

THE CHESAPEAKE CHEMIST

DECEMBER 1948

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MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

THE DECEMBER MEETING

The Maryland Section will hold its next meeting on Friday, December 17, with Dr. C. E. Barnett of the New Jersey Zinc Company as the guest speaker. Dr. Barnett is a native of Chicago, did his undergraduate work at Hiram College, and received his Ph.D. degree from Cornell University in 1930. In that year he joined the staff of the New Jersey Zinc Company as a physical chemist in the Research Division. He has been chief of the Physics Section since 1939.

Dr. Barnett will lecture on "Luminescence in Solids", supplementing his discussion with slides and demonstration material. Practical interest in luminescent substances for use in fluorescent lamps and cathode ray screens developed about fifteen years ago and greatly stimulated study of crystal luminescence in this country and in Europe. Prior to this time, sulfide phosphors had received the major attention in systematic studies of luminescent materials, but in work on fluorescent lamps it was soon found that these sulfide phosphors do not have sufficient stability in the presence of mercury vapor under prolonged irradiation. Zinc silicate phosphors were found to be much more stable and efficient in their response to mercury irradiation.

During the war research was carried on along three lines: development of long persistent combinations for radar, development of infrared-sensitive phosphors, and development of general purpose phosphors for guidance, legibility and a variety of related applications under severe blackout restrictions. The developments in the first of these fields have not added much to the fundamental theory of crystal luminescence. Those in the other two provide some interesting examples of the effect of the interaction of foreign atoms (activators) on the luminescence process.

Most of the investigations before 1920 emphasized factors that subsequently have been found unimportant for: (to page 2

Section Officers

Chairman J. A. Herculson, 407 Murdock Road, Baltimore 12
 Vice-Chairman A. H. Corwin, Department of Chemistry,
 The Johns Hopkins University, Baltimore 18
 Secretary-Treasurer H. H. Lloyd, Goucher College, Baltimore 18

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.

MARYLAND SECTION BUSINESS

Executive Committee As a result of the elections held on November 19, the following members of the Section will serve as the Executive Committee for 1949:

Officers

J. A. Herculson
 A. H. Corwin
 H. H. Lloyd

Members-at-large

Charles Brambel
 E. A. Metcalf
 W. H. C. Rueggeberg
 W. H. Hartford
 Leslie Hellerman

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 J. C. Krantz, Jr.
 Belle Otto
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Alternates

Giles B. Cooke
 W. H. Harden
 Duncan MacRae
 C. W. Wilson

Past Chairmen (not

otherwise listed)
 H. A. B. Dunning
 Fitzgerald Dunning
 Edward S. Hopkins
 Wm. F. Reindollar
 C. P. VanGundy
 Donald H. Andrews

Annual dues and contributions to the Remsen Lectureship

Statements of annual local section dues for 1949 have been mailed with this issue of THE CHESAPEAKE CHEMIST. The Treasurer's report (page 3) makes clear why such local section dues are necessary. The Editor suggests that NOW, while you think of it, you send your check to the Treasurer (his address is at the top of this page). The Treasurer or his representative will also be on hand at the December meeting to receive "cash over the counter".

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from page 1) The December Meeting

interpretation of the luminescence mechanism. Much work since then has been directed toward practical objectives with additions to fundamental knowledge as only a secondary aim. As a result, only a small part of the large amount of work recorded has value for fundamental interpretation of the luminescence process, but there is enough to provide the basis of a theoretical understanding of the simpler examples.

The dinner preceding the meeting will be held at the Johns Hopkins Club. Reservations must be made before noon on Thursday, December 16, with Dr. A. H. Corwin, Department of Chemistry, The Johns Hopkins University, Baltimore 18 - telephone HOPkins 3300, Extension 322. The dinner is open to all members of the Section.

REPORT OF THE TREASURER
 Maryland Section, American Chemical Society
 January 1, 1948 to December 1, 1948

Cash on hand, January 1, 1948		\$ 243.63
Receipts:		
Apportionment of ACS funds	\$ 1,221.50	
Commissions for new members	16.25	
Local Section dues for 1948 (in addition to \$142.00 received in December 1947 for 1948 dues and reported in 1947)	172.00	
Remsen contributions for 1948 (in addition to \$115.00 received in December 1947 for 1948 and reported in 1947)	137.00	
Interest on bonds	17.50	
	<u>\$ 1,564.25</u>	1,564.25
		<u>\$ 1,807.88</u>
Expenditures:		
Speakers' expenses, including the Remsen Memorial Lectureship	429.75	
Printing "The Chesapeake Chemist" (eight issues)	416.16	
Postage, stationery, telephone	224.99	
Secretarial and janitor services	144.50	
Refreshments (after meetings)	48.77	
Miscellaneous	9.00	
Bank service charges	1.00	
	<u>\$ 1,274.17</u>	1,274.17
Cash balance on hand, December 1, 1948		\$ 533.71
United States Government bonds		700.00
Total resources (cash and bonds)		<u>\$ 1,233.71</u>

It should be pointed out that, for the purpose of bringing our fiscal year into conformity with that used for reporting to ACS headquarters in Washington--namely, December 1 through November 30--the foregoing report to the Section covers only eleven months. Expenses for December 1948 will total at least \$100.00, which will reduce the cash balance for the entire year to about \$400.00.

Of a total membership of more than 700, only 314 paid local dues (\$1.00) and only 252 made contributions (\$1.00) to the Remsen Lectureship in 1948, whereas the cost of this lectureship was approximately \$340.00. Furthermore, the cost of this and other functions in 1948 has been below the average for a period of years. If the Section is to operate properly and keep its budget on a sound basis, a larger fraction of the membership should pay dues and contribute to the Remsen Lectureship in 1949. Two dollars is little enough to give for what the Section officers hope to be able to offer Chesapeake chemists for the coming year.

Respectfully submitted,

H. H. Lloyd, Treasurer



C. E. Barnett

NEXT MEETING December 17 TIME 8:30 P.M.
PLACE Room 101, Remsen Hall, Johns Hopkins
Charles & 34th Streets
SPEAKER Dr. C. E. Barnett
SUBJECT Luminescence in Solids
DINNER 6:30, The Johns Hopkins Club
Charles & 34th Streets

The meeting is open to any who are interested.
Bring another chemist.
Merry Christmas!

REPORT OF THE SECRETARY FOR 1948

The membership of the Maryland Section has grown to more than 700 ACS members, in addition to 25 local members and 40 individuals and groups to whom "The Chesapeake Chemist" is sent gratis.

Nine public meetings of the Section have been held. Attendance has shown an increase, reflecting care and judgment on the part of the Program Chairman, A. H. Corwin, in selecting good speakers on interesting topics. The recently adopted plan of supplying name cards and the continued practice of providing refreshments have added greatly to good fellowship at meetings. Two well attended meetings of the Executive Committee, which have been reported in detail, were devoted to the discussion of ways and means of promoting the interests of Chesapeake chemists.

The highlight of the year was the third Remsen Memorial Lecture in May. Dr. Elmer V. McCollum, Professor Emeritus of Biochemistry of the School of Hygiene and Public Health of The Johns Hopkins University, was the choice of the Remsen Committee, headed by Dr. R. D. Fowler, Chairman of the Department of Chemistry at Hopkins. In his talk on "Vitamins and the Public Health" Dr. McCollum presented important scientific principles (to which he himself has made notable contributions) in the field of nutrition, interspersed with rare bits of humor and delicate sarcasm aimed at those who have been guilty of quackery. At the conclusion of his talk Dr. McCollum was given the Remsen Memorial Scroll.

Speakers at other meetings included Robert C. Hockett (Sugar Research Foundation), Lawrence F. Hafsted (Hopkins), Ralph K. Witt (Hopkins), Ben B. Corson (Mellon Institute), Emil Ott (Hercules Powder Company), Walter S. Koski (Hopkins), and Joseph T. Walker (Massachusetts State Police Chemical Laboratory).

The cooperation of our Councillors and their Alternates, at some sacrifice on their part, has enabled us to be fully represented at ACS Council meetings. Belle Otto, in her quiet, effective way, has maintained the high standard of "The Chesapeake Chemist," which has appeared regularly and has kept us well informed on matters of local and national interest in chemistry.

H. H. Lloyd, Secretary