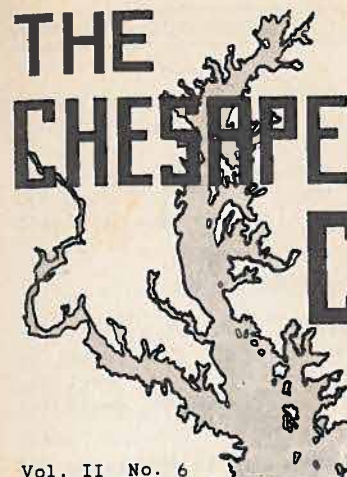


THE
CHESAPEAKE
CHEMIST



SEPTEMBER 1946

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THE SEPTEMBER MEETING

Dr. C. S. Fuller, Director of Research and Development on Plastics, Bell Telephone Laboratories, will address us on "Interpretation of the Properties of Thermoplastics" at our next meeting, Friday, September 27, 1946. Dr. Fuller will review some of the relationships between the properties of thermoplastics as solids and the chemical and physical structure of long molecules. Certain properties,—e.g. chemical stability, softening temperature, brittle temperature, water absorption, hardness and chemical characteristics,—reflect chiefly the chemical structure of the repeating units in the long-chain molecules; whereas other properties,—e.g. toughness, dimensional stability and flow characteristics, at least above the melting point,—depend more on the size and shape of the long molecules present. Still other properties, such as cold flow and crack growth, are more complicated in origin and appear to depend on both chemical constitution and molecular size and shape. An exhibit of commercially important thermoplastics will demonstrate these relationships.

Dr. Fuller was born and educated in Chicago, Illinois. After being awarded the Ph. D. degree in physical chemistry by the University of Chicago in 1929, he joined the technical staff of the Bell Telephone Laboratories as a research chemist. He is now in charge of the research and development group on plastics. His contributions to the physical chemistry of organic high polymers include both publications and patents. During the war years he served as Chief of the Polymer Research Section. He has long been active in the American Chemical Society and has been closely identified with the Gibson Island Conferences on High Polymers.

All members of the Section are urged to attend the dinners on the Hopkins Campus, preceding the monthly meetings; but from now on each member must make his own request for a reservation to the Program Chairman, Mr. John Herculson, 407 Murdock Road, Baltimore 12, Evergreen 896, not later than five days prior to the meeting.

Section Officers

Chairman Giles B. Cooke Vice-chairman John A. Herculson
Secretary C. W. Wilson Treasurer C. W. Wilson

THE CHESAPEAKE CHEMIST is published each month from September through May by the Maryland Section, American Chemical Society. Editor: Belle Otto, Goucher College, Baltimore 18, Maryland.

EXECUTIVE COMMITTEE NOTES

At a meeting of the Executive Committee, held on May 27, the Treasurer was authorized to partially redeem, to the extent of \$300, the \$500 bond which was held in the name of the Section, and to apply the cash received to the Remsen Memorial Award for 1946.

Publication of THE CHESAPEAKE CHEMIST is to be continued for another year, and, if found advisable, the number of pages may be increased. A business manager and additional personnel for the editorial staff are to be appointed by the Section Chairman.

There was extended discussion of the amendments proposed for the American Chemical Society constitution. The proposals which have to do with the membership of the A. C. S. Council are of particular interest, since the representation of the Maryland Section will most certainly be changed. The Executive Committee will favor an amendment which gives every section representation proportional to its membership. The suggestion that the country be divided into twelve regions, with six Councillors for each, is not looked upon with favor by this Section. One important reason is that the region within which we would fall would extend from Baltimore to El Paso, Texas, and would include all southeastern states. We feel that six Councillors could not adequately represent the sections in this territory, which may have widely diverse local interests.

Channing W. Wilson, Secretary

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COMMITTEE CHAIRMEN

Dr. Giles Cooke, Chairman of the Section, has announced the appointment of Dr. Sylvan Forman (U. S. Industrial Chemicals, Inc.) as Chairman of the new Committee on Professional Status. This committee is to keep the members of the Section informed of trends and developments in connection with professional standing. Dr. Sanford Jenkins (The Crown Cork & Seal Co.) will succeed Dr. Forman as Chairman of the Membership Committee.

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from fourth page) Maryland Section. Secretary Patterson's speech, to which the author refers, is in the "News Edition" for April 25, Page 1029.)

THE OCTOBER MEETING AT STANDARD OIL

The meeting arranged for October promises to be particularly valuable and interesting. The Section has accepted the invitation of the Standard Oil Company to be their guests for a tour of the refinery in Highlandtown, followed by a dinner at the Lord Baltimore Hotel and an address by Dr. Per K. Frolich. Transportation to and from the plant will be provided by the Company.

The trip through the refinery is being planned very carefully. It will be preceded by a talk at which the processes and equipment which we are to see will be discussed and descriptive printed material will be distributed. Such a tour presents an opportunity to see at first hand what goes on from the time a tanker unloads its cargo until finished gasoline, asphalt and numerous other products leave the refinery. This would appear to be an occasion which few chemists would care or dare to miss.

The trip has been arranged for Tuesday afternoon, October 29. It is hoped that all members of the Section will be able to leave their laboratories to take advantage of this great opportunity. Full details will be given in the October issue.

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THE "REMSEN" MEETING

The report of the Remsen Memorial Lecture for 1946, which appeared in the "News Edition" (June 25th) was gratifying to every member of the Maryland Section. This verbatim report was possible because the entire proceedings were recorded for the Section by the Ediphone Corporation, which donated its facilities and the services of two of its engineers. The generosity of the Ediphone Corporation is greatly appreciated by Maryland chemists. The recordings have been turned over to the Secretary of the Section.

The scroll which was awarded to Dr. Adams carries, at the top, the blue and gold diamond-shaped insigne of the Society and, below, the embossing, "Presented to Roger Adams on the occasion of his Remsen Memorial Lecture, sponsored by the Maryland Section of the American Chemical Society in memory of Ira Remsen, teacher, investigator, author, administrator. May 24, 1946."

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COURSES IN CHEMISTRY

For the local chemist who wishes to register for one or two courses, The Johns Hopkins University will offer the schedule of late afternoon and evening classes announced in its Catalogue. Loyola College reports that all its day and evening classes are already filled. The Baltimore Program of the University of Maryland will include graduate courses given by regular staff members and carrying resident credit values; details may be secured from the Extension Division, Lombard & Greene Sts., Plaza 1100, Extension 48. Goucher College admits to regular undergraduate classes qualified women who register as special students for one course.



Dr. Fuller

NEXT MEETING September 27 TIME 8:30 P. M.
SPEAKER Dr. C. S. Fuller
SUBJECT Thermoplastics
PLACE Room 101, Remsen Hall, Johns Hopkins
Charles & 34th Streets

BRING ANOTHER CHEMIST

This is the only notice of this meeting which you will receive.

Save November 22nd and December 13th for future meetings, and see third page about October.

EDGEWOOD ARSENAL AND THE N. D. R. C.

by Duncan MacRae

Before December 1941, most of the research of the Chemical Warfare Service was done at Edgewood Arsenal, but by the end of 1942, the new facilities there were overcrowded and other military installations were necessary. The N. D. R. C. had established its civilian laboratories in many places, under the guidance of a number of division chiefs, and a committee had been formed to guide the joint effort. Its members were: Dr. J. B. Conant, Dr. Roger Adams, Brig. Gen. W. C. Kabrich, Col. M. B. Chittick, and Major F. B. Stewart. In addition, Drs. W. R. Kirner, W. A. Noyes, Jr., and C. S. Keevil, representatives of N. D. R. C. Divisions 9 (Chemistry), 10 (Absorbents and Aerosols), and 11 (Chemical Engineering), became members of Gen. Kabrich's staff with offices at Edgewood.

At this time the writer's liaison activities were transferred from Edgewood to Evanston, Ill. There, a large Division 10 laboratory was working on gas masks and charcoal at Northwestern University and the location was convenient for trips to some twenty laboratories elsewhere throughout the country. Much time was spent at Division 10's munitions development laboratory at Urbana, Ill., and with its meteorology groups at Pasadena and Berkeley, Calif. Division 9 had groups of organic chemists from coast to coast, including those at Maryland and at Hopkins. Its Toxicity Laboratory at the U. of Chicago tested materials from all of these and so was of especial interest. Division 11 conducted much work on flame throwers, incendiary bombs and large smoke generators. One of its largest groups was that at the Standard Oil Development Company, Elizabeth, N. J. Division 3 (Special Projectiles) worked on chemical mortars, including the recoilless type, at the Alleghany Ballistics Laboratory.

A feature of these many trips was the opportunity to know the professors, research directors and especially the younger men and women who contributed so effectively to the solution of important military problems. Those who wish an appraisal of the value of the products of this work should read the recent speech of the Secretary of War at Atlantic City.

(Editor's Note.--Dr. MacRae, Chief Chemist, Chemical Warfare Service Technical Command at Edgewood Arsenal, has long been a member, and at present is a Councillor, of the (to second page