



THE

# CHESAPEAKE CHEMIST

MARYLAND SECTION  
AMERICAN CHEMICAL SOCIETY

VOL. XXV

MAY, 1969

NUMBER 5

*Presented to*

**Albert L. Lehninger**

*on the occasion of his*

**Remsen Memorial Lecture**

*sponsored by*

*The Maryland Section of the American  
Chemical Society*

*in memory of*

**Dra Remsen**

*Teacher, Investigator, Author, Administrator*

*June 4, 1969*

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# THE CHESAPEAKE CHEMIST

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### IN THIS ISSUE

- 24th Remsen Memorial Lecture ..... 5
- Executive Committee Minutes ..... 7
- Maryland Section News ..... 9
- ACS Awards ..... 10
- Précis of Lecture ..... 13

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*The Chesapeake Chemist* is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Dr. James Leslie, University of Maryland, 636 W. Lombard St., Baltimore, Md., 21201. Address advertising inquiries and plates to Merle I. Eiss, Sinai Hospital of Baltimore, Inc., Belvedere Ave. at Greenspring Ave., Baltimore, Maryland 21215.

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## TWENTY-FOURTH REMSEN LECTURE

#### DATE AND TIME:

Wednesday, June 4, 1969 at 8:30 P.M.  
Shaffer Hall, Homewood Campus,  
The Johns Hopkins University.

#### SPEAKER:

Dr. Albert Lester Lehninger,  
Professor and Director,  
Department of Physiological  
Chemistry,  
The Johns Hopkins University School  
of Medicine, Baltimore, Maryland.

#### SUBJECT:

*"The Molecular Organization of the  
Mitochondrion"* (see page 13).

#### DINNER:

Clipper Room, Shriver Hall.  
Cocktails 6:00 P.M., dinner 6:30 P.M.  
(Reservations are necessary and  
limited; use form on page 11).

#### PARKING:

Free parking is available in the lot  
adjacent to Shriver Hall.

#### MIXER:

Refreshments will be served in the  
Clipper Room after the lecture. Every-  
one is welcome.

#### COVER

Facsimile of the scroll to be  
presented to the twenty-fourth  
Remsen Memorial Lecturer,  
Dr. Albert Lester Lehninger.



A. L. LEHNINGER

Dr. Lehninger was educated at Wesleyan University (B.A., 1939) and the University of Wisconsin (M.S., 1940; Ph.D., 1942). Following wartime research in the physical chemistry of blood plasma proteins, he joined the faculty of the University of Chicago where he remained until 1950. In 1952 he became DeLamar Professor and Director of the Department of Physiological Chemistry at The Johns Hopkins School of Medicine, a position he still holds. He has also served as visiting professor at the Universities of Frankfurt, Cambridge, Padua, Harvard, and Guys Hospital Medical School. Honors received by Dr. Lehninger include the Paul-Lewis Award in Enzyme Chemistry (1948), honorary D.Sc. degrees from Wesleyan University and the University of Notre Dame, the honorary degree of Doctor of Medicine and Surgery from the University of Padua in Italy, the Distinguished Service Award of the University of Chicago. He is a member of the National Academy of Sciences and has served as a member of its Commit-

(Continued on page 11)



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## EXECUTIVE COMMITTEE MINUTES

Minutes of the Executive Committee Meeting  
of the Maryland Section of the American Chemical Society  
on February 4, 1969  
at Loyola College Alumni House Rathskeller  
Baltimore, Maryland

The meeting was called to order at 8:25 p.m. by the Chairman, Dr. Harold Delaney. Those present were: M. J. Albinak, J. S. Cogliano, Elmer H. Engquist, Edwin M. Glocker, Jerome Goldenson, Don Jones, Joyce J. Kaufman, R. J. Kokes, J. L. Kolbe, Frederick S. Lee, M. P. Miller, F. T. Parr, Betty Lou Raskin, Ernest F. Silversmith, and John I. Stevens.

Mr. Goldenson, the Treasurer, reported that as of January 1, 1969, the Section had \$6,192.45 in cash on hand. The income for the year 1969 is expected to be \$7,874.75 and estimated expenses are \$8,825.00. He stated that there is a need for a more efficient method of collecting dues from members who have been delinquent in payment of dues to the Maryland Section. He suggested that telephone squads be organized. Dr. Kokes suggested sending eye-catching informal reminders to these members. Mr. Parr recommended that all bills for Section dues be itemized. Mr. Goldenson questioned the value of the \$900 allocation for the Public Relations Committee for publicizing meetings. Dr. Kokes recommended revision of our mailing list, and Dr. Kaufman suggested that the meeting page from *The Chesapeake Chemist* be mailed to organizations, instead of posters.

Dr. Delaney announced the following committee chairmen for 1969:

Awards—Dr. George Steinberg  
Continuing Education—Dr. Paul Stamberger

Education—Dr. M. J. Albinak  
House—Mr. Allen Bednarczyk  
Membership—Mr. Edwin M. Glocker  
Program—Dr. Joseph Cogliano  
Public Relations—Mrs. Ann Morgan Cascorbi

MARM 1971—Dr. Donald E. Jones  
Special Scholarship—Dr. Brown L. Murr

Remsen Memorial Lecture—Dr. Walter S. Koski  
Long Range Planning—Dr. Samuel L. Goldheim

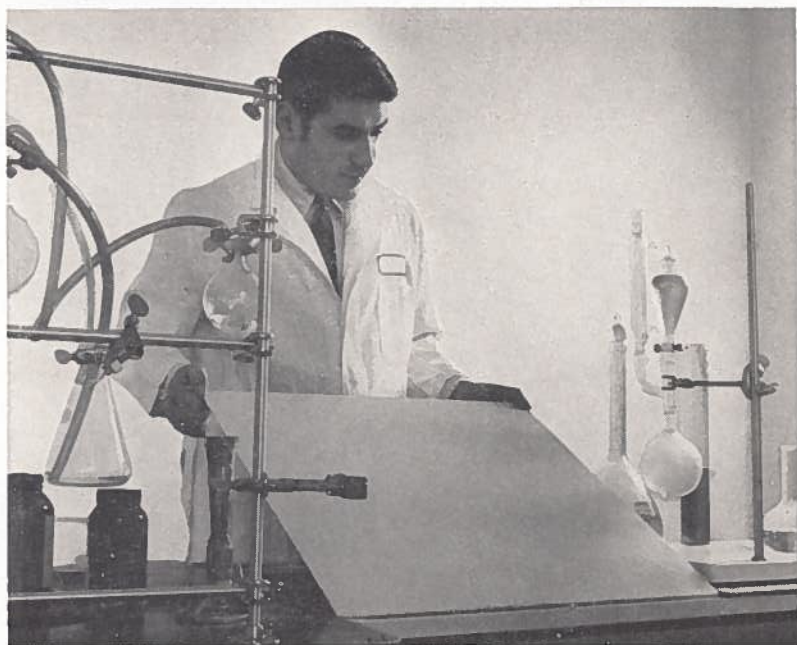
Mr. Glocker reported that the Maryland Section has been asked by A.C.S. Headquarters to evaluate the qualifications of an applicant without a degree who has asked to become a member of the national society. Mr. Glocker explained that a person without a degree can become a member of the Maryland Section and an associate member of the national society, if the Maryland Section sends in a favorable evaluation of him.

Dr. Kokes reported that the *ad hoc* committee on the Special Scholarship consisting of Dr. Delaney, Dr. Murr, and himself, was planning to ask local companies for the maximum amount of money and summer employment they will have available for the disadvantaged students to be helped by the Scholarship. After contacting high school principals, the committee plans to interview some high school students. Dr. Delaney plans to obtain the names of a few potential recipients of the Scholarship from Mrs. George Spaulding at Dunbar High School. A student selected for the award would receive \$1,000 a year for two years, providing matching funds from local industries were made available. He or she would study chemical technology at a local community college, probably at the Catonsville Community College or at the Community College of Baltimore. In addition to free tuition and books, the student would be given about \$65 per month for lunch and transportation.

Mr. Parr asked for an analysis of the results from the Section questionnaire concerning preferred courses which was distributed at the December 1968 meeting. No information concerning the results was available.

(Continued on page 14)

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## MARYLAND SECTION NEWS



### GOVERNMENT

#### FORT DETRICK

There was a joint meeting of the members of the Interdisciplinary Scientific and Engineering Seminar organizations at the Ft. Detrick conference room on February 19th. Dr. Moshe Rubinstein, Associate Professor of Engineering at UCLA, discussed "System Analysis and Synthesis in the Age of Computers." The Scientific Research Society of America, Fort Detrick Branch, joined with Hood College in presenting a lecture, "The Logical Structure of Modern Chemistry" by Dr. Roald Hoffman, Cornell University on February 18th.

Dr. Rudolph J. Allgeier, long-time member and a former councilor for the Maryland Section, retired from employment at Ft. Detrick on February 28th. Dr. Allgeier was elected a Fellow in the American Institute of Chemists during February.

The top high school science students from the state of Maryland, Maryland Junior Science and Humanities Symposium, visited Fort Detrick, for luncheon, discussions and tours on March 21, 1969. This visit was sponsored by the Fort Detrick Branch of Research Society of America (RESA). RESA sponsored lectures by Dr. Emanuel Suter, Dean of the College of Medicine, University of Florida, "Human Experimentation, Medical Progress and Society," on 18 March, 1969, at Hodson Science Hall, Hood College, and by Dr. Frank C. Whitmore, Jr., U. S. Geological Survey, Smithsonian Institution, "Digging into 18-Million Years of Maryland's Past," on 15 April, 1969.



### ACADEMIC

#### THE JOHNS HOPKINS UNIVERSITY

Effective June 30, 1969, Dr. Walter S. Koski has resigned as Chairman of the Chemistry Department. Dr. Robert G. Parr has agreed to accept the position for a three year term.

Dr. Ruth Aranow has joined the Department of Chemistry as a Special National Institutes of Health Postdoctoral Fellow with Dr. John W. Gryder. She formerly was employed by Research Institute for Advanced Studies, the Martin-Marietta Corporation of Baltimore.

Dr. Brown L. Murr spoke February 11 at the Trenton Section of the American Chemical Society, Trenton, N.J. on "Stereochemistry of Triarylmethyl Derivatives".

Dr. John W. Gryder participated on the National Science Foundation Review Panel in Washington, D. C. on March 28, 1969.

Dr. Dwaine O. Cowan presented a lecture on "Intramolecular Triplet Energy Transfer" at the ACS Meeting in Minneapolis, Minn. on April 16.

#### UNIVERSITY OF MARYLAND

Dr. Jeremy Wright and Dr. James Leslie of the Department of Pharmaceutical Chemistry attended a meeting at the British Embassy in Washington, D. C. on April 12, at which a United States Section of the Royal Institute of Chemistry was formed.

#### COPY DEADLINE

Copy for the *Chesapeake Chemist* should be forwarded to the Editor not later than the tenth of the month preceding publication.

# ACS AWARDS

This article is continued from the April issue of the *Chesapeake Chemist*.

## NOMINATIONS FOR AWARDS

Any member of the Society (except a member of the Award Committee) may submit one nomination for each award. Such proposal must be accompanied by a biographical sketch of the nominee (including date of birth), a list of his publications and patents, specific identification of the work on which the nomination is based, and an evaluation and appraisal of the nominee's accomplishments, particularly the work to be recognized by the proposed award. If the proposed nominee is eligible for any of the other ACS awards, state clearly the reason(s) for selection of the particular award.

The evaluation and appraisal of the nominee's accomplishments is of great importance and should be prepared with care. It provides an opportunity to spotlight contributions of particular significance to theory or practice and to show how these have been applied. An analysis of patents is especially valuable. If the nominee is not the sole author of important publications listed or evaluated, his contribution should be specified.

Seconding letters are not necessary. Only those which contain factual information about the candidate not provided in the nominating document will be transmitted to the selection committee. In no instance may more than two (2) such supporting letters be included as part of the nomination. In nominations by petition, the person whose signature is first will be considered as the nominator and the endorsements which follow will be eliminated.

Although not required, reprints and/or preprints may be included if the subject treated is restricted to work on which the nomination is based primarily. The number of reprints and/or preprints may not exceed five (titles).

Renomination of candidates is encouraged. However, nominations are not extended automatically from year to year.

A formal letter of nomination must be submitted by the sponsor each year prior to the March 1 deadline if the candidate is to be considered.

The original and two copies of the nomination and seconding letters and eight copies of any printed material (reprints, preprints, etc.) must be furnished for distribution to the members of the Award Committee. The nomination and its accompanying material must be received in the Office of the Executive Secretary before March 1 to the year preceding that in which the award is to be made.

## CANVASSING COMMITTEES

To assure that no outstanding candidate is overlooked, a Canvassing Committee for award nominations has been established for each award. It is expected to search the literature and suggest to potential nominators candidates who may have been overlooked. By a mail or personal canvass of Society members known to be in a favorable position to evaluate outstanding work in the field of the award, the committee not only provides the deadline dates for submission of names and supporting data, but also reminds sponsors of their responsibility. In other words, this group is expected to rectify the common human failing of relying on someone else to do the job.

The Council's Standing Committee on Local Section Activities serves as the Canvassing Committee for the ACS Award for Outstanding Performance by Local Sections. The Women's Service Committee acts as the Canvassing Committee for the Garvan Medal.

Prior to the annual solicitation of nominations, one member is appointed to each of the special canvassing committees for a term of three-award years by the President-Elect of the Society or, in his absence, by the President; the senior member serves as chairman. Vacancies are filled by appointment for the unexpired term.

(Continued on page 14)

A. L. LEHNINGER

(Continued from page 5)

tee on Science and Public Policy. He has served on the Editorial Boards of the *Journal of Biological Chemistry*, *Journal of Cell Biology*, and *Biochemistry*, among others. In addition to nearly 200 research papers, he has published two books, *The Mitochondrion* (1964) and *Bioenergetics* (1965). A third book, a biochemistry text, will be published in late Fall of 1969.

Some problems first developed in his Ph.D. dissertation research. In a series of investigations between 1943-1950 he showed that ATP is necessary to activate fatty acid oxidation, that acetyl residues derived from fatty acids enter the Krebs cycle. He discovered that the Krebs cycle and fatty acid oxidation cycles, as well as electron transport and oxidative phosphorylation take place in mitochondria (1948-1950). Since then he has carried out many investigations on the mechanism of oxidative phosphorylation, submitochondrial systems, ion transport and conformational changes in mitochondria.

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Twenty-Fourth Remsen Memorial Lecture

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American Chemical Society

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Dinner 6:30 P.M.

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Finally, the self replicating properties of mitochondria and the nature of their informational components DNA, tRNA's, and ribosomes will be reviewed with respect to the function of mitochondria as the power plants of eukaryotic cells.

#### LOOK FOR MARYLAND SECTION AWARD MEETING

#### POSTERS FOR SECTION MEETINGS

The mailing list for posters describing the monthly meetings of the Maryland Section is being brought up to date. If you are interested in receiving posters for display, or if you do not have use for the posters presently being mailed to you, we would like you to let us know so that we could amend the mailing list. Please send the information to 636 West Lombard Street, University of Maryland, Baltimore, Maryland 21201, c/o Dr. James Leslie.

#### CATONSVILLE COMMUNITY COLLEGE COOPERATIVE WORK-STUDY PROGRAM

Catonsville Community College and W. R. Grace Research Laboratory have negotiated an agreement for a cooperative work-study program for students in the Chemical Technology curriculum. Under this plan students enrolled in this curriculum would complete one semester of courses at the College and then work on alternate semesters at the Grace Washington Research Center in Clarks-ville, Maryland at jobs selected to reinforce their studies.

Students could continue to alternate study and work semesters thereafter until their education was completed. The total program would take three years and those students who completed the program would be awarded the Associate in Arts degree. They would receive the standard salary for chemical technician trainees for the periods worked at W. R. Grace.

For the past two years, enrollment in the Chemical Technology curriculum has been small and it is anticipated that the cooperative-work study program should attract more students. There is a known shortage of trained technicians for the chemical industry. Catonsville Community College has the only program of this type in the Baltimore metropolitan area.

Interested individuals from industry or high school students and counselors can obtain more information about this program by contacting Joseph A. Scarlett, Director of Career Programs, or Robert Reynard, Assistant Professor of Chemistry at Catonsville Community College, telephone number 747-3220.

The Editor and Staff of The *Chesapeake Chemist* thank all those who contributed to the Chemist during the past year, and wish all the members a pleasant summer.

## ACS AWARDS

(Continued from page 10)

### AWARD COMMITTEES

A committee of experts in the field of each award selects the recipient. For all except the Charles Lathrop Parsons Award and the Priestley Medal the committee consists of seven appointed members, each of whom serves for three-award years. Terms are on a rotating basis.\* These appointments are made by the President-Elect or, in his absence, by the President. Members are ineligible for a second consecutive appointment to the same award committee. For the ACS Award in Enzyme Chemistry sponsored by Chas. Pfizer & Co., Inc., the personnel of the award committee is limited to noncommercial chemists. The committee for the Garvan Medal shall have not less than two or more than three women as members. Nonmembers may serve on the Award Committees for the James Bryant Conant Award in High School Chemistry Teaching sponsored by E. I. du Pont de Nemours & Company Incorporated and for the James T. Grady Award provided they do not constitute a majority. Except for the Charles Lathrop Parsons Award and the Priestley Medal, the President-Elect of the Society or some member designated by him serves as Chairman of each Award Committee.

Promptly after the deadline for receipt of nominations, the Office of the Executive Secretary of the Society transmits all documents received to the Chairman of the Award Committees. In each case, except for the ACS Award in Pure Chemistry, the Charles Lathrop Parsons Award and the Priestley Medal, the Chairman then sends the nominations with supporting data to the members of the appropriate committees, requesting prompt review.

\*If it is decided in advance that an award will not be made, thereby relieving the committee of its responsibilities, all appointments are extended automatically for another year.

NATIONAL ACS MEETING  
SEPT. 7-12, NEW YORK CITY

## EXECUTIVE COMMITTEE MINUTES

(Continued from page 7)

Mr. Kolbe reported that the Awards Committee is seeking nominees for the Maryland Chemist Award. Dr. Kaufman suggested that the Maryland Section become more active in nominating chemists for national offices. Dr. Delaney reported that three fifty-year members who are members of the Maryland Section will be given fifty-year pins, certificates, and permanent membership badges in April. They will be invited to the April 9th dinner and meeting and invited to bring a member of the family with them.

Dr. Delaney reported that the Maryland Section has been asked to supply the speaker for the joint meeting of the Maryland-Washington Sections to be held in May. The Washington Section has asked us to choose a speaker who will not cover topics which were discussed in the February MARM meeting.

Dr. Jones stated that a chairman of the 1971 MARM meeting will have to be selected before December 1969. Shortly after January 1970 a call for papers will have to be made. Dr. Jones said that the Civic Center will be the primary site of this meeting and that work on the exhibits has already begun. The Executive Committee agreed to support Dr. Jones's expenses in connection with the preliminary aspects of the meeting. Dr. Kaufman suggested that past chairmen of the Maryland Section be called upon to help plan the meeting.

Dr. Cogliano asked for the names of prospective speakers for the 5:00 o'clock meetings. The meeting was adjourned at 10:20 p.m.

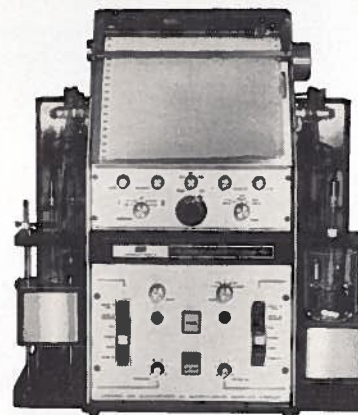
Respectfully submitted,  
Betty Lou Raskin  
Secretary, Maryland Section  
American Chemical Society

### AICHE NATIONAL MEETING

The 66th National Meeting of the American Institute of Chemical Engineers will be held on August 24-27, 1969 at the Hilton Hotel, Portland, Oregon. Complete details may be obtained from the Institute at 345 East 47th Street, New York, N. Y. 10017.

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## Thomas Model 40 MICRO HOT STAGE

*New model with interchangeable  
pre-calibrated thermometers*



For micro melting point determination and other fusion studies. Range 30 to 350°C. Accuracy,  $\pm 1^\circ\text{C}$  to 300°C;  $\pm 1.5^\circ\text{C}$  above. New type thermometers are replaceable from stock. Requires metal stage microscope such as 6517-J10 and 8 mm working distance objectives.

Hot stage chamber is 5.5 mm deep  $\times$  90 mm i.d. A 2 mm hole at center transmits light from below. Manipulator for 1  $\times$  1½-inch slides extends through stage rim. Two thermometers are supplied:

one 30 to 230°C, the other 60 to 350°; both scaled in 1° divisions.

**6885-W10. Hot Stage**, complete assembly. With autotransformer; heat baffle; cooling block; 24 micro slides; 3 oz. cover glasses; test reagents; sublimation accessories. In storage case. *Without microscope* ..... **370.00**  
**6885-W25. Ditto**, with autotransformer, heat baffle and cooling block, but without other accessories. .... **315.00**  
**6885-W40. Ditto**, without case ... **280.00**

*Detailed bulletin sent upon request.*



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