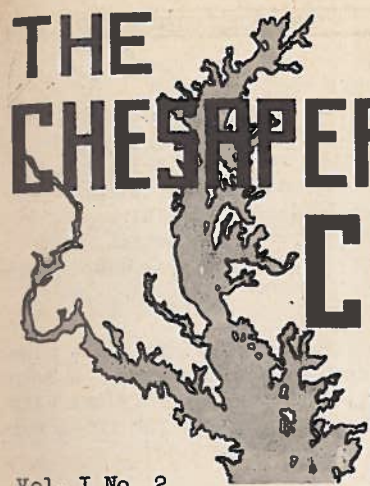


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THE CHESAPEAKE CHEMIST

SEPTEMBER 1945



PUBLISHED BY THE
MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

Vol. I No. 2

THE CHESAPEAKE CHEMIST is the name of the venture in journalism that has been undertaken by the Maryland Section. The name seems to locate us geographically and to indicate our sponsorship; it is simple and has enduring dignity.

THE CHESAPEAKE CHEMIST is scheduled to appear in its present form for three more issues in 1945. Its growth and fate after that rest with the members of the Section.

THE SEPTEMBER MEETING

Dr. Emil Ott, Director of Research, Hercules Powder Company, will address us on "The Relation of Physical Characteristics and Chemical Structure of Cellulose Derivatives" at our next meeting, Friday, September 28, 1945. The importance of high polymers is well recognized today, and the well-defined and closely related derivatives of cellulose constitute a significant group. Dr. Ott will show how modifications in the cellulose molecule affect the physical and chemical properties. The influence on solubility, melting point and flexibility of such factors as intermolecular forces, rigidity of molecule, nature and distribution of the substituent, and the degree of substitution will be discussed. The effect of the shape of the molecule, the average molecular weight and molecular weight distribution on such physical properties as tensile strength and elongation will be pointed out.

Dr. Ott was born in Zurich, Switzerland, and received his Ph. D. degree from the Swiss Institute of Technology in 1927. In 1928-29 he was American Petroleum (to third page)

Section Officers

Chairman W.F. Reindollar
 Vice-chm. Giles B. Cooke
 Secretary C.W. Wilson
 Treasurer C.W. Wilson

Section Councillors

A. H. Corwin
 Leslie Hellerman
 John Herculson
 A. L. Kibler
 P. K. Leatherman
 Frederick Wiselogle

The shooting is over. Prayers for an enduring peace rise everywhere. As we emerge from the complex and momentous events of recent days the chemist will work, perhaps less grimly but with unabated determination, for total peace as he did for total war.

The American Chemical Society is opposed to legislation calling for registration or licensing of chemists. The American Institute of Chemists favors it. Since perhaps every member of the Institute also holds membership in the Society, it becomes obvious that a significant number of A.C.S. members do not endorse the Society's position. The question of licensure threatens to loom large at future sessions of the A.C.S. Council. Without at this time going into the merits of the issues involved, we feel that our Councillors (whose names are listed above) would appreciate an expression of opinion on these matters from our members, so that when the occasion arises they will be able to debate and vote in accordance with the concensus of our membership.

Giles Cooke and his committee are considering the practicability of a dinner, to which all members will be invited, preceding each regular monthly meeting. With this issue of THE CHESAPEAKE CHEMIST appears an announcement of the plans for this month. Our readers are asked to keep in mind that in these unsettled times plans cannot be made for the entire year. However, here is the beginning of a serious effort to give us opportunity for much-needed social contacts. Therefore even though the arrangements for this first dinner may not meet everyone's desires, let us realize that the Committee is working against great odds and needs the encouragement of every chemist's attendance if we are to get the most for the least out of these dinner gatherings.

On October 26, 1945, Dr. Earl L. Warrick of Mellon Institute will address the Section on "Organosilicon Polymers."

Jules T. Ducatel, Professor of Chemistry at the old University of Maryland Medical School, and Isaac Tyson, founder of the Baltimore Chrome Works, predecessor to the Mutual Chemical Company of America, have streets in Baltimore named after them. Do you know other instances of this sort?



Dr. Ott

(from first page) Institute Fellow and from 1929 to 1933 Assistant Professor of Chemistry at The Johns Hopkins University. In 1933 Dr. Ott joined the Development Department of Hercules Powder Company and in 1937 was made head of the Research Department. In 1939 he was appointed Director of Research for the entire Company. He has published numerous papers, has lectured extensively, and is author of "Cellulose and Cellulose Derivatives."

NEXT MEETING: September 28
 TIME: 8.30 P.M.
 BRING ANOTHER CHEMIST

PLACE: Room 101, Remsen Hall
 The Johns Hopkins University
 Charles & 34th Streets

THE EXECUTIVE COMMITTEE MEETING
 SUMMARY OF MINUTES

The Executive Committee of the Maryland Section met on August 6, 1945, at the home of Chairman and Mrs. Reindollar. Of the topics considered, three are of particular interest to the membership at this time:

1. The news bulletin, THE CHESAPEAKE CHEMIST, will be continued, for a while at least, under the guidance of the Editorial Committee, composed of W. H. Hartung, Miss Belle Otto, H.H. Lloyd and Paul Leatherman.
2. Plans are under way for another inspection trip to a representative industrial chemical plant in this area.
3. It is proposed to invite all members of the section to attend a get-together dinner before each monthly meeting for the purpose of promoting the spirit of comradeship among the chemists of this region. The dinner will afford all members an opportunity to become better acquainted with our guest of the evening as well as with one another.

Channing W. Wilson, Secretary

(from 4th page) In addition to plants federally classified as "chemical," many local industries utilize chemical reaction processes and are operated largely by chemists or chemical engineers. Among these are soap, sugar, distilling, brewing, paints, petroleum products, perfumes and cosmetics, dairy, poultry and stock feeds, rubber goods, dyes, etc.

Many new chemicals and chemical products, a number of them synthetics or substitutes, have been quietly or secretly developed locally during the war emergency. Some of these will be adaptable to numerous postwar uses. A greater future awaits Baltimore's chemical industries when, in the new days of peace, expansions now planned become realities.

BALTIMORE'S CHEMICAL INDUSTRY

(Courtesy of H. Findlay French, Baltimore Ass'n of Commerce)

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Baltimore's first chemical industry, as such, was that of Isaac Tyson and Howard Simms, who, in 1816, began the manufacture of drugs, chemicals, paints, etc., at their laboratory on Pratt Street. Their introduction of chrome pigments was the forerunner of the city's chromium industry, which is one of the largest in the world, bringing much of its raw materials 12,000 miles from its own mines in New Caledonia.

In 1828, John McKim erected a plant for the manufacture of alum, chrome colors, etc., on the harbor at the foot of Federal Hill. At about the same time, and almost adjoining that plant, the Maryland Chemical Company is reported to have produced the best salts and drugs in the United States, particularly quinine. It also made copperas, alum, oil of vitriol and chrome pigments. These plants gave Baltimore its status as an outstanding producer of heavy chemicals.

In 1832, Davison, Kettlewell & Co. started to manufacture sulfuric acid in a plant near Federal Hill, and in 1857, taking advantage of the supply of this acid, Gustavus Ober and John Kettlewell began to make fertilizer, in tiny crude kettles, in a plant nearby.

From these modest beginnings the chemical industry of Baltimore has steadily expanded. Just prior to the war, more than one hundred plants were in operation, employing over 6,000 workers and turning out, annually, products valued at approximately \$63,000,000. The outstanding products include sulfuric acid, alcohols, titanium dioxide, lithopone and other pigments, copper sulfate, sodium silicate, chromic acid and other chromium compounds, ammonia, muriatic acid, alum, and "Silica Gel."

All formulas of completely and specially denatured alcohols and related industrial chemicals are produced in large volume. Several companies produce oxygen and carbon dioxide gas. Among drugs and medicinals, a wide range of products are made, some having universal acceptance. Chemicals in food lines are becoming more widely used, and the war perforce introduced many synthetics in flavoring extracts and syrups. Coatings and water-proofing compounds for various materials and purposes are also locally produced. Glues, indicator dyes and solutions, blood chemistry outfits and water and soil testing materials are important local items of manufacture. The janitor supply and insecticide lines, as well as such laundry supplies as bleaches and solutions, are ever increasing in application and variety. (to 3rd page)