

Badger chemist : a newsletter from the Department of Chemistry of the University of Wisconsin. Summer 1953

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BADGER CHEMIST

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

MADISON, WISCONSIN

SUMMER, 1953

Foreword By Our New Chairman

Dear Former Chemistry Student,

Greetings to the several thousand men and women who have received degrees in chemistry at the University of Wisconsin. Most of you have known only one departmental chairman—J. Howard Mathews—who was on the job continuously for 33 years.

This first year as the new chairman has been a happy one because all members of the departmental staff have been helpful and cooperative. Professor M. Leslie Holt as associate chairman, Miss Bette Germann as secretary and Mr. Harold A. Schimming as administrative assistant have been effective aides in administration and every one of the professors serves on at least two committees within the department. Educational policies are discussed fully by the professorial staff at the bimonthly luncheon meetings and important changes have been made in the curriculum. It is indeed fortunate, although there is not always agreement on all things, that there is nevertheless complete harmony.

We are fortunate also in our relations with the University's officers, President Edwin B. Fred and Dean Mark H. Ingraham. Encouragement and support from them, together with an atmosphere of mutual confidence, has made this first year of the departmental chairman a pleasant one. We are proud of the Department of Chemistry and its achievements. In addition to full teaching and research programs the staff members carry committee and lecturing assignments in the University, in Madison and in our national societies. They have accepted their responsibility to the community as well as to their Department. A partial list of these assignments is interesting. Professor Sorum is Chairman of Freshman Forum, and Professor Willard is on the committee to guide the senior course, Contemporary Trends. Associate Professor Ihde teaches the introductory science course in the Integrated Liberal Studies program. Professor Meloche is Chairman of the difficult Human Relations Committee of the University and for 25 years has been serving on the board of directors of

the University Y.M.C.A. Professor Holt is a member of the Athletic Committee and Professor Schuette, a past president of the Wisconsin Academy of Sciences, Arts, and Letters, continues to be a guiding spirit in this 83-year-old organization by virtue of a life-time tenure on its Council, or governing board. He is also serving the museum of the State Historical Society of Wisconsin as a sort of curator-without-portfolio in that he is chairman of the Society's Philatelic Committee.

Currently there are in the department 24 professors, five of whom are members of the National Academy of Sciences, and 3 instructors, plus 58 teaching assistants, 65 research assistants and 26 fellows. The total number of graduate students is 165. A comparatively new development is the increase in post-doctoral fellows and project associates supported largely by industrial grants and government research contracts.

The staff is now publishing the results of their researches in the scientific journals at the rate of about 100 papers a year. It was not always so, however, in that the 100th communication was not forthcoming until early in 1903! This and other interesting bits of information were uncovered some 20 years ago when departmental historian, Dr. Schuette, began the task of compiling a record of the scientific contributions by past members of the Department, and the seemingly hopeless one of securing a reprint of each. The success of the project in terms of "originals" found is reflected in the fact that photostating was required in only a few cases, one of which was the inaugural address to the Regents by Professor Ezra Slocum Carr in 1856; its theme is that the natural sciences have a claim "to enlarged consideration in our systems of education".

The work of recording on file cards the publications of the staff and preserving a reprint of each was in time delegated to the departmental librarian. It has required 33 volumes to bind into permanent form this record of our research activities. We suspect that ours is the only department of comparable

age in the College of Letters and Science that has such a record.

In a recent conference with a faculty committee of a prominent University, your chairman had mixed feelings of pride and worry when he was asked to give advice on a list of men who had been suggested as possible candidates for the chairmanship of its chemistry department. Six members of our department were on the list.

Our chief worry at present is the decreasing enrollment of undergraduate students in chemistry. We are now feeling the effects of the low birth-rates of the 1930's, but chemistry and other subjects which require stiff mathematical preparation and arduous hours of study are suffering proportionally more than the whole University. Jobs for chemists were never so plentiful and never so well paid, but the many representatives of industry who visit us to interview our seniors and graduate students about jobs are going to be even more disappointed next year than they were this year. The number of graduate students has kept up pretty well but the supply line at the freshman and sophomore level has dwindled so much that in the years to come the supply of graduate students will fall off too. If your son or daughter, or your neighbor's son or daughter has a special aptitude and interest in science, tell us about them and send them to us.

The selective service policies with reference to students have been working out very well. We trust that no drastic change will be made in this policy and that able students can continue to prepare themselves to serve in the best interests of their country.

Another important problem is space. The new wing to be added to the northwest corner of the Chemistry Building along Charter Street is not for us—it is for the School of Pharmacy. We can be happy and scientifically productive in our present quarters, but the rickety wooden construction, and wavy floors of the central part of the Chemistry Building are a disgrace to any modern Chemistry Department. The demands for any kind of floor space in other departments of the University are so great that we will have to wait our turn for

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Daniels - -

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new building plans—but we trust that we won't have to wait too many years.

Budget cuts for the next bien-nium will hurt, but we will survive. Of still greater worry has been the attempt to integrate the University and the State Teachers Colleges by way of a bill which would seriously belittle the University and tend to cause it to lose its identity. Its high standing built up over the years is likely to suffer. We were happy to have the State Senate kill the bill though it may turn up again in future sessions.

It has been suggested on several occasions that the Alumni of the Department of Chemistry of the University of Wisconsin, both undergraduate and graduate, should form an association of some kind. At the meetings of the American Chemical Society the Wisconsin luncheon is an established and always well attended function. The splendid response of the alumni to the fund for Dr. Mathews' portrait and to the collection of letters presented to him were tangible evidences of interest.

This letter, together with the news items which Professors Schuette and Ihde have prepared, is an outgrowth of the realization that the Alumni want to keep in touch with us and with each other. We in the Department would welcome the formation of an association of alumni of the Department of Chemistry, but we would like to see the association develop as a result of spontaneous demand from the alumni themselves. Perhaps some of you have suggestions as to how plans for such an organization can be implemented. Finally, would you like to have a news letter such as this become a regular affair? We would appreciate your reaction and attach a questionnaire for your convenience.

Cordially yours,

Farrington Daniels

Sorum on Science Education Committee

Professor Sorum, representing the American Chemical Society and upon invitation of the U. S. Commission of Education, last November attended a conference in Washington, D. C., which had been jointly planned by the Cooperative Committee on the Teaching of Science and Mathematics of the American Association for the Advancement of Science and the specialists for Sci-

ence and Mathematics of the U. S. Office of Education of the Federal Security Agency. The theme of the conference was Identifying High School Students with Potential for Science and Mathematics and Providing Opportunities for their Development. The conference as planned was in harmony with a Defense Manpower Policy announced last fall from the Defense Manpower Administration, U. S. Department of Labor, committing the Federal Security Agency to "assist secondary schools in developing more adequate curricular and better teaching methods in order to provide students possessing the requisite aptitudes and interests with the fundamental education necessary for college work in science and engineering".

Dr. Sorum's appointment to the Cooperative Committee was a compliment not only to his own well known sympathetic interests in the beginning student in chemistry, but also to the excellent reputation among the higher institutions of learning which the University enjoys for the quality of its instruction in this subject.

du Pont Teaching Fellowship

Something new has been added in the fellowship field in the Department for the academic year '53-'54, and that something new is the teaching fellowship made possible by a grant from E. I. du Pont de Nemours and Company. It takes the place of the research fellowship in the Department originally sponsored by the same donors.

The du Pont Teaching Fellowship has just been set up to stimulate and reward outstanding teaching on the part of graduate assistants. The recipient must have had a minimum of two years of experience as a graduate teaching assistant, must have exhibited real ability and interest in teaching, and must continue teaching on the usual half-time basis. The fellowship pays a salary comparable to that of the best research fellowships. The purpose of this fellowship is to hold the superior assistant on the assisting staff where students and new teaching assistants can benefit from his experience and maturity.

The first recipient of this fellowship is Allen Prince who did his undergraduate work at Wabash College before joining the staff in general chemistry in 1950. Allen is married and has two small daughters.

Chairman Daniels On Tour

The life of a president of the American Chemical Society seems to be just one speech after another with coast-to-coast and border-to-border travels. Late in September, 1952, he delivered two addresses on atomic energy to Canadian scientists. He spoke to the staff of the Canadian Atomic Pile and Atomic Energy Laboratory at Chalk River and also addressed the National Research Council of Canada at Ottawa. The following month found him in Cleveland addressing the Professional Men's Club there on "Future Energy Sources" and several days later he was in Newark participating in the dedication exercises of the Chemical Engineering addition to the H. Fletcher Brown Laboratory of the University of Delaware. The Western New York Section at Buffalo was host next month to hear him lecture on "Solar Energy", and a tion did the courtesies; his lecture subject there was "Thermoluminescence of Crystals". During the month of February he addressed sections at Baltimore, Wilmington, Stamford, Conn., and New York.

Dr. Daniels' journey to Los Angeles for the national meeting of the Society in March called for five lecture stops en route: Laramie, Wyo., Idaho Falls, Ida., Salt Lake City, Utah, Davis, Cal., and San Diego.

The month of May was an auspicious one for him; it was marked by participation in the diamond jubilee of Case School of Applied Science and the dedication of the Chemistry Building of the University of Rhode Island, and appearance before the Northeastern Section in Boston. The high point of this eastern trip was the conferring upon him by the University of Rhode Island of the honorary degree Doctor of Science.

Accompanied by Mrs. Daniels, he spent the summer in Europe attending two scientific meetings and visiting seven countries. As our Society's president he presented its official greetings to the Netherlands Chemical Society on the occasion of its golden jubilee, and then moved on to Sweden to participate in the meetings of the XIII International Union of Pure and Applied Chemistry in Stockholm. He was official representative here of the National Research Council.

Before returning home the Daniels family visited Norway, Italy, Switzerland and France.

Staff News

Prof. Norris F. Hall will resume his teaching duties with the opening of the '53-'54 academic year after a semester's leave of absence which he spent with Mrs. Hall visiting their daughter and family in Mexico.

Prof. J. O. Hirschfelder became the fifth member of the Department to be elected to the National Academy of Sciences. Earlier appointees are: Drs. Daniels, Johnson, McElvain, and Williams.

Prof. Sorum has been busy this summer writing a text book for the use of his students in general chemistry. It will be the fourth of a series of which there are already in use a problem book and two laboratory manuals.

Prof. Thomas O. Jones (Ph.D. '37 Wisconsin) of Haverford College was visiting lecturer during the summer session. He was in charge of Chemistry 1a and worked with Professor Holt in a new course, "Frontiers in Chemistry," which was offered by the staff for high school science teachers attending summer session. He is not the first alumnus to have been invited back for a summer session lectureship. Last summer Prof. Paul C. Cross (Ph.D. '32), who is now chairman of the Department of Chemistry and Chemical Engineering, University of Washington, gave a series of lectures in advanced physical chemistry.

Profs. Edward L. King and Edwin M. Larsen attended the AAAS-sponsored Gordon Research Conference on Inorganic Chemistry in New Hampton, N. H., July 6-10.

Prof. W. S. Johnson was a guest lecturer at Pennsylvania State College last November in a course devoted to special topics in organic chemistry. He was one of 18 chemists—each a specialist in his own field—addressing the chemistry students there on consecutive weeks this semester. His topics: Studies on the total synthesis of steroids, and conformational analysis.

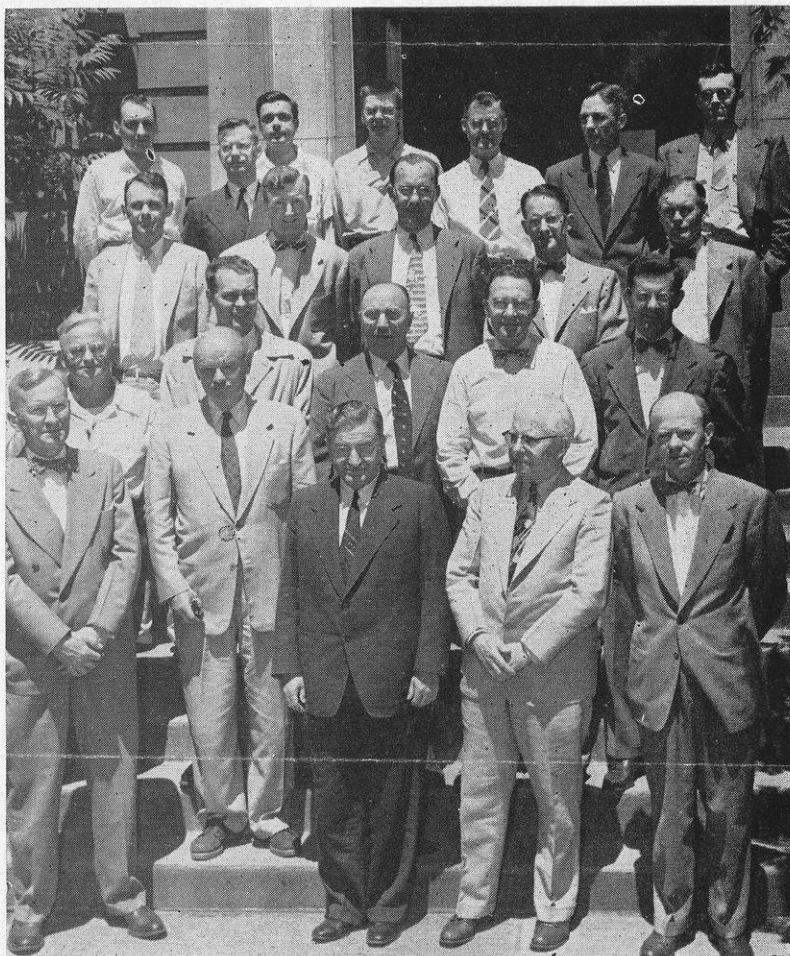
Prof. Hirschfelder, who is also director of the University's Naval Research Laboratory, spent some time in Texas last January lecturing to interested groups in three cities there. He gave the Humble lectures, which in his case consisted of a two-week's concentrated course in his specialty, at the Humble Oil and Company's laboratories in Baytown. In addition, Dr. Hirschfelder addressed a joint meeting of the Southeastern Texas Section of the

American Chemical Society and the American Institute of Chemical Engineers at Houston. He was also a guest of the Chemistry Department of the University of Texas at Austin before whose staff he gave a lecture.

Dr. Edward L. King of the inorganic group has been promoted from assistant to associate professor.

Prof. Aaron J. Ihde spent the academic year 1951-52 on leave of absence at Harvard where he held an appointment as Visiting Fellow in General Education. The appointment, sponsored by the Carnegie Corporation for Advancement of

Education, was an outgrowth of Dr. Ihde's activities in the Integrated Liberal Studies program. This program of studies was inaugurated at Wisconsin in 1948 to provide a co-ordinated plan of studies in the humanities, social studies, and natural sciences for a selected group of students during their first two years in the University. The program's first science course, based on important developments in astronomy, physics, and chemistry, has been taught by Dr. Ihde since the inception of the program. The year at (continued on page 4)



	Ritter			
	Van Tamelen			
Goering	Bender		Wilds	Gosting
Ferry	Sorum	Curtiss	Alberty	Willard
	Blaedel			Williams
Klein		Hirschfelder	Johnson	Larsen
	Hall			
Schuette		Daniels	Mathews	Holt

Our Picture was taken on the steps of the Chemistry Building in the spring of 1952. For the benefit of those who have not been in contact with the Department lately the names placed roughly the same as position in the picture are as above.

Missing from the picture are Assoc. Professor Aaron Ihde who was on leave of absence last year at Harvard, and Professor S. M. McElvain who just plain forgot about having his picture taken.

(Continued from Page 3)

Harvard was spent in a study of its entire General Education Program. His teaching duties were in connection with Natural Sciences a, the case history course developed by President Conant as an outgrowth of the thoughts expressed in The Terry Lectures at Yale in 1946 and outlined in his book, "On Understanding Science".

Prof. John D. Ferry was one of some 135 Americans who attended the XIII International Congress of Pure and Applied Chemistry in Stockholm and took part in the program of papers read. Before going to Sweden, Dr. Ferry stopped in England at Oxford University to attend the II International Congress on Rheology. Under joint authorship with Dr. E. R. Fitzgerald (Wisconsin '52) he read a paper there entitled, "Dynamic rheological properties of linear polymers". Last October Dr. Ferry read a paper, "Dynamic properties of the system polystyrene-decolin", before the Society of Rheology at its Philadelphia meeting.

Emeritus Professor J. H. Mathews is seen daily around the building. He has retained his laboratory in the southeast corner of the building where he is carrying on studies on firearms. With the support of a research grant from the University he is preparing a catalog of data on every type of pistol on which he can get his hands.

Enrollment in chemistry courses continued to drop this year, particularly at the junior and senior levels. Freshman enrollment rose a small amount over last year. Professor Sorum's Chemistry 4a showed a healthy increase over 1951 but the increase was due mainly to chemical engineers rather than to chemistry majors.

Even though their reading knowledge of Spanish may be hazy, still we venture that the title "La caracterizacion de los compuestos organico" is not lost upon most of our readers who will recognize it as a Spanish translation of Professor McElvain's "Characterization." This text book made its appearance this summer under a Madrid imprint.

The formal presentation to the State Historical Society on June 6 of one of the earliest stage coach inns in Wisconsin, the restored Old Wade House, by the Kohler Foundation of Sheboygan, was preceded in the morning by a program appropriate to the afternoon's exercises. The restored maple syrup house on the premises provided the theme for an invited paper by Dr. Schuette, "The Art of Making Maple Sugar."

Staff Changes

Three resignations at the assistant professor level occurred last year. Moving on to other fields were Dr. Mark Woyski who is now with the Lindsay Chemical Company, West Chicago, Ill.; Dr. George Murphy who is now chairman of the Chemistry Department at New York State College for Teachers in Albany and Dr. Howard Ritter who accepted a similar position at Miami University, Ohio. Dr. W. Charles Cooper resumed his teaching duties in analytical chemistry last fall after several years' leave of absence because of illness. At year's end he resigned to return to his native Canada where he has accepted employment with the Rand Mines, Quebec.

New men added to the staff in the fall of 1952 as instructors were C. Dan Cornwell, John L. Margrave, and Irving Shain. Dr. Cornwell, who is with the physical chemistry group, took his B.S. at Cornell and his Ph.D. under E. Bright Wilson, Jr. at Harvard. Dr. Margrave took his degrees at the University of Kansas, doing his doctoral thesis under Prof Paul W. Gillis. He comes to the general and inorganic group from a year of post-doctoral work with Dr. Leo Brewer at the University of California. Dr. Shain comes to the analytical group from the University of Washington. His Ph.D. was taken under Prof. A. L. Crittenden.

Our Newest Alumni

During the period beginning July 1, 1952 and ending with Commencement of 1953 exactly 95 degrees, divided between 87 men and eight women, were awarded. Fifty of these degrees were at the bachelor's level; the master's degrees numbered 21; and the doctorates made up the rest. According to Dr. Meloye who is chairman of our employment committee, all the degree recipients have been placed. In fact he could find jobs for numerous others if they were available.

An impressive number of Ph.D. degrees has been contributed by the Department to the total number granted by the University over the years. Emeritus Professor A. T. Lincoln of Carleton College in 1899 became the Department's first Ph.D. Approximately 715—the exact number at this writing is not readily available and will not be until the Commencement Register is mailed out—have won this the University's

highest degree since that time.

The names of the 24 new Ph.D.'s, the titles of their theses together with the name of the major professor and their present affiliations follow:

David F. Akley—Diffusion studies of mixed solutes in aqueous solution (Gosting), University of Wisconsin.

Loren W. Bannister—1,4-Diazobicyclo [2.2.2] octanes and 1,5-diazobicyclo [3.2.2] nonanes (McElvain), Monsanto.

Edwin N. Becker—Thermal reactions of trichloromethyl radicals produced by bromine from bromotrichloromethane in carbon tetrachloride solution (Willard), St. Thomas College, St. Paul, Minn.

Robt. Sieh-Hsuan Chiang—Chemical reactions of Br⁸⁰ initiated by radiative neutron capture and by isomeric transition in organic bromides and in solutions of bromine in carbon tetrachloride (Willard), Hercules Powder.

Edw. R. Degginger—I. The molecular rearrangement of 3-hydroxynonyne-4. II. The reactivity of ketene dimethylacetal with carbonyl compounds (McElvain), Solvay Process Co.

Hugh R. Eisenhauer—Studies on 4-hydroxycoumarins (Wilds), Canadian Industries, Ltd., Montreal.

Warren W. Evans—Dynamic and transient mechanical properties of polyisobutylene solutions (Ferry), du Pont.

Lester D. Grandine, Jr.—Mechanical properties of the system polystyrenedecalin (Ferry), du Pont.

George E. Heckler—Mechanical properties of some thermally reversible gels (Ferry), du Pont.

Robert J. Kline—The influence of colloidal electrolytes on the critical solution temperature of triethylamine and water (Ihde), Ohio University.

Donald F. Mason—The effect of ultrasonic radiation on the electrolytic separation of hydrogen and deuterium (Hirschfelder), Northwestern University.

Frederick F. Morehead, Jr.—The effects of different types of radiation on the thermoluminescence and coloration of crystalline lithium fluoride (Daniels), Union College, Schenectady.

Stephan W. Nicksic—Studies on the minor components of oat oil (Schuette), California Research Corporation, Richmond.

Howard B. Palmer—Schlieren optical studies of the critical region of pure substances (Hirschfelder), Brown University.

Andrew E. Potter, Jr.—The vapor (continued on page 5)

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phase association of acetic-d₃ acid-d (Bender), Lewis Flight Propulsion Laboratory, Cleveland.

Albert F. Pruess—The chemistry of rhenium (Meloche), Rohm and Haas.

John A. Schmitt—The influence of isotopic carbon on reaction rates (Daniels), Standard Oil of Indiana.

Rubin Shapiro—Application of a rotating silver disc electrode to solution spectroscopy (Meloche), American Can Co.

Robert Siegfried — A study of chemical research publications from the United States before 1880 (Ihde), Boston University.

John I. Slaughter—The formation and decomposition of nitric oxide (Daniels), Standard Oil of Indiana.

Edward E. Smissman — I. Rearrangement of methyl-ethyl-phenyl-ethyl carbinol. II. Structure of streptolyn (Aycock), University of Illinois.

Victor G. Soukup—The keto and hydroxyhexadecanoic acids (Schuette), Procter and Gamble Co.

Kensal Van Holde—A study of the viscoelastic behavior and molecular weight distribution of polyisobutylene (Williams), du Pont.

Layton J. Wittenberg—Addition compounds of zirconium and hafnium tetrachlorides with phosphorus oxyhalogen compounds (Larsen), Mound Laboratory, A.E.C., Miamisburg, Ohio.

An Alumnus Honored

A Wisconsin alumnus who had won his Ph.D. degree in 1931, and before that his Bachelor's at the University of Illinois, was honored with a series of six lectures sponsored by his employer and delivered during the first two weeks last November by an internationally known organic chemist from Germany.

The alumnus in question is Karl Folkers, associate director of research and development with Merck and Co., Rahway, N. J. His employer took this means of recognizing him for his numerous outstanding research contributions, among others, in vitamin syntheses and hormones. The foreign speaker was Dr. Karl Ziegler, director of the Max Planck Institut fuer Kohlenforschung in Muelheim-Ruhr—its former name of Kaiser Wilhelm Institut had given way in the early 30's to Nazi "reforms"—who, while a guest of the Department, discussed some of his

recent work on the aluminum alkyls, dimerization and polymerization of olefins, and the stereochemistry of cyclo-olefins with 8 to 10 ring atoms.

His two-week stay in Madison completed, he left on a similar mission at the University of Illinois, returning to New York with lecture-stops, among others, at Washington, D. C., Harvard, and the Massachusetts Institute of Technology. Dr. Ziegler saw the United States from Boston to Pasadena and other western cities, was a spectator at a few good football games and saw the fabulous state of Texas. Prof. McElvain planned the western lecture trip for him.

For Mrs. Ziegler, who accompanied him, there was an unscheduled event in the family itinerary. While in Madison she met a former grade-school pupil of hers when she was a Marburg school teacher. The former ten-year-old German miss is now the wife of a member of the German Department, Prof. Walter Naumann.

Fellowships

We have come a long way since the first industry-sponsored research fellowship took its place alongside the lone University fellowship in chemistry of which the late Louis Kahlenberg, '92, became the first incumbent in his eventual rise to the chairmanship of the Department. A University catalog of the first decade described it as having an "annual value of \$400". The '19-'20 edition of this publication listed among the "special" fellowships then available one in chemistry sponsored by the E. I. du Pont de Nemours and Company with a stipend of \$750. It was the first of its type in a group which now numbers 17.

The list of fellowship sponsors, the appointee and his alma mater, given in that order, follows: National Aniline and Nitrogen Process Divisions of Allied Chemical and Dye Corporation, I. A. David, Pennsylvania, and W. T. Tsatsos, Minnesota, respectively; American Cyanamid Company, W. C. Child, Oberlin; Carbon and Carbide Chemical Corporation, R. E. Ireland, Amherst; Eastman Kodak Company, H. F. Mason, Cornell; General Electric Company, J. F. Hornig, Harvard; S. C. Johnson and Son, Inc., S. A. Fuqua, Beloit; Minnesota Mining and Manufacturing Company, R. L. Strong, California; Monsanto Chemical Company, Stephen Kraychy, Alberta; Procter and Gamble Company,

Ignacio Tinoco, New Mexico; Pure Oil Company, A. J. Frisque, Wisconsin; Shell Oil Company, J. H. Norman, Michigan; Sinclair Refining Company, R. S. Berger, Stanford; Socony-Vacuum Laboratories, R. L. Reeves, George Washington; Standard Oil Foundation, Inc., R. W. Kluiber, Illinois; Union Carbide and Carbon Corp., M. L. Williams, Missouri; and United States Rubber Company, C. J. Postmus, Calvin.

The Homer Adkins memorial fellowship has been assigned to Oscar R. Rodig, an alumnus of Rutgers.

Physical Plant Changes

Returning alumni who left the University before June of 1951 will still find the auditorium an old friend but one resplendent in a new dress. Its one time dingy, uninviting interior illuminated with outmoded lights has been given a complete overhauling. The timbered ceiling has not been changed but gone are the ugly, black shades which on occasion were drawn by a noisy mechanism. They were taken down when the light well above was closed and plaster replaced the glass in the side walls at the second-floor level. New and better seats were installed, and the number was reduced on the sides in order to make for easier access. No longer does the lecture assistant make his entrance through a door in the blackboard. Communication with the "prep" room is now to the side. A new lecture table has been installed; the lighting system has been modernized, and the whole room has been redecorated.

Another change in the central wing is the recent conversion of room 185 which was once a large student laboratory devoted to general chemistry into six units, five of which will be used for graduate research.

Outside of the building, on the site where once the underground acid vault was located there has been built a volatile solvents storage addition of modern design. Of 40 x 60 ft. outside dimension and cut up into six vaults, it stands about four feet above ground except for a penthouse for the ventilating machinery and hydraulic lift. Every conceivable hazard has been taken into account in its planning: Automatic carbon dioxide fire extinguishers, a sprinkler system, explosion relief panels, and shower heads. The days of storing inflammable chemicals within the building proper are over.

This n' That About Our Alumni

George W. Heise, B.S. '09, has retired after 34 years of service with the National Carbon Company, Cleveland, Ohio, where he was associate director of research laboratories.

Angus J. Johnston, B.S. '13, is president of Hickman Williams and Company, 230 N. Michigan Ave., Chicago 1, Ill.

George C. Bailey, E.A. '14 (Ph.D. Yale '16), plant manager for du Pont's at Perth Amboy, N. J., has retired. His home address is 260 West Jersey St., Elizabeth 2, N. J.

Readers of the Wisconsin Magazine of History who follow the feature section of this Madison-edited quarterly publication might be interested in learning that "The Collector" by Bertha K. Whyte is the work of one of our chemistry alumnae, the former Bertha Kittchell, B.A. '12. Her husband is a Milwaukee lawyer.

Homer A. Piper, B.S. '14 is chairman of the board and director of the Haloid Co., Rochester, N. Y., one of the world's largest manufacturers of photographic products. He joined the company which he now heads in 1924, in 1938 became production manager and in 1940, works manager. He was elected vice-president in 1940. The Haloid Co. produces photocopying equipment and materials, contact and enlarging photographic papers, photographic negative materials for graphic arts, and is the producer of XeroX products used in xerography, a system for copying documents by use of a dry, chemical-free, electrical process.

A name well known in Kentucky's professional circles is that of Sarah Vance Dugan, B.S. '17. Mrs. Dugan is director of the Division of Foods, Drugs, and Health of the State Department of Health of this state.

Aaron M. Hageman, Ph.D. '18, retired in August after 35 years as director of research and engineering of the Westinghouse Electric Corp.'s lamp division in Bloomfield, N. J. He joined the Westinghouse firm in 1918 after completing his studies at Wisconsin.

Paul Wartman, M.S. '21, who at one time was an assistant in chemistry ('19-'21) and then, after an interlude as professor of chemistry and director of the band at Concordia College, Minnesota, moved on to Cornell University where he won his Ph.D. in '25, is now professor of chemistry at Mississippi State

College in its School of Science. He joined its faculty in 1925.

Wilbur A. Lazier, Ph.D. '25, is a "news-maker" of no mean caliber. Upon graduation he joined duPont as a research chemist and later was promoted to group leader. He terminated his connections there in 1944 to become the first director of the Southern Research Institute in Birmingham, Ala. Four years later he entered the employ of Chas. Pfizer and Co. to become director of chemical research and development. Election to a directorship followed in 1951. His most recent move is to the Sprague Electric Co., North Adams, Mass. His title: vice president and technical director.

Ralph N. Traxler, Ph.D. '26, is director of asphalt research for the Texas Company at Pt. Neches. He served the Society of Rheology as its president in 1950.

Leo Friedman, Ph.D. '30, and one-time assistant in general chemistry, is professor of chemistry at the University of Oregon.

Carl Niemann, B.S. '31, Ph.D. '34 (biochemistry) is professor of organic chemistry at California Institute of Technology. The interval between graduation and appointment to Cal. Tech's staff was marked by four years of post-doctoral study, one of which was at Wisconsin, two were with the Rockefeller Institute for Medical Research, and the last was as Rockefeller Foundation Fellow at University College Hospital Medical School, University of London. Advancement to his present work came in 1945. A Presidential Certificate of Merit was awarded him in 1948 for his valuable services to the government as Investigator for the National Defense Research Committee and the Committee for Medical Research, as well as for his work as Chairman of G-3 (Analytical and Field Problems of Chemical Warfare) and as Consultant in the Southwest Pacific Area for the Office of Field Service.

Arthur C. Cope, Ph.D. '32, is professor of chemistry and head of the Department of Chemistry at Massachusetts Institute of Technology. He is a member of the National Academy of Sciences.

John E. Willard, Ph.D. '35, professor of chemistry at the University of Wisconsin, has been appointed a member of the Advisory Committee on Isotope Distribution of the U. S. Atomic Energy Commission. His term of office which began July 1, 1952 will end June 30, 1956.

All of our graduates do not necessarily follow chemistry after graduation. Walter P. Trost, E.S. '41, for

example, became an ordained minister of the Evangelical Reformed Church. The Rev. Trost is now head of its mission school in British Togoland, Gold Coast, Africa.

Uunnstein Stefansson, M.S. '46, is in charge of the hydrographic and chemical work at the Icelandic University Research Institute, Department of Fisheries, Reykjavik. Currently he is at the Woods Hole Oceanographic Institution, Woods Hole, Mass., on a visiting fellowship.

Glenn O. Michaels, B.S. '48, has joined the staff of the Esso Laboratories of the Standard Oil Development Company, Linden, N. J., it has been announced. He is a member of Phi Beta Kappa, and Phi Lambda Upsilon, the American Chemical Society and the American Institute of Chemists. He served over two years in the Navy during World War II.

Joseph G. Baldinus, a three-degree alumnus, whose six years between the B.S. and Ph.D. '49 were divided between a turn of duty as an officer in the Chemical Warfare Service and enrollment in the Graduate School, is a research chemist with Colgate-Palmolive-Peet Co., Jersey City, N. J.

A warm friendship between two graduate students which had its inception when they were research-room mates here was not to be interrupted because of separation upon graduation of the first of the pair. Gerald A. Harlow, Ph.D. '51, went west to join the research staff of Shell Development, Emeryville, Cal., and Stephen W. Nicksic, Ph.D. '52, followed him next year in a similar capacity with California Research Corporation, Richmond.

E. R. Fitzgerald, Ph.D. '52, is assistant professor of physics at Penn State College.

Argonne National Laboratory Program

Wisconsin is a member of the Participating Institutions Program of the Argonne Laboratory which was set up in 1946 and so works very closely with the Laboratory taking advantage of various opportunities for the facilitation of research in radiochemistry. Several members of the Department were connected with the Laboratory during the war period and have continued to work closely with it since. Professors Holt and Hall have spent some time there as have University staff members in other departments. Dr. Willard, for the past several years, has taken his students there for a visit.