

APRIL 1953

THE CHESAPEAKE CHEMIST

PUBLISHED BY THE
MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. 9 NO. 4

THE APRIL MEETING

The Maryland Section will again meet in Remson Hall, Room 104, on the Homewood Campus of The Johns Hopkins University, Friday, April 24, at 8:30 P.M. Dr. George W. Irving, Jr. of the Bureau of Agricultural and Industrial Chemistry, Washington, D.C., will be the speaker for the evening.

Dr. Irving, who will talk to the section on "Some Activities of Chemistry in Agriculture", has been associated with the U.S. Department of Agriculture as a chemist and administrator for a number of years. He will discuss the role that is being played by the Bureau of Agricultural and Industrial Chemistry in the Department of Agriculture's approach to the problems of the farming industry. The importance of these problems to the farmer, to the national welfare, and the potential available for solving them will be considered. From his wide experience in this field Dr. Irving will give specific examples of the contributions of Government chemists, of areas now receiving attention, and of glimpses into the future opportunity for chemistry in agriculture.

There are four Regional Research Laboratories of the Department of Agriculture which have been in existence for a number of years. Their prime purpose is to bring chemistry to the aid of the farmer by showing him new industrial uses for farm products and for by-products obtained by the chemist. Many notable contributions have resulted from the work of these laboratories. The Bureau of Agricultural and Industrial Chemistry with which Dr. Irving has been connected for the past six years, is administratively responsible for the noteworthy contributions of chemistry to agriculture.

Dr. George W. Irving, Jr., who is President-elect of the Washington Section of the American Chemical Society, received his undergraduate and graduate training in chemistry from the George Washington University. Both his M.A. (1935) and his (to page 3

Section Officers

Chairman	Winslow H. Hartford, Mutual Chemical Company of America, Baltimore 34
Vice-chairman	William H. Summerson, Chemical Corps, Army Chemical Center, Maryland.
Secretary	H. H. Lloyd, Goucher College, Baltimore 4
Treasurer	E. A. Metcalf, 907 Litchfield Road, Baltimore 42

THE CHESAPEAKE CHEMIST is published each month from September through May by the Maryland Section, American Chemical Society.

Editor: J. Lloyd Straughn, Western Maryland College,
Westminster, Maryland.

Associate Editor: Stephen S. Hubard, Davison Chemical
Corporation, Baltimore 3

THE REMSEN MEETING

Dr. Wm. Mansfield Clark, Chairman of the Remsen Memorial Lectureship Committee, has announced that Dr. Edward L. Tatum, Professor of Biology, Stanford University, has accepted the Committee's invitation to deliver the eighth Remsen Memorial Lecture. Dr. Tatum is being honored for his pioneering work in the biochemistry of genetics and he will speak on "Contributions of Biochemical Genetics and Microorganisms to Biochemistry". He will be introduced by Professor William D. McElroy of The Johns Hopkins University. The Remsen meeting will be held on Friday, May 15, in Remsen Hall on the Homewood Campus. Please note the change in date - one week earlier than usual.

* * * * *

Organic Chemistry Symposium. The Thirteenth National Organic Chemistry Symposium, sponsored by the University of Michigan Section and by the Division of Organic Chemistry, both of the American Chemical Society, will be held in Ann Arbor, Michigan, June 15 to June 18, 1953.

William von E. Doering - The Chemistry of Tropolones and Related Substances.

Donald J. Cram - Studies of Asymmetric Induction in the Synthesis of Acyclic Systems.

Carl G. Niemann - The Scope and Mode of Action of the Enzyme alpha-Chymotrypsin.

John C. Sheehan - Synthetic Approaches to the Penicillin Structure.

Emil Schlittler - Rauwolfia Alkaloids.

David Y. Curtin - The Cis Effect.

Max Tishler - Selected Topics from Recent Developments in the Chemistry of Steroids.

Melvin S. Newman - Some Aspects of the Chemistry of Acetylenes.

Marshall Gates - The Synthesis of Morphine.

C. Gardner Swain - Nucleophilicity and Electrophilicity.

Hermann O. L. Fischer - (Dinner Speaker) - Reminiscences of Chemistry on Two Continents.

William Shive - Growth Factors.

Robert B. Woodward - Recent Advances in the Chemistry of Natural Products.

from page 1) The April Meeting

Ph.D (1939) were in the field of biochemistry, to which he has made worthy contributions. In 1946 he received the Award for Scientific Achievement in the Physical Sciences given by the Washington Academy of Sciences for his work in biochemistry, especially for his researches on antibiotics in tomato plants.

Dr. Irving started his career in chemistry with the Government as Laboratory Assistant with the National Bureau of Standards in Washington, D. C. in 1927, was with the Bureau of Chemistry as Laboratory Assistant from 1928 to 1935, and then Junior Chemist at the Bureau of Entomology and Plant Quarantine in 1935. After three years (1939-42) as Assistant in Chemistry at the Rockefeller Institute for Medical Research in New York City he went to the Southern Regional Research Laboratory in New Orleans as Biochemist and then Senior Biochemist. This was the beginning of his association with the Bureau of Agricultural and Industrial Chemistry, which he continued as Senior Biochemist and Principal Chemist, Head of the Division of Biologically Active Compounds in the Agricultural Research Center at Beltsville, Maryland, from 1944 to 1947. In September 1947 he became Assistant Chief of the Bureau of Agricultural and Industrial Chemistry in Washington and also Professorial Lecturer in Biochemistry at the George Washington University Medical School, which positions he holds at the present time.

He is a member of the Society of Biological Chemists, the Society for Experimental Biology and Medicine, and has recently been appointed a vice-president of the Washington Academy of Sciences to represent the Washington Section of the ACS. He is also a member of Alpha Chi Sigma, Sigma Xi, and the Cosmos Club of Washington, D. C.

A dinner in honor of the speaker will be served at 6:30 at The Johns Hopkins Club, and is open to members of the section and their guests. Reservations should be made by Tuesday, April 24, with Dr. W. H. Summerson at 504 W. University Parkway, Baltimore 10; by phone at TUxedo 8787 or BELmont 0400 and leave a message.

* * * * *

A Puzzler. Several of the local section publications carry a monthly puzzle to tease the brains of their readers. Here is one that has appeared in some of the publications. Try your brain on this one.

A chemical company has six employees: president, vice-president, chief chemist, laboratory technician, stock clerk and stenographer. The following facts concerning them are available.

1. The vice-president is the president's grandson.
2. The stock clerk is the chief chemist's son-in-law.
3. The technician is Miss White's niece.
4. Mr. Jones is 25 years old.
5. Mr. Brown is a bachelor.
6. Mr. Smith is the president's neighbor.

Which person holds which job?



NEXT MEETING April 24 TIME 8:30 P.M.
PLACE Room 401, Remsen Hall, Johns Hopkins
Charles and 34th Streets
SPEAKER Dr. George W. Irving, Jr.
SUBJECT Some Activities of Chemistry
in Agriculture
DINNER 6:30, The Johns Hopkins Club
Charles and 34th Streets
The meeting is open to any who are interested.
Save Friday, May 15, for the Remsen meeting.

G. W. Irving, Jr.

GETTING ACQUAINTED WITH CHESAPEAKE CHEMISTRY

XXV THE DAVISON CHEMICAL CORPORATION
by Stephen S. Hubard

The Davison Chemical Corporation was formed in 1935 by re-organization of the Davison Chemical Company, which had operated for many years chiefly as a manufacturer of superphosphate, mixed fertilizers, and sulfuric acid. Davison has remained a very large producer of these important items, but has from time to time added products of other types. In 1920, it opened the first commercial plant for making silica gel, now a widely used desiccant and selective adsorbent, both industrially and in the laboratory. The manufacture of silica gel eventually paved the way to a synthetic silica-alumina cracking catalyst, now manufactured in large tonnages for use in several major refineries. Quite recently, a petroleum reforming catalyst has been developed in co-operation with an outside firm.

Other manufactures include silicofluorides, with such diverse uses as concrete hardeners and laundry soaps; flattening agents (to produce a matte finish in lacquers and varnishes); pigment additives; and a wide variety of specialty catalysts. Examples of the latter are oxidation, polymerization, and hydrogenation catalysts. Silica gel itself has evolved into a "family" of products, with special uses as varied as chromatographic analysis, refrigerant drying, and catalyst bases.

The home office of Davison is in downtown Baltimore, and the main plant is at Curtis Bay. Extensive phosphate rock deposits in Florida, owned by the Corporation, require a large adjacent installation for handling rock preliminary to superphosphate manufacture. A triple superphosphate plant in Florida will constitute a major expansion when completed, and a new plant for manufacturing cracking catalysts has been built near Lake Charles, Louisiana. There are several fertilizer plants in the eastern part of the United States, as well as one at Perry, Iowa, and at Lansing, Michigan, and there is a catalyst plant in Cincinnati.

The Research and Development Division of Davison is in Baltimore. In addition to research, process engineering, and a patent department, this division has two unusual features—a unit (specialty) plant serving both as a pilot plant and to produce numerous small tonnage items, and a development planning group, which assays possible fields for new corporate or research ventures.