experimental approaches are having on the development of the quantum and statistical mechanical theory of gases and liquids. Many of the new techniques involve the interaction of intense monochromatic light with individual molecules, colliding complexes, or condensed matter, and these areas received prominence at the conference. Examples include laser-influenced kinetics, multiphoton ionization and dissociation, state-to-state chemistry via molecular beams and lasers, and light scattering from dense fluids. Both theory and experiment were discussed at the conference, with the emphasis placed on directions that research might take in the next few years.

Some 150 scientists participated in the
(Continued on page 10, col. 1)



Bob Bird unveils Joe's Academic Genealogy

This 'n' That . . .

(Continued from page 5)

Stuart P. Cram, MS '63, was promoted to Research and Engineering Manager for the Walnut Creek Instrument Division of Varian with responsibility for new product development in gas chromatography, liquid chromatography and chromatographic data systems. Stuart received his MS from Professor Meloche and his PhD at Illinois in '66. Before joining Varian in '74 he taught at U of Florida and later headed the chromatography section at National Bureau of Standards. He further reports that **Fred Baumann**, PhD '56 with Shain, is Managing Director of the Varian Techtron Division in Melbourne, Australia.

Don Cromer, PhD '51, who has been at Los Alamos during most of his career, spent some time the past year in Germantown, Maryland.

Michael J. Curry, PhD '48, operates a management counseling firm in Westfield, New Jersey. He has just completed a two-year stint as President of the Association of Consulting Chemists and Chemical Engineers. He is a McElvain PhD.

Symposium

(Continued from page 9)

symposium, some coming from as far away as Poland, Indonesia, and Japan. The invited speakers were Professor Tom George of the University of Rochester; Professor Richard Bernstein, formerly of UW-Madison, now at Columbia; Professor A. H. Zewail of Cal Tech; Nobel Laureate Gerhard Herzberg from Ottawa; Dr. Russell Pack, who received his doctorate with Joe in 1965 and who is now at Los Alamos; Professor Dick Zare from Stanford; Professor Bob LeRoy who received his degree from Wisconsin in 1971 and who is now at the University of Waterloo; Professor Bill Klemperer from Harvard; Dr. Berni Alder from Lawrence Livermore Laboratory; Professor Peter Toennies from the Max Planck Institute in Göttingen; and Professor David Buckingham from Cambridge University. Almost all of the speakers and many of the participants have visited the Theoretical Chemistry Institute many times in the past, so in addition to being an important scientific conference, the symposium gave everyone the opportunity of visiting old friends. Invited and contributed papers at the symposium are being published in a special issue of the *Journal of Physical Chemistry*. (That issue will also carry a brief scientific biography prepared by three of his former doctoral students who are now faculty members at Wisconsin, Chuck Curtiss, '48, Bob Bird, '50 and Phil Certain, '69. Ed.)

Inez (Williams) Dadswell, BS '23, MS '27, reports that she left Madison 52 years ago to live in Australia. A few copies of BC have reached her. While in Madison she worked in the Food Laboratory on the second floor of the old building completing her masters. In Australia she worked in Canberra with her husband, H.E. Dadswell at the Forestry School on problems associated with wood. Later she transferred to University of Melbourne where she now continues to live since her husband's death in 1964. Two sons also reside in the vicinity.

Lawrence D. David, PhD '81, reports a new address in Dover, NH but sends no news.

Richard DeMallie, Jr., MS '61, sent sugar from Pittsford, New York without news.

James D. D'Ianni, PhD '38 and immediate Past President of the ACS wrote after receiving BC 27 that he was very happy to help in the celebration of the Departmental Centennial in Autumn of '80. He continues active service on the ACS Board and some Society committees. In addition, he is Chairman of the Council of Scientific Society Presidents which brings together various disciplines in the natural sciences and mathematics.

Ray A. Dickie, BS '61, PhD '65, reports that the prospect of a jump for joy and a click of the heels on the way down was too much to pass up. Happily, his employer, the Ford Motor Company, matched. Ray's research interests have shifted from mechanical properties of polymers to corrosion by organic coatings.

Edgar A. Dieman, MS '33, reports from Crown Point, Indiana that his 9 years of retirement have been as successful as his working years and blames the UW for contributing to that capability. He sends regards to Professor Blaedel.

G. Charles Dismukes, PhD '75, of Princeton is a Searle Scholar for 1981.

Carl Djerassi, PhD '45, is author of *The Politics of Contraception*, "a global perspective on fertility control." Carl, a faculty member at Stanford, has also been active in the industrial development of drugs derived from steroids and had a role in development of The Pill.

Margaret Draeger, BS '70, MD '74, is an Army doctor in West Germany. She reports that the world view from there leads to a rapid education in international affairs.

Walter H. Dreger, BS '63, recently joined Genentech, Inc. in South San Francisco. He left Syntex after 15 years in the Patent Department and holds a similar position with Genentech, the pioneering recombinant DNA firm. He will manage International Patent Operations.

Eleanor (Pennington) Dunn, BA '28,

enjoyed the pictures of the Ihde Retirement Party, but knew few and felt they looked older. She was happy to see pictures of Tally, Harvey Sorum, and Les Holt. Harvey was her lab instructor in freshman chem — 1925-26. She has pre-ordered an autographed copy of the Centennial History of the Department when it is finished. Eleanor reports great pleasure in 3 granddaughters who are in the 20's.

Carl W. Eggert, BS '31, reports enjoying the article concerning the Ihde Retirement Party and is glad that he will continue to edit BADGER CHEMIST. Ihde and Eggert were undergraduate classmates.

William D. Ehmann, BS '52, MS '54, is now Associate Dean for Research at the U of Kentucky Graduate School. He has been a professor of radiochemistry for 23 years. Son Bill recently graduated from Notre Dame with a geology degree while the youngest son is a chemistry major at Kentucky.

Alfred Ekstrom, PD '67-69 with Willard, was a Madison visitor on June 7-8 while on a round-the-world tour for the Australian Atomic Energy Commission with which he is connected. While at Wisconsin he also served as a lecturer in physical chemistry for three semesters.

David W. Firsich, PhD '79 with Treichel, is now a postdoc with Richard Lagow at U of Texas-Austin.

Mark Fischer, PhD '78, has just finished his first year with the M.W. Kellogg Co. in Houston, TX, where he is involved with catalyst development.

Keith Fisher, PD '70 with West, has a change of address to the Faculty of Education, U of Khartoum in Sudan.

Edmund M. Fitchett, BS '24, wrote last November after receiving BC 27 just before leaving for a trip to Rochester, Minnesota "for a few riotous evenings of cribbage and pinochle with my wife's brother and their family." Ed is enthusiastic about the Nichols proposal for an endowment fund for BADGER CHEMIST and responded with a match from Ray-O-Vac, his former employer. Ed has also volunteered to be a BC proofreader. His father ran a print shop in Janesville, and besides, Ed points out "all classical analytical chemists are extremely persnickety by nature and by training — prime requisites for a proofreader."

E. Gordon Foster, BS '41, PhD '44, of Houston, Texas enclosed a contribution and asked the editor to "Please give my regards to Mrs. Ihde, my former schoolteacher in Stanley, Wisconsin."

Robert P. Frankenthal, PhD '56, a staff member of Bell Labs for 8 years, is working in the areas of surface science, electrochemistry, and corrosion. He is also chairman of the Corrosion Division

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In Memoriam

Following recent precedents, this section carries obituary notices, not only of deceased alumni of the chemistry department, but of friends of the department, the university, and the academic community. In the case of alumni we frequently find problems in obtaining information, especially when we have no correct address. Such short items are generally picked up from the Alumni Records Service, CEN, *Science*, *Wisconsin Alumnus*, and *The Hexagon*. We are very appreciative when survivors send us notices since we are able to include more information.

Ross Allen Baker, PhD '14, under Prof. Victor Lenher, died on Nov. 18, '78 according to Alumni Records. He served in the Chemical Warfare Service during WW I, taught at Syracuse '19-30 and after '30 was head of the chemistry dept. at CCNY (Commerce Center) until retirement.

Charles A. Boyd, PhD '48, died Nov. 1, '80 at State College, PA. A graduate of U of Washington (BS '39) and Oregon State (MS '41), he was associated with the Allegheny Ballistics Lab in Maryland during WW II, and during the immediate post-war years was at Argonne. He then joined Prof. Daniels as project assistant at UW and served as asst. prof. of physical chemistry in '50-51. After 2 years at Camp Detrich he joined the Department of Defense as a weapons analyst. In 1965 he moved to Penn State at the Ordnance Research Lab.

George S. Buettner, BS '40, died 5-7-79. Our last contact had him in Fort Wayne, IN with U.S. Rubber.

E. B. Fred, on the Bacteriology faculty from 1913 and UW President '45-58, died 1-16-81. See article elsewhere.

Harold F. Hansen (BA Ripon) MS '28, is reported deceased 9-28-80 according to Alumni Records.

Arlington C. Krause, MA '21, PhD '23 with Prof. Krauskopf, is reported dead in *The Hexagon* for January '81.

Albert C. Krueger, PhD '30 with Kahlenberg, was reported deceased in the Apr. '81 *Hexagon*.

Robert E. McMahon, BS '45, PhD '49 with McElvain, died on September 4, 1980 in Indianapolis after a lengthy illness involving cancer, according to information sent to Grace Legler by Dick Rapala, PhD '49 and to the Department by Chester Davis, MS '45. He did doctoral research with Professor McElvain and was briefly with Standard Oil in Whiting, and with MIT, before joining Eli Lilly in '54. His research involved problems of pharmacology. He served on editorial boards of many scientific journals, most recently on the staff of *Xenobiotica*. Bob is survived by his wife, two daughters, and a son.

M. Starr Nichols, BS '16 (PhD Physiological Chem '26) died on 12-13-80 at age 93. He became an assistant at the State Laboratory of Hygiene in 1913 and remained with the lab up to the time of his retirement. He served as asst. director from 1949. He was made the university's first professor of sanitary chemistry in 1926. He began teaching a course in water and sewage analysis to engineering students in 1923 and continued this until retirement, perhaps the first such course in the country. He was a pioneer in fluoridation of water and had a deep interest in improvement of the quality of lakes. He served for many years as Commissioner of the Madison Water Board — the Nichols Pumping Station was named in his honor.

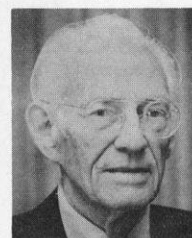
James P. O'Connor, MS '75, PhD '77 under Dahl, died in Seattle in early summer of '81.

Henry E. Reynolds, Madison Mayor '61-65, died 11-3-80 at age 74. He was president of the Reynolds Transfer and Storage Co. and also active in the real estate field. A staunch conservative, he was a leader in killing the proposed Frank Lloyd Wright Auditorium on Lake Monona. In 1975 he returned to political activity by challenging (unsuccessfully) Paul Soglin's bid for reelection as mayor. Shortly before his death he agreed to sell the state a parcel of land, including 600 feet of lake frontage, critical for the development of Lake Mendota State Park. As mayor he fought hard for an Equal Opportunities Ordinance and broke a tie vote in the City Council to pass it.

Elmer L. Severinghaus, BA '16 (M.D. Harvard '21), died in December '80. A member of the UW medical faculty from '21-46, he was a specialist in diabetes and other endocrine diseases. He was involved in development of Isoniazid as a treatment for TB. He retired from Hoffman-La Roche in '57, but continued part-time teaching at Columbia for several years.

John H. Van Vleck, co-winner of the 1977 Nobel Prize in Physics, died on 8-27-80. The son of UW math professor E. B. Van Vleck (at UW '09-36 — Van Vleck Hall is named for him), John took his BA in physics at the UW in 1920, his doctorate at Harvard. He was prof. of theoretical physics at the UW ('28-34). In 1935 he became a prof. at Harvard where he became known for creation of the modern theory of magnetism, based on quantum mechanics. He was named to Harvard's venerable Hollis Professorship (established 1726) of Mathematics and Natural Philosophy in 1951. The Elvehjem Art Museum in Wisconsin has been bequeathed the Van Vleck collection of Japanese prints, etchings, and books, together with provision for their care. The collection contains some 3,000 prints by

the greatest artists of Japan dating from the seventeenth century to the present. Dean Emeritus Mark H. Ingraham has a tribute to three generations of Van Vleck math profs in the March/April *Wisconsin Alumnus*, pp. 16-19.



Veazey

Marion H. Veazey, PhD '26 with Mathews, died on 11-18-80, a month short of his 81st birthday. His heart had been giving problems for several years. After graduation he was chemist with the

Institute of American Meat Packers in Chicago. It was here that he met his wife, Daisy, who survives him. He is also survived by a daughter and son, 15 grandchildren, and 1 great granddaughter. Marion soon left the Chicago position for the Flintkote Co. in NJ, and after '53, was director of research for the Funkhouser Co. in Hagerstown, MD. After early retirement he taught chemistry at Shippensburg State College and later in St. James School, St. James, MD where he retired in 1975.

Mary Elvira Weeks, MA '14 (PhD '27 Kansas) died June 20, 1975 in Detroit. She was on the faculty at U Kansas from 1921 until 1944 when she became Literature Specialist at the Kresge-Hooker Library of Wayne State U. She was well-known for her book, *Discovery of the Elements*, which went through 7 edns. between 1934 and 1968. She was also coauthor of *A History of the American Chemical Society* which was prepared for the 75th anniversary of the ACS in 1951. She received the Dexter Award of the HIST division of the ACS in 1967.

Lois Williams, the wife of Emeritus Professor J. J. Williams, died in late fall, 1980 after a lengthy illness. She and Jack lived in Attic Angel Towers, 602 Segoe Rd., in recent years, while spending winters in Pasadena. Jack continues in residence at the Towers.

Perry W. Wilson, Emeritus Professor of Bacteriology, died on August 17, 1981 at age 78. Born in Arkansas, he attended the UW where he received three degrees. His PhD, taken for graduate work with W. H. Peterson, Biochem, and E. B. Fred, Bacteriology, was granted in '32. He was immediately made a member of the Bacty Department where he became known for his work in enzymology, particularly in connection with biological nitrogen fixation. He directed the work of 37 students for the PhD and was known as a leader in his field. For many years he taught the required course in Bacteriology taken by Chem Course students.

This 'n' That . . .

(Continued from page 10)

of The Electrochemical Society and Divisional Editor of the Society's Journal. Bob was Irving Shain's first graduate student and still finds it difficult to address him as Chancellor.



Fox

Sister Marie Fox, MS '63 with Sorum, has become head of one of eight collegiate teams participating in a special project for adult learners funded by the National Institute of Mental Health. Sister Fox is Director of the Women's External Degree Program at Saint Mary-of-the-Woods College near Terre Haute, Indiana. Her team will be connected with SMWC. The school was chosen because of its strong record of service to students. Sister Marie joined the college in July of '79 to head the innovative degree program for adult women. She earned her BA in chemistry from Saint Xavier College in '55 and her PhD in higher education from Florida State U in '74.

William French, PhD '69, reported from Hudson, Wisconsin that he stopped receiving BC after moving back to Wisconsin in '79 after 10 years with Bell Labs in New Jersey. Bill is now with 3M in St. Paul. He is back on our mailing list and has received the missing numbers.

F. W. Froben, PD '69-70 with Willard, visited the Department on September 16, 1980 to give a physical chemistry seminar. Dr. Froben is connected with Frei Universität in Berlin.

Albert J. Fry, PhD '64, has been elected to the Connecticut Academy of Science and Engineering.

Lucien Gagnerson, MS '45 with Professor Schuette, sent sweetener but no news.

Cyrelle K. Gerson, MS '71, started a new position in June '81. She is with the ACS in Washington, DC as a New Products Specialist in continuing education.

Milton Gillen sent update addresses for his twin sons, who were both PhD '70. **Kenneth T.** is in Albuquerque, New Mexico and **Keith T.** is in Palo Alto.

Robert J. Glinski, BS '78, writes that he would like to continue receiving BC at Minnesota where he is doing graduate work in physical chemistry.

Steven A. Goldstein, PhD '73, was honored in October '80 as a member of Professor Walter's team which received the Lester W. Strock Award. This award is given for the outstanding paper in applied atomic spectroscopy in the pre-

Last year's BC updated the difficulties between Professor Walter Blaedel and the chemistry department, particularly the two analytical divisions. It noted the recommendation of the Committee on Faculty Rights and Privileges that Blaedel take early retirement. The suggestion was refused by Walt and the controversy continued to escalate throughout the year. The details of various charges and actions are too many and too confused to recount in detail so only the basics will be reported here.

The Chemistry faculty considered a motion last November to recommend that Walt be forced to retire at age 65 in May, 1981, since irreconcilable differences existed between him and the department. The vote to approve was unanimous on the part of those voting and the action was transmitted to the Chancellor. (Faculty retirement is mandatory at 70, optional between 65 and 70, according to UW rules.)

At the beginning of the second semester, Dean Cronon relieved Walt of his teaching duties in analytical chemistry while continuing his salary.

On March 26 Walt filed suit in Dane County Circuit Court against the Chemistry Department and the UW. The petition claims that various rights were systemati-

ceding year. Professor Walters kept the medal and divided up the \$500 honorarium between the five coauthors. Steve contributed his award money to the BADGER CHEMIST Endowment Fund. He is with Sandia Laboratories, Albuquerque where he works in the Pulsed Power Operations Division.

Frederick Granberg, BS '39, reported from Knoxville, Tennessee, but sent no news.

Gary L. Grunewald, PhD '66, is Chairman of the Cardiovascular Research Committee, American Heart Association, Kansas Affiliate.

Randolph J. Guschl, BS '69, is research supervisor in the Petrochemicals Department at the du Pont Experimental Station.

Ronald G. Haas, PhD '70, is associated with the Marshfield Medical Center Laboratory in Marshfield, Wisconsin.

John Haberman, PhD '75, started a new job in '80 with NASA at the Goddard Space Flight Center, Greenbelt, Maryland. When he wrote last November he was involved with development and calibration of the neutral mass-spectrometer to be included in the Galileo probe mission of the atmosphere of Jupiter.

S. L. Hager, PhD '74 with Willard, has been promoted to Group Leader in R&D at Union Carbide Technical Center

ally violated by specified arms of the university to deny him his Constitutional rights and rights as a member of the university faculty.

He further filed a series of complaints with the Board of Regents charging misconduct by Chairman Trost in course assignments, abridgment by the department and Dean Cronon of his right to communicate with students, misconduct in assignment of responsibility for teaching chem 221 the second semester, and manipulation of transfer funds in the department. The protest also objected to the Regent's prosecution of the request for termination of his tenured appointment.

Briefly, the Regents on September 11, 1981 voted that Walter Blaedel should retire on October 1, 1981. He has been drawing his full salary during the past year and should be eligible for his retirement benefits when he goes off the payroll on Oct. 1. However, one news account of the action reported that Walt planned a court appeal. Perhaps there will be an Act IV. One regent remarked, "This is a very sad process to go through. It is a sad process for Blaedel, the UW and the Regents, but, unfortunately, it was a necessary process."

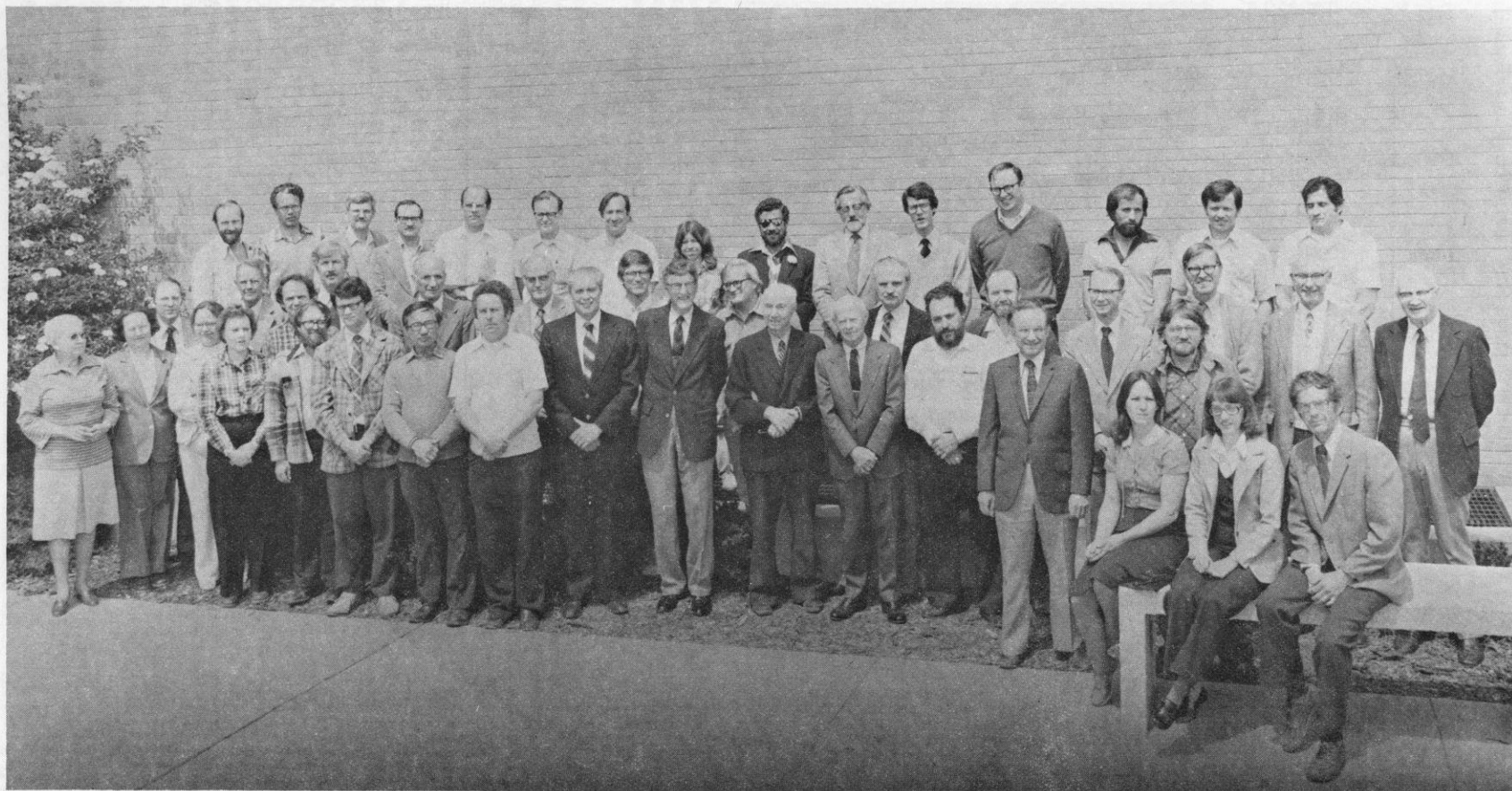
at South Charleston, West Virginia where he heads the Polymer Properties Group. Stanley reported in March that the October '80 edition of BC was exceedingly useful to him when returning to Madison as a recruiter. He writes "It's about the only way we have to keep up with what's going on between visits."

Robert L. Harris, PhD '51, reports from New Jersey that two families get valuable use of his BC. As soon as he and Ruth read it they send it off to **Marie Ritter** whose late husband Howard was Bob's major professor at Wisconsin in the late 40's. Bob reports that Marie spent several weeks with her son, Howard, who is an MD near Wiesbaden, Germany where he is connected with the Air Force. Marie's daughter, Mary Ann, accompanied her for part of the visit. Bob further reports that **Ralph Wood**, PhD '51 with Ritter, has moved from coal research at U of Utah to TOSCO, at Arvada, Colorado. TOSCO is deep in synfuels. Bob further reported that **Tom Evans**, PhD '52, also a Ritter student, has been doing nuclear energy research at Hanford. Bob's own work at Allied Chemical is connected with toxicology studies.

Louise Hellwig, PhD '78, is now with the Chemistry Department of Towson State U, Towson, Maryland.

(Continued on page 14, col. 1)

THE GREEK TRAGEDY — ACT III



The UW-Madison Chemistry Staff — Centennial Year 1980-1981

The picture was taken in May 1981 on the south side of the Farrington Daniels Chemistry Building by Gary Schultz of the UW Photo Media Center. Identifications are L. to R. with the persons area of activity indicated in () as follows:

A. Analytical; C. Chairman's Office & Dep'tl. Administration; E. Emeritus; G. General (Frosh Chem); H. Historical; I. Inorganic; O. Organic; P. Physical; R. Rheology or Colloid; T. Theoretical.

Seated, Pat Puccio (G, sec.), Jan Froding (C, sec.), E.M. Larsen (G,I,C-assoc chm '77-).

Standing front row, Bette Germann (C-dept. sec.), Leta Roettiger (C-sec.), Karen Rulland (O-sec.), Joyce Griesbach (C-sec.), Ed Turner (P, lab dir.), John Wright (A), Hyuk Yu (P,G), Worth Vaughan (P,G), Walt Bladel (A), C. Harvey Sorum (E,G,I), Joseph Hirschfelder (P,T-dir.), M. Leslie Holt (E,G,I,C-assoc chm '52-67), John Harri-man (P,T,G), Howard Zimmerman (O), Hans Reich (O).

Second Row, Barry Trost (O,C-chm '80-), John Ferry (P,R,C-chm '59-67), Paul Schatz, in front of Ferry & Lavine (O, lab dir.), Robert Lavine (A, lab dir.), John Willard (E,G,P,I,C-chm '70-72), Al Wilds (O), Paul Treichel

(G,I), Steve Nelsen (O), Richard Fenske (I,G,P,C-chm '72-77), Donald Gains (I,G,P), Tom Farrar (A,P-dir. Instrumental Labs), Frank Weinhold (T,P,G), Charles Curtiss (P,T-asst. dir.), Aaron Ihde (E,H,G, also Hist. of Sci, ILS).

Back row, Marion O'Leary (O,G), Thomas Record (P,G,Biochem), James Taylor (A), John Schrag (A,R), John Walters (A), Philip Certain (T,P,G), Claude Woods (P), Mary Wirth (A), Bassam Shakhshiri (G,I,Coord of Frosh Chem), Harold Schimming (C-Adm. Asst.), Fleming Crim (P), Charles Casey (O), Charles Amling (Glass-blower), Marv Contney (Instrumental Specialist), Ted DiFiore (Instr. Specialist).

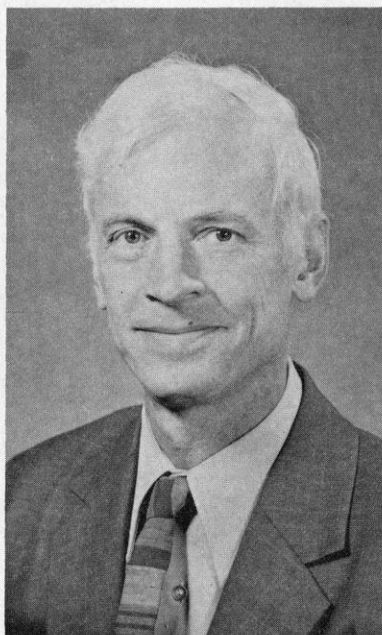
Missing from the picture are: Paul Bender (E,P-Dir. Instrumental Program), Dan Cornwell (P,G), Lawrence Dahl (I,G,P), Dennis Evans (A,G,Chm-'77-80), Harlan Goering (O), Irving Shain (A,C-chm '67-70), Chancellor '77-), Edwin Vedejs (O), Robert West (I,G,O,P), Howard Whitlock (O), John Williams (E,P,R), Arthur Ellis (I,G), Robert Sheridan (O), Glen Dirreen (G-lab dir.), Russell Riley (Head Instrument Maker), Fred Jurgens (Demonstrator), Vince Genna (Asst. Dem.), Odell Taliaferro (E, Dem.).

WENTORF RECEIVES HONORARY SCD

Robert H. Wentorf Jr., PhD '52, was named to receive one of the six honorary degrees conferred at the Madison commencement in May.

Bob took his BS in Chemical Engineering at Wisconsin before joining Professor Hirschfelder for work on critical points of gases which led to his doctorate. He joined General Electric Research Labs in Schenectady, working with a group formed to do research in high pressure chemistry. Some highlights of his work include the co-invention of catalytic processes for synthesizing diamonds now in commercial use; discovery of a catalytic process for synthesizing the cubic form of boron nitride; co-discovery of a wurtzite form of boron nitride; synthesized at pressures above 100 kilobars; doped, by adding small amounts of impurities, cubic boron nitride and diamond during synthesizing to make them semiconducting; produced new forms of matter by high-pressure processes, such as two new forms of silicon, a new form of boron, a new form of carbon intermediate between graphite and diamond, and high density forms of boron arsenate and boron phosphate. He has also worked on a closed-cycle process for releasing hydrogen from water.

Bob has been a Research Associate with General Electric since completing his doctorate. In 1966 he returned to Madison temporarily as Brittingham Visiting Professor of Chemical Engineering and Chemistry. In 1965 he received the Ipatieff Prize for his work in high-pressure chemistry and he has been the recipient of various other honors, including election to the National Academy of Engineering.



Wentorf

UOP classification on the management ladder. "I still find that the rewards outweigh the frustrations and I intend to continue on the technical side."

Henning Hopf, MS '65, PhD '67 with Goering, returned to Germany where he had associations with Universities of Marburg, Karlsruhe, Wurzburg, and Braunschweig. He is now director of the Institut für organische chemie. Henning was Visiting Professor in Madison in Fall '79. He reports that several of his Wisconsin colleagues have been at Braunschweig for seminars and that one of the Editor's former associates, Dr. Erika Hickel, is now a History of Pharmacy Professor at Braunschweig.

John Ihde, BS '64 (MS '71 Duke), who teaches chemistry at Wausau West High School, also coaches the varsity basketball team there. Last March his team earned its way to the State Tournament in Madison and took second place in the Class A field of 8 large schools. In 1977 John received the Distinguished Teaching Award conferred by the Central Wisconsin Section of the ACS.

Terry Iorns, PhD '70, has been visiting Wisconsin regularly as a recruiter for the Phillips Petroleum Company in Bartlesville, Oklahoma. He is involved primarily with development and management of analytical instrumentation.

Michihiro Ishimori, PD '69-71 with West, is in Environmental Chemistry with CRIEPI in Tokyo.

Russell Johnsen, PhD '51, sent his "hello" to the Department via Professor

Shakhashiri who visited Florida State U last November.

Elmer Johnson, PhD '40, who is now retired from South Dakota State but he and Roberta continue to live in Brookings. A year ago after getting their garden planted, Elmer took a bus tour to the Grand Canyon and spent several days on genealogy in the Mormon Library in Salt Lake City. In Fall '80 SDSU called on him to fill in as a result of late resignations in the chemistry faculty.

Howard C. E. Johnson, PhD '43, after a year with Rohm & Haas, joined the staff of *Chemical Industries* as a chemical editor. After the publication was bought by McGraw-Hill and renamed *Chemical Week*, Howard became editor-in-chief. Eight years ago he became a security analyst with Arnold Bernhard & Co., publisher of *Value Line Investment Survey* and manager of several mutual funds. Howard is now senior industry analyst specializing in the common stocks of chemical companies. He regrets that college professors are so dazzled with research that they fail to reveal to students that chemists have many options other than working at the lab bench.

Mark Johnson, BS '74, finished his PhD at Michigan State in '78 and Postdoced at Harvard. He is now with Dow in Midland.

Robert E. Johnson, BS '64, recently reported a change of address to Cambridge, MA, but reported no reasons for leaving Madison.

Thomas L. Johnson, PhD '46, reports that he had a nice reunion with Al and Carolyn Wilds when he was in Madison a year ago for the IUPAC symposium.

John Jorgensen, PhD '81 with West, is with 3M in St. Paul.

Mike Jorgensen, PhD '78 with Gaines, is Research Chemist with Union Carbide in Tarrytown, New York.

Gary Keck, PhD '75 with Zimmerman, was in Madison in September '80 to give an organic seminar on "Some Recent Advances in Natural Product Synthesis." Gary has been at University of Utah since '76 where he is doing research on synthetic and photochemical organic chemistry.

Philip L. Kinson, PhD '70, is now with General Electric's Noryl Products Department in Selkirk, New York.

James A. Knutson, BS '70, has entered the practice of law in Wauwatosa, Wisconsin according to a note from **Dan Blake**, BS '70.

William Koerner, PhD '49, now Director of the Physical Sciences Corporate R&D staff with Monsanto. In his new role Bill will continue to have responsibility for the Physical Sciences Center at Creve Coeur and responsibility for plan-

(Continued on page 15, col. 3)

This 'n' That . . .

(Continued from page 12)

Richard Hess, PhD '71, sends no news but hopes his contribution will "keep what continues to be a first class publication in the black."

Gene Hiegel, BS '60, PhD '65, sends sweetener without news.

Katharine Hilmer, BS '71 and **Richard Hilmer**, PhD '73, sent a bit of Christmas cheer to the long-suffering editor. Dick has transferred within du Pont Experiment Station and is working in chemical research under David Pensack. **Joseph Calabrese**, PhD '71, is in the same group.

Harrison Holmes, BS '30, PhD '34, sent an offering from Wilmington, Delaware and asked to be remembered to his good friends while he was at the UW, especially Holt, Meloche, and Sorum.

Edwin Homeier, PhD '68, is still at Universal Oil Products but is now "working as a research specialist" which is a

CENTENNIAL REPORT

The Centennial Activities reported in the last BC are now mostly a part of the past as the Department moves on into its second century.

The lectures were the most visible part of the program. The series got off to an excellent start in September with **James D' Ianni**, PhD '38, who was completing his year as President of the American Chemical Society. Jim's lecture, "Chemistry — Present Achievements and Future Pros-

Science and Industrial Processes." The final lecture was given in May by Prof. F. Albert Cotton of Texas A and M. He discussed his work on "Metal-Metal Bonds in Inorganic Chemistry."

The Exhibits planned by Aaron Ihde and Sheldon Hochheiser utilized the three exhibit cases to show changes at the UW, the community, and the chemistry profession at various periods, beginning with the founding of the UW in 1848. Perhaps the item which attracted the greatest interest was a panorama of Madison in 1870

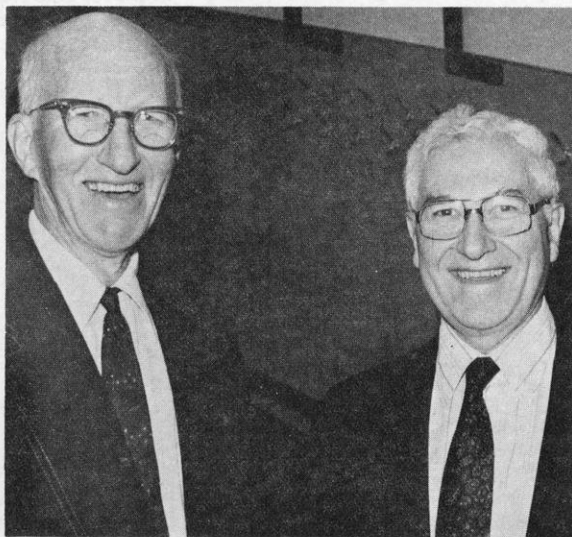
subsidy of \$20,000 would be needed to publish the volume. The chemistry department is unable to come up with that kind of money. Volumes published by the Press are customarily subsidized since sales are seldom large enough to cover publication costs but the department was not prepared for a subsidy of this magnitude.

Professor Ihde has been instructed to explore other alternatives for publication, ranging from discussing with the UW Press the possibility of less expensive options,



Before the First Centennial Lecture

L. to R. Prof. E. M. Larsen, Dr. Martha Casey, Pres. J. D'Ianni. D'Ianni was Larsen's TA in the '30s. Martha was Chairman of the Wisconsin Section and presided at the meeting. She is the wife of chem prof Charles Casey and is Asst. Director of Budget Planning and Analysis in the Chancellor's office.



Ed Fitchett and Irv Shain in a mellow mood before Irv introduced the speaker.

pects," was enthusiastically received by a large audience in room 1361, an audience made up of students, faculty, local chem alumni, and others. Jim was introduced by Chancellor Irving Shain.

That evening, the Chemistry Department gathered for a Centennial Dinner at the Madison Club. Faculty and wives were well represented and everyone appeared to enjoy the evening. Guests of the department included: Jim D'Ianni, Chancellor and Mrs. Irving Shain, L and S Dean and Mrs. David Cronon, Pharmacy Dean and Mrs. August Lemberger, Biochem Chm. and Mrs. Hector DeLuca, Chem. Engr. Chm. and Mrs. Ray Bowen. Harry Karavolas, Chm. of Physiological Chem. was unable to attend. There were no speeches! There was plenty of camaraderie and good fellowship.

The second Centennial Lecture was given by Prof. Herbert Laitenen of U. of Florida (formerly Illinois) who discussed "Trends in Analytical Chemistry — The Third Revolution." The third lecture, given in April by William O. Baker, Head of Bell Labs., dealt with "Chemical

which was loaned by the State Historical Society of Wisconsin. The pictures constituting the panorama were taken by a professional photographer from the roof of South Hall and showed a sweep of the city from Lake Mendota through Capital Square with the first State Capitol (which burned in 1904), to Monona Bay on the south. The picture included three of Madison's churches which are still in use today, besides various businesses, homes, R.R. stations, breweries, and small factories.

DEPARTMENTAL HISTORY STALLED

Early last winter Professor Ihde submitted seven chapters of his projected history of the chemistry department to the UW Press for consideration. The ms received a favorable reading and the Publication Committee voted to accept the book for publication.

This favorable start then ran into a serious obstacle when the Press notified the Chemistry Department recently that a

to the possible alternative of having camera-ready copy printed by a commercial printer. Other routes which will be explored include other university presses and possibly even commercial presses, particularly those doing small-volume specialized printing. It is a disappointment to report these facts. As things stand at present the project will not be abandoned but it will be delayed as a consequence of having to seek a less expensive mode of publication and distribution.

This 'n' That . . .

(Continued from page 14)

ning and operation of site-wide Applied Science and Physical Science activities at the Corporation Triangle Park Development Center in North Carolina, and at European Technical Center in Louvain-La-Neuve, Belgium. He writes that Badger Chemists not listed earlier as being part of the Monsanto contingent in St.

(Continued on page 16, col. 1)

This 'n' That . . .

(Continued from page 15)

Louis include **Loren Bannister**, PhD '53, **Arno Herzog**, PhD '39, and **Ron Morse**, PhD '68.

Kenneth E. Kolb spent the summer in Madison teaching one of the organic courses in summer session. Ken is at Bradley University in Peoria. He took his PhD at Ohio State in '53.

Mary Jo Kopecky, MS '70, has been named to manage the Laboratory and Quality Assurance Programs in the Environmental Protection Program for the Wisconsin Department of Natural Resources.

Sheldon Kopperl, PhD '70 (Hist. of Sci.) has been promoted to full professor at Grand Valley State College in Michigan.

Frank Korman, PD '73-74, is Director for Academic Counseling at West Coast University in Southern California. West Coast U is a college for adult students who attend school in evenings after holding full-time jobs in the community. He is also teaching biochem and organic at a nearby college. His wife, Kate, recently joined the "think tank" at Rand Corporation.

John Korth, MS '40, reports enjoying retirement at Corea, Maine. He and Henrietta spent several weeks in Hawaii and California in the summer of '80 and in late September toured the British Isles.

Carl H. Krieger, MS '38 (PhD '40, Bio) writes from Wynnewood, Pennsylvania to send retirement congratulations to the editor and is glad that he is continuing to turn out BADGER CHEMIST and is writing up the history of the department.

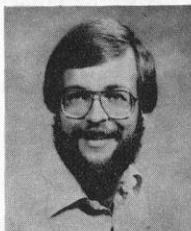
Walter Kutz, PhD '30, reports from Santa Rosa, California that they have visited **Ray Kepfer**, PhD '30 and his wife at Yucaipa. He says that **Ambrose Nichols**, PhD '39, is a faithful attendee of the California Section meetings held in Santa Rosa.

Gary Kwong, MS '70, completed a PhD in '75 with **Wayland E. Noland**, MS '50. After three years with the Polymer Departments of De Soto Inc. in Des Plaines, Illinois he joined S. C. Johnson in Racine, Wisconsin in Corporate Polymer Research. He has been married since August '74 to Christine Anderson who is a registered dietitian.

Robert W. Laundrie, BS '42, sends sweetener from Akron, Ohio without news of his activities. The editor remembers Bob as a student in Professor Schuette's food chemistry course.

James J. Leddy, PhD '55, is Technical Manager of the Dow Chlor-Alkali Technology Center in Freeport, Texas after many years in Midland.

Weisshaar Joins Faculty



Weisshaar

James Carl Weisshaar joined the chemistry department faculty this past summer as a member of the physical division. Jim was born in Cincinnati in 1952. He took his B.S. at Michigan State in '74 before joining Professor C. Bradley Moore for grad studies at Berkeley where he studied formaldehyde gas-phase photo-physics after excitation of single rotational states of S₁ formaldehyde with a narrow-band, pulsed dye laser as his dissertation subject. The Ph.D. was completed in '79 and the next year Jim received the Nobel Laureate Signature Award, the American Chemical Society national award for an outstanding doctoral thesis in chemistry.

The next year was spent as a JILA postdoctoral fellow at University of Colorado where he measured nascent vibrational state distributions from ion-molecule reactions via infrared chemiluminescence. He worked with Professors Stephen R. Leone and G. Barney Ellison, Dr. Veronica M. Bierbaum, and Timothy S. Zwier in the Joint Institute for Laboratory Astrophysics and the Department of Chemistry. Jim already has seven papers deriving from his graduate and postdoctoral work. He anticipates that his research interests will continue to lie in the field of gas phase chemical physics with state-selected reaction dynamics, photochemistry and spectroscopy being major areas of concern.

Louis M. Leichter, PD '73-74 with Trost, reports the arrival of a third son Matthew R., born in June '80.

Milton Lietzke, PhD '49 with Holt, reported to Professor Larsen last December that 13 students have completed research under his direction at the University of Tennessee. He recommended one of his boys for admission to the UW graduate program. Milt, who is a Dean at U of Tennessee in Knoxville reports a pleasant visit with Professor Taylor when he was at UT to present a seminar. Milt asked that Ihde be reminded that Alpha Chi Sigma's winning the Badger Bowl was one of its highlights during his years at Wisconsin — an item for the Centennial History.

Wendell A. Lindbeck, PhD '40, retired from his chemistry position at Northern Illinois U in '78 but was called back in Fall of '80 to teach one course because of increased enrollment. Wendell and **Durward C. Layde**, PhD '40, were the last students to receive PhD degrees under Professor **Louis A. Kahlenberg**, BS '92,

MS '93 (PhD '95 Leipzig). Wendell sends his best wishes to Professor Holt.

Karl R. Lindfors, PhD '63 with Cornell, spent a year in industry before joining the chemistry faculty at Central Michigan U at Mt. Pleasant. Since '78 he has been chairman of the department. In '76 he spent a sabbatical in Ft. Collins doing multi-nuclear NMR at Colorado State U. He and Katharine have two children, Bryan 14 and Britt 11.

Richard M. Lindstrom, BS '63, completed his PhD at U of California-San Diego and postdoctoral work at Tata Institute (Bombay) and at Brookhaven. He then settled at National Bureau of Standards doing analytical chemistry by nuclear methods. Dick reports that in January '81 **Byron Kratochvil** was nearby on a sabbatical at National Bureau of Standards from U of Alberta.

R. Daniel Little, PhD '74, responded to last year's warning to indicate he wishes to receive future issues. Dan is Assistant Professor of Chemistry at U of California-Santa Barbara.

Thomas R. Lloyd, retired Chief Mechanician, now lives at 2233 Middlecoff Drive, Mesa, Arizona. Tom reports enjoying retirement in the land of sunshine and enjoys a new activity with the Apache Wells Motorcycle Club. The "Wells Angels" takes a weekly trip into the mountains.

Timothy P. Lodge, PhD '81, is with the Polymer Division of National Bureau of Standards, according to Professor Schrag.

John G. Lofstrom, PhD '54, reports marriages of a son and daughter and the birth of a granddaughter, but no news of his own activities in Metuchen, New Jersey.

Arthur D. Lohr, PhD '42, sent Christmas congratulations to the editor on his retirement and remarked that he is sure that his wife Olive played a very major role in that productivity. (You are very correct! Ed.).

James T. Lowe, BA '30, PhD '35, sends sweetener but no news.

Roger H. Lueck, MS '21, considers BC 27 the finest to date. He says that **Ambrose Nichols** has come up with a great idea and feels the Endowment Fund should be pushed. Many thanks for the appropriate check, Ed. Roger also enjoyed the short history of the Chemistry Department under the Centennial title. Since he joined the Department at the time of the Mathews chairmanship he has a feeling for its growth during that period.

Lester G. Lundsted, PhD '42, also sent sweetener without a report.

Norman G. Mailander, BS '47, wrote from his retirement home in Sun City, Arizona. Following graduation in '47 he
(Continued on page 18, col. 1)

E. B. Fred Dies at 93

Edwin Broun Fred, president of the UW from 1945 to 1958, died on January 16, 1981. His wife Rosa preceded him in death the previous May. She was 88. They came to Madison in 1913 when he had a "temporary" appointment in the Agricultural Bacteriology Department.

Born in Middlebury, VA and educated at Virginia Polytechnic Institute (BS '07, MS '08), he never lost his affection for his state of birth and maintained family ties there throughout his life. Also, he remained a son of the soil and had a genuine empathy for farmers everywhere.

Fred took his PhD at Göttingen in 1911 and returned to VPI as asst. prof. in 1912. He came to Wisconsin the following year and quickly planted roots which kept him here for 68 years. He reached his full professorship in 1918, became Dean of the Graduate School in 1934, Dean of the College of Agriculture in 1943, and President of the University in 1945. Even after formal retirement in 1958, after the second longest presidency in the University's history, he served a number of years as part-time consultant to the Administration. He was a tireless worker, known to be the first in his laboratory (later, the office) in the morning and fully committed to his work into the evening. He frequently remarked that he judged the stature of the university's departments by noting where the lights were still on at 10 p.m.

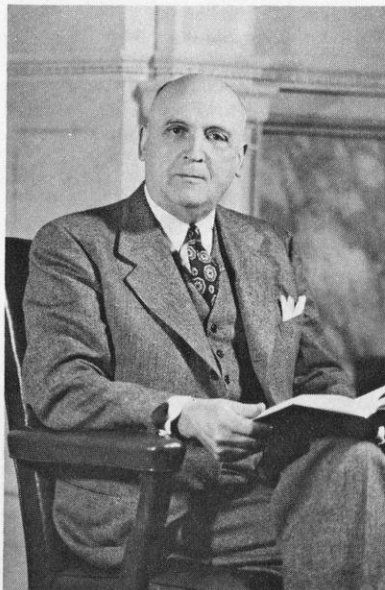
By the time he became dean he had acquired an international reputation for his studies on soil bacteria, particularly for his work on root-nodule bacteria involved in nitrogen fixation by leguminous plants. His book on this subject, coauthored with Elizabeth McCoy and Ira Baldwin, was a milestone work in the field. He also teamed with Wm. E. Peterson of the Ag Chemistry department in extensive studies of fermentation processes involved in the production of sauerkraut and silage. Twenty-four students took PhD's under his direction. Although not known as a highly effective classroom teacher, he was unusually effective on a one-to-one basis in the laboratory or office. He was characterized by an "itch-to-know" which was infectious. His questioning and innovative mind left his students with a lifetime of problems for solutions.

Many in the university remember him only as an administrator. As graduate dean he established sound policies for use of funds coming from the recently established Wisconsin Alumni Research Foundation and kept research programs viable during the Depression.

During the war years he was chairman of the advisory committee on biological warfare of the National Academy of Science, charged with considering defenses against germ warfare. For this work he

received the "Medal for Merit." He was also a charter member of the Board of the National Science Foundation. His many other honors included election to the NAS and the American Philosophical Society and eight honorary doctorates, including one from the UW in '58.

His deanship of the Ag College was short and at a time when he was still spending much time in Washington. His presidency was characterized by accommodation to explosive growth of the university during the post-War years. Enrollment



President Fred

doubled in one year, going from 9,000 to 18,500 in 1946. Eleven thousand were veterans, many married. Fred took the university into the housing business — a trailer camp at Camp Randall, barracks at Truax Field, temporary structures built at the ordnance works near Sauk City during the war (Badger Village), and a cabin court at Harvey Street. Soon he was able to gain WARF support for more permanent housing in the form of University Houses in Shorewood for housing some of the younger faculty, and married student houses at Eagle Heights.

Classrooms also posed a problem. Quonset Huts were quickly set up on the Lower Campus and elsewhere. "Temporary" barracks from army camps were moved on campus (and a few still survive). Churches volunteered their facilities for classrooms. All this was coordinated from 158 Bascom.

Permanent buildings also mushroomed during the Fred presidency — Memorial Library, Electrical Engineering, Chemical Engineering, Babcock Hall, Bacteriology Building (now renamed Fred Hall), Pine

Bluff Observatory, Commerce Building, Service Memorial Institute and Bardeen Labs (medical sciences), Poultry and Genetics Research were all new buildings. Eagle Heights Apartments were built for married students. Dormitories included Zoe Bayliss, Schlichter, Holt, and Sullivan. Additions, some very substantial, were made to Home Ec., Bascom, Biochemistry, and Wisconsin General Hospital.

In Milwaukee the Extension Division was merged with Milwaukee State College to become UW-Milwaukee at the former Teacher's College campus.

E. B. was not an effective public speaker but he had a deep interest in people and was very effective in dealing with small groups. He studied problems carefully and understood their implications. Since he hated to say "No" to worthy projects, he gained a reputation for vacillation. By such indecision, however, some of the proposals were finally dropped while ways of funding the really good ones were finally found. He was unusually successful in dealing with the Regents and had fair success even with the legislature.

Upon retirement, the Regents permitted him to retain an office near that of the President up to the end of his life. They also permitted him to continue living in the Ag Dean's house on Babcock Drive. When he became President he was successful in avoiding a move to the Presidential Mansion on Prospect Avenue since he and Mrs. Fred loved the old house built for Dean William Henry in the 1890s and preferred to remain on the campus. E. B. demonstrated great skill in being innovative and persuasive!

He had a deep love for the university and remained active almost to the end in bringing up ideas for improving the institution. He was not hesitant in pressing these ideas on those in power. Although suffering serious losses of sight and hearing in later years, he found the telephone an effective tool for communication and persuasion. His influence on the UW was enormous, even in retirement.

Perhaps this sketch may be ended with an anecdote recounted by Robert Taylor of the UW Press Service. E. B. frequently greeted students as he walked on campus and struck up a conversation. "Hello, I'm Fred," he said to a student one noon. "Hi, I'm John," the student answered, and added, "Are you studying here?" "Everyday," the president emeritus answered.

A small number of individuals make an imprint on institutions. E. B. Fred left an indelible imprint on the UW during his long career. He was always a student, always an innovator, and always seeking to improve.

This 'n' That . . .

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taught a year at UW-Milwaukee before joining Johnson Wax in Racine. He retired last fall as R&D Manager for their Netherlands operation.

Joseph M. Malik, PhD '72, is with Monsanto Agr. Products in St. Louis as a Research Group Leader.

Raymond Mariella, PD '46 with McElvain, is Executive Director of the ACS.

Michael T. Marron, PD '69-70, wishes to continue receiving BC. Michael is at UW-Parkside in Kenosha where he is Professor of Chemistry and Chairman, Division of Science.

Eldor A. Marten, BS '25 (PhD '29 Biochem), wished to be remembered to Professor Meloche who was his first instructor in the Department. Your letter arrived in time to be communicated. Ed.

Ronald L. Martin, PhD '57 with Meloche, is now Director, Petroleum and Specialty Additives Division, Amoco Chemicals R&D in Naperville, Illinois. Amoco has been his only employer since leaving Wisconsin.

Gerald R. Miller, BS '58, writes from the Chemistry Department, U of Maryland.

Marvin P. Miller, PhD '78, is now with Battelle Columbus Laboratories in Ohio as Group Leader in Inorganic Instrumental Analysis. His wife, Barbara, was BA '76, Biochem, at UW and is now doing graduate work toward her PhD in analytical chemistry at Ohio State.

Nels Minne, PhD '32, sent no news about himself with his congratulations to Professor Ihde on retirement. Nels is President Emeritus of Winona State U in Minnesota.

Michael G. Minnick, PhD '80 with Schrag, is now with Essex Group Magnet Wire and Insulation Division, United Technologies Corporation in Fort Wayne, Indiana.

Therald Moeller, PhD '38, enjoyed the pictures in the last BC. Therald retires in '83 from Arizona State U. He still spends summer vacations at a summer place in Wisconsin.

Marjorie Moldenhauer, BS '52, likes Dr. Nichols' endowment idea and made a contribution thereto. She reported enjoying reading about her past teachers. "Al Preuss was a great instructor! Dr. Paul Bender influenced my life just as much. Dr. Sorum doesn't look a day older. His slight accent, just like that of my relatives and neighbors, kept me from being homesick as a freshman." Marjorie's daughter is doing graduate work in chemistry at USC and another daughter is studying for an E.E. degree at Carnegie Mellon. Her husband, Jim, is a systems engineering manager in Ohio. Marjorie has gone back

to school to work toward an engineering degree concurrent with her part-time work as medical technologist in a nearby hospital.

Patricia (Bukovic) Mondloch, BS '65, was glad to begin receiving *Badger Chemist* to follow news of former teachers and fellow students. After taking seven years to raise two children she works as an Analytical Chemist for Donohue and Associates, an engineering firm in Sheboygan, Wisconsin. The job is primarily water and waste water studies.

Donald H. Morman, BS '55, MS '57, is Coordinator for the Industrial Hygiene Laboratory in the Analytical Department of Shell Development in Houston.

Melvin M. Mueller, BS '39, retired in '76 from Johnson Wax, but is keeping busy with consulting and part-time teaching. He recently completed twelve years on the Germantown, Wisconsin School Board, the last three as President.

Stephen Neumann, PhD '78 with Casey, is at Eastman Kodak investigating image in transfer dye properties.

Thomas Newman, PhD '80 with West, is at University of Texas-Austin.

Philip T. Newsome, PhD '26, writes "Thanks again for the *Badger Chemist*" but no news. He lives at 488 Sagamore Dr., Rochester, NY — an Eastman employee.

J. Burton Nichols, MS '24, PhD '28, sent sweetener from Wilmington without news.

Stephen W. Nicksic, PhD '52, is associated with a "solution mining" project at Standard Oil of California. The objective is evaluation of low grade uranium prospects and development of improved extraction methods.

Warren D. Niederhauser, PhD '43, reports "No new news. Continued last year as Director of Pioneering Research, Rohm and Haas Co. and Regional Director (mid-Atlantic states) of the ACS."

Morris L. Nielsen, PhD '41, has retired after 29 years in research and patents with Monsanto and another 9 as patent attorney for Upjohn. He appears to be enjoying traveling with children and grandchildren, fishing and sailing, and recording books for the blind.

Joseph Niu, PhD '62 with West, is now in Texas with Beto Labs.

Wayland E. Noland, BA '48, MS '50 (PhD '52 Harvard), reports having a sabbatical from his spot at U of Minnesota, the first during his career. He is Vice President for Organic Syntheses, Inc. and is in the process of editing *Collective Volume 6*. When he heard of Professor Meloche's death he recollected catching his first lake trout (a 4½ pounder) in the company of **Richard E. Juday**, PhD '43 near the Meloche cottage on Trout Lake.

Wis Business

(Continued from page 8)

Electronics (emergency power supplies, battery chargers-Philadelphia). The Madison unit of the firm is now developing a new line of batteries expected to produce 4 to 7 times the power of conventional batteries. A new building on Madison's west side will soon house a staff of 50 involved in research and development of batteries utilizing lithium.

Other Madison industries with a scientific base include: Ohio Medical (the medical products division of Airco, Inc.) which established a Madison base when it absorbed the Celon Co. three decades ago; Nicolet Instrument Corp., a young firm which produces electronic instrumentation systems which have analytical, medical, and industrial applications; Traco Northern is another young firm which is developing "evoked-response" equipment for use in medical diagnosis and industrial process control; *Biotec* began two years ago to manufacture restrictive enzymes and other materials used in genetic research.

Mark S. Ortman has completed his PhD work with Larsen and is taking a position with du Pont's Savannah River operation.

Marshall V. Otis, BS '42, is still active in the Research Laboratories of Tennessee Eastman.

Dean L. Owens, BS '42, retired in '76 and is having a ball, golfing, skiing, and consulting.

Robert Paradowski, PhD '72, (Hist of Sci), stopped in Madison last August while enroute to California to spend a semester's leave-of-absence at the Linus Pauling Institute. Bob, who teaches physical chemistry at Eisenhower College, has the first volume of his projected biography of Pauling nearly ready for publication. It will carry the story of Pauling's life through his educational years to the beginning of his professorship at Caltech. Bob recently received recognition for his services as a consultant on the NOVA program telecast on PBS last summer.

John Parascandola, PhD '68 (Hist of Sci), received the Edward Kremers Award of the American Institute of the History of Pharmacy in 1980.

Albert A. Pavlic, BS '38, PhD '42, has retired as director of investor relations at du Pont. Al joined du Pont in '42 in research but soon served in various sales and marketing management positions until '64 when he became director of plastic products.

Val E. Peacock, PhD '78, has terminated his beer flavor research at Oregon State
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and is now doing flavor research on 7-Up for Philip Morris in Richmond, VA.

David W. Pelle, MS '71, is Manager of Quality Control, Ohmite Manufacturing in Skokie, Illinois.

A Lectureship Fund was established in 1980 in memory of the late **David Perlman**, BA '41, MS '43 (PhD '45 Biochem), Professor of Pharmacy and one-time Dean of the UW Pharmacy School. Dave was internationally known for his research on microbial fermentation and antibiotic production. The first Perlman lecturer was David A. Hopwood, chairman of the Department of Genetics at John Innes Institute of Norwich, England.

Fredus N. Peters, PhD '25, reports relief at completing his term as President of the Residents Association of Plymouth Harbor, the retirement center in which he and Helen live in Sarasota, Florida.

Russell W. Peterson, BS '38, PhD '42, has frequently been in the news as a guardian of the environment these days in connection with his presidency of the National Audubon Society.

George J. Piazza Jr., PhD '80, is with the Institute of Cells and Organelles at Brandeis U.

Herbert E. Pleuss, BA '37, has retired as Technical Director with Heresite-Saekaphen Inc. after 39 years with the company.

Andrew E. Potter Jr., PhD '53 with Bender, is still with NASA at the Johnson Space Center in Houston. He wrote the environmental impact statement for the Space Shuttle Program, and is doing planetary astronomy research, attempting to identify lunar rocks by observations of thermal infrared spectra. His wife, born Shirley Barrett (BS '51 Pharm), recognizes Ihde as one of her former teachers.

Albert F. Preuss, PhD '53, continues active with Aldex Chemical Company Ltd. in Granby, Quebec.

Everett H. Pryde, PhD '49, has been busy editing monographs for the American Oil Chemists Society. His *Fatty Acids* was published in '79, his *Handbook of Soy Oil Processing and Utilization*, with 4 coeditors, came out in '80 and his *New Sources of Fats and Oils* with Princeu and Mukherjee was scheduled for the present year. He reports keeping busy telling farmers not to burn soybean oil in their diesel tractors until a way has been found for modifying the oil or the engine so that combustion will not wreck the engine.

Gorman L. Quinn, PhD '51, send some of the greenstuff we like to see, but without news.

Gregory Ralston, PD '72-73, writes from Sydney, Australia that he looks forward to catching up on news of old friends

The Lewis Acid-Base Concepts, William B. Jensen, Wiley-Interscience, New York, 1980, 364 pp. \$37.50.

It is unusual for a graduate student in chemistry to undertake authorship of a book while still doing research on a different subject for his doctoral thesis. Bill Jensen, BS '70, has pulled off this achievement while working under Prof. Larsen for his PhD in inorganic chem!

Bill has had a long-time interest in acid-base theories and published several papers on the subject in *Chemistry*, the ACS journal aimed at high school teachers and students (title recently changed to *Sci-Quest*). This led to a paper on Lewis' concepts published in *Chemical Reviews*, **78**, 1 (1978). Wiley-Interscience became interested and suggested he expand his material into a book. It is now in print.

Chapter 1 has a good historical overview of the development of acid-base concepts from the 17th century through the 19th and is followed by a chapter on definitions of acids and bases from Arrhenius to Lewis. The next six chapters deal with bonding concepts and applications while chapter 8 treats hard and soft acid-base theory and its applications.

Joseph Priestly: Scientist, Theologian, and Metaphysician, Lester Kieft and Bennett R. Willeford, Jr., eds. Buckness Univ. Press, Lewisburg, PA, 1980, 117 pp., \$12.00.

This volume contains the three invited papers presented at the Priestley Bicentennial Symposium of the Discovery of Oxygen organized by L. Kieft and **Ben Willeford**, PhD '51, for the MARM meeting of the ACS at Wilkes-Barre in 1974. The authors are Robert E. Schofield, one of the world's leading Priestley scholars (at Iowa State) who dealt with Priestley's metaphysics, **Erwin N. Hiebert**, PhD '54, (at Harvard) who discussed

from his Madison days. He reports that his postdoctoral year with Professor Williams was very happy and enjoyable experience. "Jack Williams is a wonderful teacher and a delightful man. We remember our stay in Madison with fondness." Gregory is Senior Lecturer in Biochemistry at Sydney where he studies the organization of proteins of the red blood cell membrane. He was awarded the Boehringer Medal of the Australian Biochemical Society for this work.

Richard Ramette, who was a visiting professor this past summer, was pleased about the Departmental elections to the National Academy. Dick is at Carleton College. He has been visiting professor in the Department several times in recent years.

READER'S CORNER

Priestley's theology, and **Aaron Ihde**, PhD '41, who dealt with the strained relations between Priestley and Lavoisier.

Derek Davenport, VP '79-80, has reviewed the book in more detail in *J. Chem. Educ.*, **58**, A155 (1981).

The History of Antibiotics: A Symposium, John Parascandola, ed. Am. Inst. Hist. Pharmacy, Madison, 1980, 137 pp. \$6.00.

This volume is a collection of 10 invited papers read at the ACS symposium sponsored by the Divisions of Medicinal Chemistry and History of Chemistry at Honolulu in April 1979 and organized by **John Parascandola**, PhD '68. Participants who are authors of papers include Nobel Laureates Ernst Chain and R.L.M. Sygne, the former on "A Short History of Penicillin from Fleming to the Present," and the latter on "Early Work in Gramicidin S." Badger Chemist **James Whorton**, PhD '69, presented "Antibiotic Abandon: The Resurgence of Therapeutic Rationalism." Jim is in the School of Medicine at Seattle.

Reminiscences of Los Alamos, 1943-1945, Lawrence Badash, J. O. Hirschfelder and H. P. Broida, Reidel Publishing Co., Boston, 1980 xxi + 188 pp. Cloth \$26.50, paper \$9.95.

This fascinating volume grew out of a symposium organized by Professor Hirschfelder two years ago. This symposium brought together a number of the leading figures who constituted the crew working at Los Alamos during the war years. The reminiscences reveal many aspects of life on the reservation, its frustrations, hardships, successes, failures, and humorous moments. Among the 10 authors are: Edwin McMillan, Elsie McMillan (a wife's view), George Kistiakowsky, JOH, Laura Fermi, and Richard Feynman. It is a welcome addition to the history of science in World War II.

Richard Rapala, PhD '49 with W. S. Johnson, sent news of the recent death of Bob McMahon. Dick is associated with Eli Lilly. He reports, "Our family is okay — went to Boston to visit son Bill who works for G.E."

Victor A. Reinders, PhD '35, has been named to the Wisconsin Trapshooting Hall of Fame. Now retired from his professorship at UW-Milwaukee, he continues shooting and has been named to the All-American team 21 times.

Manfred G. Reinecke, BS '56 (PhD '59 Berkeley), has served as chairman of the Dallas-Fort Worth Section of the ACS. He spent last year's sabbatical in Europe as Visiting Scientist from the U.S.

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This 'n' That . . .

(Continued from page 19)

Academy of Science to the East German Akademie der Wissenschaften. Manfred is Professor of Chemistry at Texas Christian U.

James M. Renga, PhD '75, is with Dow Chemical in Midland.

Steven C. Rifkin, PhD '76, continues with Eastman Kodak. He recently sent in his correct address so he could receive BC directly rather than through friends.

Robert W. Rosenthal, PhD '49, continues as Adjunct in organic chemistry at Florida International University. He is in semi-retirement in Hollandale, Florida and still goes on cruises in the area as an Arts and Crafts Director.

William F. Rothschild, BS '48 (MS '49 Chicago), took advantage of the transfer of BC funds to Wisconsin Foundation to send in a contribution with a match from Rockwell.

Roswell J. Ruka, BS '44, MS '48 (PhD '54 MI) has completed 26 years at the Westinghouse Research Labs in Pittsburgh. He is currently involved in studies of a high temperature solid electrolyte fuel cell project sponsored by DOE.

Katherine (Heller) Ryan, MS '73, is presently in Houston, Texas but the nature of her activities is not known.

Rudolf M. Salinger, MS '60, has become manager of Systems Compliance and Administration for Corporate Quality Assurance with Dow in Midland.

W. Warren Schmidt, RA '75-77 with Goering, is involved in polymer research in the Procter & Gamble Paper Division. His wife, Diane, has been working on her PhD in chemistry at U of Cincinnati. She worked with Professor Whitlock while Warren was a Research Associate.

Howard A. Schneider, BS '34, MS '36 (PhD '38 Biochem), sent best wishes to Professor Ihde on his retirement. Howard is now retired from the Directorship of the Institute of Nutrition at Chapel Hill and continues doing consulting and is Commissioner of the Presidential Commission on World Hunger.

Richard S. Schneider, PhD '66 with Muxfeldt, is associated with Syva in Palo Alto. He joined this joint research venture of Syntex and Varian after spending a postdoctoral year at MIT. He writes that Syva now has over 700 members and is a leader in research and manufacturing of innovative diagnostic products for use in clinical and hospital labs. Richard is now Vice President and Director of Development, but anticipated a move to General Manager of the Instrument Division shortly after November 1980. He wished to be remembered to Professors Certain, Trost, Zimmerman, West, and Vedejs, and sent

best wishes for their recent honors. Richard was himself honored with the Bernard F. Gerulat Memorial Award by the New Jersey Section of the American Association for Clinical Chemistry, "for outstanding efforts in designing, developing and promoting new analytical techniques which have revolutionized the practice of laboratory medicine."

Harry P. Schultz, BS '42, PhD '46, starts each day with a long bicycle ride, jog, and swim in Biscayne Bay before commencing with work in the Chemistry Department at U of Miami.

Jacob Sedlet, BS '45 (PhD '51 Purdue), sends sweetener but no news.

Carl W. Seidel, BS '59, has been at New England Nuclear for the past 11 years managing a new venture group. He also chairs the American National Standards Institute Committee writing standards on calibration procedures for radiation measurement instruments and on the editorial board of the Mossbauer Data Index Journal.

David B. Shaw, PhD '75, is on the faculty of Madison Area Technical College as an instructor in chemistry.

William F. Sokol, PD '78-79 with Evans, has taken a position as an analytical chemist with Pfizer, Groton, Connecticut.

Alan L. Soli, PhD '78, has completed a year as Lecturer in the Analytical Chemistry Department at UW and has taken a position at Eckerd College in St. Petersburg, Florida. (The editor's son-in-law, Hal Serrie, of the Anthropology Department will be a faculty colleague.)

Martha Stamper, PhD '52, felt that the account of Professor Ihde's retirement revived many pleasant memories of her days as a TA at the UW. She noted with a glow of approval that Gretchen Ihde Serrie is a violinist. Martha still enjoys her violin, piano, and cello. She reports that the editor would be interested in the expansion that has taken place at Butler U in Indianapolis since he left the faculty there in 1942. Martha hopes to have more time to enjoy music if she ever retires from Eli Lilly. At her request she was supplied with addresses of Badger Chemists, **Marjorie Huber Svoboda** and **Bennett Buell**.

David A. Stanislawski, PhD '78, now holds a position at University of Dayton.

Charlene Steinberg, MS '48, has been studying the Czech language during the past several years since the Dean at the UW Manitowoc Center is a remarkable teacher who is working hard to revive languages in the area. She has also been translating Russian articles for Plenum besides continuing her work on the chemistry faculty at Manitowoc and coaching the tennis team.



Stare

Frederick J. Stare, BS '31 (PhD '34 Biochem, MD '41 Chicago), was seminar speaker at alumni weekend in Madison last May. His title, "Panic in the Pantry." The occasion was also the 50th reunion of the

class of '31. Fred was born in Columbus where his father was president of the local canning company. In 1942 Fred joined the faculty at Harvard to organize a Department of Nutrition in the Schools of Medicine and Public Health. He was Chairman of the Department until his retirement in July '80.

Joseph P. Stenson, PhD '70, is in the Chemistry Department of Delaware Valley College in Doylestown, Pennsylvania. He was a Madison visitor in June '78. In November '79 the Stenson's enjoyed a reunion with **Sheldon Kopperl**, PhD '70, and his family at the home of Dick and Mary Lou Hess in Wilmington for Thanksgiving dinner. Shelly was in the area during a sabbatical year at Philadelphia.

William G. Stevens, PhD '66, sent a nice contribution from San Diego with the request for an annual bill. Unfortunately, our facilities make it impractical to send bills. We hope the reminder box on the back of each issue and the lead editorial are appropriate substitutes for an annual bill and Badger Chemists will keep the greenstuff coming.

Donald L. Stevenson, PhD '67, was in Madison last summer and wished to be returned to the mailing list. He is Senior Marketing Representative with the Polymer Products Department of du Pont in Wilmington.

Gilbert J. Stork, PhD '45, recently received the William H. Nichols Medal which has been sponsored since 1903 by the New York Section of the ACS. Gilbert, who is Eugene Higgins Professor of Chemistry at Columbia, was cited for "outstanding contributions to the methodology and art of synthetic organic chemistry and for landmarks in natural products synthesis." In 1979 Gilbert received the Arthur C. Cope Award of the ACS at the San Francisco meeting. He and his group have published work on highly stereoselective syntheses of complex natural products such as alkaloids, terpenes, steroids, prostaglandins and cytochalasins. Badger Chemists who received the award earlier are: **Arthur C. Cope**, PhD '32 in 1964; **Karl Folkers**, PhD '31, in 1967; **Wm. S. Johnson**, faculty 1940-60, in 1968. Gilbert recently finished preparing a biography of Professor McElvain which is scheduled to appear in the next volume of *Biographical*

(Continued on page 21, col. 1)

This 'n' That . . .

(Continued from page 20)

Memoirs of the National Academy of Science.

Marjorie (Huber) Svoboda, BS '43, MS '47, reports being in Indianapolis to get acquainted with her new granddaughter. Carla's second child. Marj completed a PhD in biochem at North Carolina several years ago and continues biochemical research at the institution. Marj has remarked that with Bender, and Ihde retired, Larsen is the only professor from her days as an Instructor who is still active.

Wes Tarwid, BS '50, sent thanks for the writeup in the last BADGER CHEMIST and enclosed a reprint of the article referred to at that time.

Bryce E. Tate, PhD '50, reacted to the last year's query and confirms that he is still at Pfizer. He works closely with **James Miller**, PhD '79, who joined the company recently.

David R. Taylor, PhD '76, is with Systems, Science and Software in San Diego, a small but diversified high-technology company doing contract research and consulting.

Robert F. Taylor, PhD '41, was motivated to reminisce after reading the retirement notices in BC 26. He recalled another retirement luncheon for Professor Kahlenberg in '40. "Uncle Looie, as we irreverently called him — thought not to his face — was 70 years of age as I recall but the youngest 70 in the room." His remarks on the contemporary energy crisis went something like this according to Bob's recollections,

"Of course we must use energy — that is what makes civilization go. What you must do is find new sources of energy — sources that are renewable like the energy of the atom."

Bob remarks that was strangely prophetic from a man remembered for his opposition to the ionic theory.

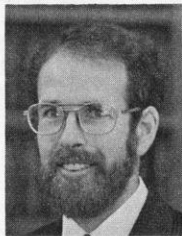
Charles C. Templeton, PhD '48, sent a nice check from Houston with a two for one match from Shell. It has been placed in the BADGER CHEMIST Endowment Fund. Chuck has early retirement on account of a severe arthritis problem, but sounds as if he continues to be exceedingly busy with voluntary church, Boy Scouts and other jobs, including counselor for the ACS through '82. Chuck hopes that **Sallie Fisher** is able to get a Schuette-Meloche-Hall memorial set up to honor these three stalwarts in UW analytical chemistry.

Howard G. Tennent, PhD '42 with Prof. Williams, was a featured speaker at a Conference on Catalysis at Caltech last March. The subject was, "Aspects of

Ziman — Congressional Fellow

Stephen D. Ziman, PhD '71, was mentioned last year as a Public Affairs Fellow in the ACS Congressional Science Fellowship program. Steve has now returned to Chevron. At the Editor's request, he sent the following report for BC. His fellowship was also reported in CEN for 10-27-80.

Overall, the ACS fellowship year has been the most exciting experience in my professional career. It's an excellent program, and I hope more people will try to participate in it. I'm glad I had the opportunity.



Ziman

When I arrived in Washington in September of 1979, I knew little of how the various branches of government functioned. After an orientation — short but intense — I knew a little more. Interviews between the fellows (23 of us) and committee and members' staffs led to my decision to join the House Science, Research and Technology Committees under George E. Brown, Jr. (D-CA). Brown is an extremely competent legislator, and he is one of the few who tends to view legislation, particularly science policy, in the long range goals of the country rather than short term. He also allows his staff a tremendous amount of flexibility and freedom, but this also means that the staff must be able to handle it. Most of the staff, made up of MS and PhD scientists, were capable of doing so. Though I'm a chemist by training, I wound up working in a number of different legislative areas, all involving science policy. I was the lead staff member for the reauthorization of a law dealing with earthquake and other natural disaster research, and hazard reduction. Through a small reauthorization (\$100 million), we were working with the U.S. Geological Survey, National Bureau of Standards, National Science Foundation,

Zeigler-Natta Catalysis." Howard is with Hercules Chemical in Delaware.

Glenn A. Terry, PhD '51, has been acting Assistant Director of Operations and Technology in the Office of Nuclear Safety and Safeguards. In the past this group has been responsible for ". . .the Generic Environmental Statement on the Use of Recycled Plutonium in Mixed Oxide Fuel on Light Water Cooled Reactors, GESMO for short." He is uncertain how the direction of his office may change with the change in the administration.

Richard J. Timmons, PhD '62, writes (Continued on page 22, col. 1)

and the Federal Emergency Management Agency. We rewrote the Act, passed our version in the House, got the Senate to adopt it, and had it signed into law. It's now very gratifying to see the results of this legislation being applied in my home state of California.

Equally challenging — and meaningful — was the opportunity to work on a bill about risk assessment. It would promote more basic and applied research in this area with the aim of getting federal agencies to incorporate risk assessment in their regulatory decision processes. I believe this is necessary if we are to have reasonable regulations to protect the health and safety of the American public. Though three of us wrote the legislation last year, it had been carried over to this year, and may have some chance of passage before the end of the 97th Congress.

A third area was that of the National Science Foundation reauthorization. Here, I'll digress from the actual reauthorization and talk about the money situation. While we, as chemists, look only at the NSF chemical funding, I think it behooves us not to ignore other areas of science, especially those areas which deal with science and its relation to the social system. We must show that there is a need to continue support of long term basic research, especially in this tight budget era. Just because the chemistry funding did not suffer the horrible cuts that science education and the biological and social sciences did, this is no reason to rejoice. We could be next. Unfortunately, NSF's constituency is not loud and vocal — and with a limited amount of money that Congress has to play with, those who lobby well have a better chance at having their programs supported.

It is time for chemists, both academic as well as industrial, to become more politically aware of financial support of science by the federal government. It's time to start lobbying to keep that support coming. It's obvious that the long term health of this country depends on support of long range basic research, as funded by NSF and other agencies — and the politicians must hear it, and hear it from all quarters — and I urge chemists to do this.

In the nine months since I returned from Washington, I have left the research bench and moved into a staff position in the Environmental Affairs Group at Chevron U.S.A. We serve as staff for the corporation, as well as coordinating activities among the various operating companies within Standard of California. My area is air, and I deal with proposed and final regulations, legislation, and technical interfacing between our research scientists and engineers and the federal, state and local agencies. I find the job a challenge and owe this transition directly to the fellowship. SDZ

This 'n' That . . .

(Continued from page 21)

"keep the BADGER CHEMIST coming" and provided sugar.

Thomas Tischer, PhD '62, continues with the Research Labs at Eastman Kodak where he is in patent liaison for color instant products.

Aldo E. Trameri, PhD '50, responded to the last BADGER CHEMIST that he enjoyed reading about the Ihde retirement.

Verne F. Trevorrow, PhD '55, of the Argonne National Laboratory is still involved in the proof-of-breeding project for the Light Water Breeder Reactor. His job is to design, fabricate, and install a system for handling the waste from the analysis of fuel rods from the LWBR in Bettis, PA which will be shipped to Argonne.

Charles W. Tullock, PhD '38, reports enjoying retirement, which includes presenting selected science talks at the local high school. He is pleased that his classmate **Jim D'Ianni** served as President of the ACS.

Carl Turnquist, PhD '72, runs a materials and process development group for USCI Cardiology and Radiology Division of C. R. Bard, Inc. in Concord, MA. The company produces Gruntyig coronary dilatation catheters.

Jeff Ulman, PhD '74, recently joined Ventron Corp. in Beverly, MA where he does research on borane derivatives.

Carl W. Umland, BS '52, and **Jean Blanchard Umland**, PhD '53, jointly sent sweetener from Houston without news.

H. W. (Wil) Vandeborn, PhD '74, was a departmental visitor on August 25 according to his major professor, Dennis Evans. Wil is currently Compensation Supervisor, Western Canada Division, Dow Chemical of Canada, Ltd.

John F. Voza, PhD '48, is now retired from the UW Center System and resides at 331 S. Alvernon Way #10, Tucson, Arizona.

Thomas G. Waddell, BS '66 (PhD UCLA '69), writes, "I just received the Badger Chemist and it as usual makes me long for the good old days in Madison," Tom has been at U of Tennessee-Chattanooga since '76 where he is working on chemical constituents of medicinal plants.

Jerry Walsh, PhD '77 with Gaines, is an Assistant Professor at Lafayette College in Easton, Pennsylvania.

Dale Warren, PD '71, attended his 25th reunion at Rice last fall.

A. Harry Young, PhD '59, writes from Decatur, IL where he is Senior Scientist/Manager, Materials Research in the Advanced Research and Development Department of the A. E. Staley Manufac-

turing Company. His group is investigating products from corn and soybeans as renewable raw materials to partially replace petrochemical products. In 1978 he received the IR 100 Award for STARPOL 100 Polymerizable Starch.

Raymond G. Zehnpfennig, BS '36, PhD '41, has retired from Montgomery Engineers except for services one day per week. Ray has left the smog of Los Angeles County and moved to Ojai, CA where he lives in a mobile home and enjoys gardening. He reports that Ojai is an interesting place, with a hotbed of oriental religion and counter-culture nutrition people. Its institutions include World University of Ojai whose curriculum offers astrology.

Gary A. Zimmerman, PhD '65, is now VP for Academic Affairs at Seattle while retaining his rank as Professor of Clinical Chemistry. In his spare time he is Chairman of METRO, the Municipality of Metropolitan Seattle which operates the transit authority and treats the sewage of the area. This is an outgrowth of his prior experience as mayor in Bellevue.

Carl Zuehlke, BS '38 (PhD '42 Michigan), retired from Eastman Kodak Research Labs on July 1, '79. He was Director of the Analytical Sciences Division. After two years of loafing he reports that (1) he enjoys it very much, and (2) is very, very good at it. His letter sent regards to Professor Meloche who he remembers with great appreciation and affection. His letter arrived in time to be reported to Mel.

LATE ITEMS

Visiting professors in the department this fall are **John W. Moore** in the freshman program and **Volker Jäger** in organic chemistry. John is on the faculty at Eastern Michigan U and Dr. Jäger comes to us

NEW PHARMACY DEAN

August P. Lemberger has undertaken his duties as Dean of the UW College of Pharmacy, moving from a position as Dean of the U of Illinois-Chicago Medical Center pharmacy. Gus succeeds George D. Zografis who held the deanship after the late **David Perlman**, BS '41, stepped down from the position he had held for a decade. Zografis is returning to his teaching and research in the college.

Gus is no stranger to the Wisconsin scene. He took his BS in pharmacy in '48 and his doctorate in '52. After a year in pharmaceutical research with Merck he returned to Madison as instructor in pharmacy, moving up to a full professorship in '63. In 1957 he received the UW Kiekofer Award for distinguished teaching. He left the UW in '69 to the deanship at Illinois.

POPULATION REPORT

The 1980 census showed Madison to have a population of 170,616 (including students), down about 1,100 from 1970. Dane county has a population of 320,000, while that of Wisconsin is 4,680,000, an increase of 260,000 in the past 10 years. Milwaukee continues to be the state's largest city with 630,000, a decline of 80,000 in the past decade — a significant part of that decline was to the suburbs, five of which are now among Wisconsin's 20 largest cities. Green Bay (88,000) ranks third with Racine and Kenosha still ranking ahead of West Allis (64,000). The Milwaukee suburb of Greenfield (31,500), which did not exist in 1940, now ranks 20th, just behind Wausau.

from University of Wurzburg. We are happy to have them with us.

Gene Christenson, a graduate student in the analytical division is serving as lecturer in analytical chemistry this semester.

Professor Willard reports recent department visits from **Richard Fass**, PhD '69, who is on the chemistry faculty of Pomona College, Claremont, CA and is also Vice President.

Dr. H. J. Arnikaar, Professor Emeritus of Chemistry at the U of Poona, Pune, India, was in Dr. Willard's group in '63-64. He was in the States at this time as an invited speaker at the International Conference on Chemical Education held at U of Maryland in August.

Professor Yu recently reported the following personnel changes of former members of his group. **Dr. Hideo Takezoe** after spending two years at the UW, returned to Tokyo Institute of Technology in March, 1981. Prof. **Icksam Noh** from Inha University, Inchon, Korea has joined the group on September 1, 1980, and he will spend another year before returning to Korea. Mrs. Noh has recently been recruited as an LTE teaching assistant in Chem. 108 this semester. **Eric J. Amis** finished his PhD and now holds an NRC postdoctoral fellowship at National Bureau of Standards, working with another former member of this group, **Dr. Charles C. Han**. **David M. Piatt** finished his PhD and is now at Procter and Gamble Co. at Ivorydale Center in Cincinnati, OH. **Michel Delsanti** returned to Saclay, France after spending a year in the group. **George B. Cafilisch**, now at Tennessee Eastman Co. at Kingsport, TN, and his wife, Emily, had twin girls born during the past year. That makes the second pair of twin girls in Hyuk's group; the first among the former members is the one of **Charles** and **Sally Han**.

Kenneth Barnett, PhD '67, has left the U of Missouri-St. Louis and joined Ash-

(Continued on page 23, col. 1)

Retirements

The retirement of Joe Hirschfelder is given attention elsewhere. Other well-known members of the UW faculty retiring last summer included: Eugene Cameron of geology, who was associated with Prof. Larry Haskin on the study of moon rocks; Robert Gard of extension, well-known for his development of the Wisconsin Idea Theater; John C. Garver of biochem; David Green of the Enzyme Institute; J. Willard Hurst of Law, well-known for his work on legal history; Joe Wilson of bacteriology and associate dean of the Grad School.

Margaret Bender, wife of Emeritus Prof. Paul Bender, has retired as Senior Scientist in the UW's Environmental Studies Center for Climatic Research where she was responsible for the C-14 dating program. Like Paul, Margaret was a Yale PhD. Her field was organic.

Late Items

(Continued from page 22)

land Oil Company in Columbus, Ohio according to Professor Treichel.

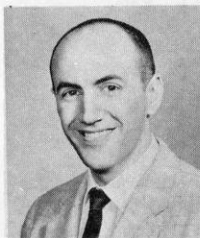
Steve Nelsen reports that **Carl Kessel**, PhD '79, has left Dauben's group at Berkeley after working out a commercially feasible synthesis of cantharadene (Spanish fly) and completing the synthesis of fusidic acid. Carl is now with 3M in Minneapolis. **Gary Weisman**, PhD '76, deserves congratulations for successful running of the International Conference on Conformational Analysis held in Durham, NH last July. **John Buschek**, PhD '73, is continuing his postdoctoral saga to spend a postdoctoral year with R.S. Brown in Edmonton. John had been with the Asmus' group in Berlin. He was recently married in Montreal.

Charlene Steinberg, BS '47, MS '48, was a participant in the International Congress for the History of Science which was held in Bucharest, Rumania in early September.

Marjorie (Gilbert) Moldenhauer, BS '52, stopped in the office 9/10/81 with a check for the Endowment Fund. She was on her way to visit her mother in Broadhead. Her air flight was changed six times making her schedule 11 hours late. After working as a medical technologist for 11 yrs. in Port Clinton and Norwalk hospitals in Ohio she is back in school taking computer science courses and pre-engineering courses. This year she is taking JCL and assembler courses — getting all A's and B's. Family is fine — daughter at USC graduate school in chemistry and the other daughter is finishing her double major in computer science and electrical engineering at Carnegie Mellon (Pitts-

HASKIN-SPACE SCIENTIST

Many Badger Chemists of the sixties period will remember Professor Larry Haskin and his involvement, following the lunar landing, in analysis of lunar rocks. In the fall of '73 Larry and 6 members of his research group left Wisconsin to join NASA's Johnson Space Center in Houston where Larry became chief of the Planetary and Earth Science Division, which has charge of research in planetary sciences. He left Wisconsin with reluctance at a time when NASA was faced with difficult problems regarding lunar sample collection and direction of research. Larry spent three very busy years bringing about reorganization and coordination of the Earth Science Division.



Haskin

In 1976 he left NASA to become chairman of the Earth and Planetary Sciences Department at Washington U in St. Louis. He is also a member of the Chemistry Department. Since he has been at EPSD the department has doubled in faculty and tripled in number of students. His group is made up of 5 geologists, 3 chemists, 1 physicist, 1 geochemist, and 1 geophysicist. The research facilities are excellent and research is concentrated about half on projects involving planets and the other half on terrestrial projects.

Larry's research group contains 4 grad students, 1 postdoc, 2 undergrads, and 3 senior research associates (including **Randy Korotev**, PhD '76, and **David Lindstrom**, BS '66 (PhD Oregon)). They are still studying moon rocks with attention to how trends in composition can be used to understand processes by which moon lavas and early crustal rocks formed, in order to obtain estimates of moon's overall composition. Neutron activation analysis is their main analytical technique. They have learned that the moon appears to have ordinary rock, not a variety of ores.

Larry stopped at the Department on January 29 to present an analytical seminar "Molten Silicate Electrochemistry: A Geochemical Tool and Possible Basis for Lunar Technology."

burgh) and should have her BS degree by Christmas. She will be working part-time and going to school part-time for her MS.

Marshall R. Sprinkle, PhD '32, reports having a pleasant visit with **Harvey Sorum**, PhD '27, and Emma Lou recently when Harvey was in Charlottesville for the 80 and over Tennis Tournament. Marshall reports that his loblolly pine forest is

doing well but needs thinning, a task which he finds a bit demanding. He recently heard from **Hervey Voge**, MS '32, who was a fellow student with N.F. Hall. Herve is now retired from Shell Development and lives in Sebastopol, CA. He had a note from **Nevill Isbell**, PhD '31, with McElvain who has made a recent trip to China.

Garry N. Fickes, PhD '65 with Goering, continues to be active in the Chemistry Department of University of Nevada in Reno.

Daniel Jones, PhD '69 Hist of Sci, was organizer and participant in a colloquium marking the 75th Anniversary of the Pure Food and Drug Act. The meeting was held at the Medical Center, U of Illinois in Chicago where Dan's faculty member, **John Parascandola**, PhD '68 was a participant.

James Carnahan, PhD '46, has been employed continuously in the Du Pont Control Research Department. He is presently involved in the expansion of life science where he leads a group doing basic research in neurobiology and will soon start a gerontology group. He remarks that this is a long way from catalytic chemistry he studied with Homer Adkins; it is nevertheless logical and exciting.

James H. Rigby, PhD '77, has joined the chem department at Wayne State as asst. prof. of organic.

Richard M. Pagni, PhD '68, has been promoted to professor at U of Tennessee in Knoxville.

Robert A. Alberty, PhD '47, has resigned as science dean at MIT and returned to teaching and research in the chem department there.

Aaron and Olive Ihde were dinner guests of **Dorothy Dana Walton**, widow of Prof. James Walton, when in New York last August at the ACS Meeting. Mrs. Walton and daughter Marcia have a coop apartment across the street from Central Park within walking distance of Lincoln Center.

New Grad Students

Enrollment of new grads is down sharply this fall. As of August 1, the number was a mere 50. The pattern is apparently nationwide. Illinois is the undergrad alma mater of 4 new students; John Hopkins, Ithaca College, Northwestern, and St. Olaf sent 2 each. Thirty-eight schools sent one student each.

Three foreign students enter from the Universities of Iceland, Guelph (Ontario), and National Cheng Kung. Other schools represented include Purdue, Texas, MIT, Bucknell, Hope, Notre Dame, Haverford, and Puerto Rico.

Placement

During the '80-81 academic year 82 persons used the placement service, 78 organizations conducted interviews in the department, 940 interviews were conducted by 98 company representatives.

Eleven postdocs used the service; 7 accepted industrial positions, 1 took an academic position. The average starting salary in industry was \$30,150.

Fifty-three PhD candidates used the service; 27 accepted industrial positions at average salary of \$31,629. Two took academic positions and 10 took postdocs. Of the 13 BS candidates using the service, 8 took industrial jobs, 2 plan graduate studies. Industrial salaries average \$18,455.

Principal employers of Badger Chemists were Celanese (5), duPont and 3M (4 each), Monsanto (3), and American Cyanamide, Lilly, Universal Oil Products, and Rohm & Haas (2 each). Nineteen other companies hired one each while 17 companies made offers which were not accepted. Postdocs and PhD's averaged 2 offers each.

Name Professorships — Faculty Honors

Eight faculty members were appointed to name professorships in summer '81; included in the list are Laurens Anderson, Steenbock Prof of Biomolecular Structure, well-known for his work in carbohydrate biochem; Arthur D. Code, Hilldale Prof of Astronomy who has been a national leader in the development of the space telescope; Frank Remington, Jackson Prof of Law - Remington has been Big Ten Faculty Representative for many years.

Four UW faculty were included among the 75 recently elected to the American Academy of Arts and Sciences. They are James and Elizabeth Miller of cancer research, **R. Byron Bird**, PhD '50, of chem engr., and Leon Epstein, political science, who in the mid-sixties was dean of L and S.

Badger Chemist is made possible only as a result of the generosity of friends of the Chemistry Department who have kept it going for 28 years. Don't let this be the last! Give the Editor something to do in his retirement years and continue to keep him out of debtor's prison (see editorials, p. 2). Make checks payable to Wisconsin Foundation — Badger Chemist Fund, and mail with lots of news to:

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

New Badger Chemists

We list below the students who received chem degrees between July 1, '80 and June 30, '81. There were 26 bachelor's degrees, 8 being certified to the ACS for immediate membership. Ten of the degrees went to women. Five of the BS students are now in grad schools, 3 in med schools.

There were 13 master's, 6 of them women. Twenty-eight students completed the PhD, 7 of them women.

Bachelor's Degrees

Where an * appears before a name the student graduated with honors. Where the name of a college appears after a name, the student is attending grad or medical school there.

ANDERSEN, Kari L.
 * BECKNELL, Alan F., Yale
 * BILICH, Daniel K.
 BUGARIN, Robert J.

SPORTS FLASH

Wisconsin defeated No. 1 ranked Michigan at Camp Randall on September 12, the first win over Michigan since 1962 and only the 8th victory over Michigan in history. Michigan has defeated Wisconsin 32 times and there was one tie — the 1921 game ended 7-7. In the past four years Michigan held Wisconsin scoreless while piling up 176 points.

The '81 win was no fluke. Michigan was held to 8 first downs vs 23 for Wisconsin; Michigan was held to 190 yards rushing (vs 257) and completed 3 of 18 passes for 39 yards with 3 intercepted (Wisconsin was 8-17-1 for 182 yards). The Wisconsin defense game ground grudgingly except for an 89 yard Michigan touchdown run. Wisconsin quickly retaliated with a 71 yard screen pass for its third touchdown, then played solid defense for the last 20 minutes with the offense playing credibly to give the defense a periodic rest.

DIXON, Douglas P.
 GARCIA, Carmen T.
 GINKE, Susan A.
 GOLOVIN, Milton N., Boston U
 GREENBERG, David M.
 GROSS, Jonathan P.
 GUNNESS, Elaine M.
 HANSEN, John E.
 HORSLEY, David B.
 * KOEHLER, Konrad F., Emory
 KUCK, Kim S.
 * LEMMEN, Timothy H., Indiana
 LE ROSE, Grace A.
 MUSOLF, Karen L., UW Med
 OWENS, Karen A., Yale
 PERRY, Patti A.
 SCOTT, Kurt S.
 SEABURG, Mark D., UW Med
 * STRICK, Thomas J., Med Milwaukee
 SWAN, Andrew P.
 VODACEK, Anthony
 ZVARA, Patrice D.

Master's Degrees

Name of major professor shown at right.

BARNHART, Steven G.	Walters
BASILE, Alfonso	Cornwell
BROCKHURST, Barbara J.	Taylor
DE GOOYER, William J.	O'Leary
FOSTER, Thomas J.	Crim
LIN, Da-Sheng	Whitlock
MILLER, Maria L. Santiago	Trost
PLUTE, Kathleen E.	Treichel
SEWELL, James W.	Certain
SHAFIEE, Fathieh	West
SHIH-KNODEL, Nancy	Cornwell
SUMMERS, Neena L.	Certain
YOKELSON, Howard B.	Zimmerman

Doctoral Degrees

ADAMS, Steven P.	Whitlock
AMIS, Eric J.	Yu
BLEAM, Margaret Louise	Cornwell
BOHN, Paul W.	Taylor
BRUEGGEMAN, Barry G.	Schrag
BROWN, Alexandra L.	Whitlock
CANNON, Bret D.	Crim
CIRJAK, Larry M.	Dahl
COX, Kenneth A.	Curtiss
EKIMOFF, David	Walters
FACTOR, Ronda E.	Zimmerman
GREZZO, Loretta A.	Nelsen
JARVI, Esa T.	Whitlock
JOHNSTON, Murray V., III	Wright
KARAS, Bradley R.	Ellis
KLEIN, Barbara Jo Kure	Record
KOCAL, Joseph A.	Dahl
LODGE, Timothy P.	Schrag
MAK, Kit Ming	Treichel
MARTINEZ, Gregory R.	Vedejs
NEWMAN, Thomas H.	West
PARMELEE, William P.	Nelsen
PILTCH, Nancy D.	Woods
RIVES, Albert B.	Fenske
RUNGE, Thomas A.	Trost
SEELBINDER, Mark B.	Wright
SHUSTERMAN, Alan J.	Casey
WASHECHECK, Don M.	Dahl