THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXIV JANUARY, 1968 NUMBER 1

THE CHESAPEAKE CHEMIST

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IN THIS ISSUE

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 Lionel Katzoff, Sinai Hospital of Baltimore, Inc., Belvedere Ave. at Greenspring Ave., Baltimore, Maryland 21215.

JANUARY MEETING

DATE:

Wednesday, January 17, 1968

PLACE:

Eudowood Gardens Lecture Room, Eudowood Plaza, Joppa Road near Goucher Blvd.

SPEAKERS AND TOPICS:

8:30 P.M. Dr. Howard V. Malmstadt, Prof. of Chemistry, University of Illinois. *Electronic Instrumentation For Use By Chemists* (see page 13).

COCKTAILS AND DINNER:

Eudowood Gardens Dining Room. Price is $3.50 per person for cocktails (6:30-7:15 P.M.) and dinner (7:15 P.M.) Free parking. Reservations must be received no later than January 16.

Use reservation form on page 13. We encourage you to bring your wife and friends to both the dinner and the meeting.

SOCIAL HOUR:

There will be a social hour after the meeting. Refreshments will be served. All are welcome.

SPECIAL NOTICE

Students (and their spouses) may attend the dinner at a charge of $2.00 each. **Prior reservations are necessary.**
Use reservation form on page 13.

H. V. MALMSTADT

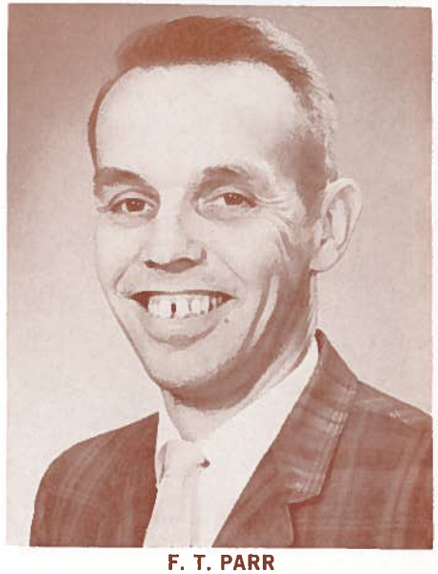
Howard V. Malmstadt was born in Wisconsin in 1922 and received a B.S. degree from the University of Wisconsin in 1943. From 1944 to 1946 he was Radar Officer for a division of destroyers in the Pacific.

After the war he returned to the University of Wisconsin for graduate work and received an M.S. degree in 1948 and Ph.D. degree in chemistry in 1950. The following year he remained at Wisconsin as a Post-doctoral Research Associate.

He joined the faculty of the University of Illinois in 1951, and was promoted to full Professor in 1961. He was a Guggenheim Fellow in 1960 and was the 1963 winner o fthe ACS Award in Chemical Instrumentation. He is past National Chairman of the Analytical Division and member of the ACS Council. At present he is a member of the Advisory Council on College Chemistry.

His major areas of research are in time-resolved spectroscopy, analytical reaction rate methods and automation. He is the author or co-author of more than seventy technical publications and the book *Electronics for Scientists*. Several commercial instruments are based on his designs.

CHAIRMAN'S MESSAGE



F. T. PARR

During the third week of last October I was privileged to attend a three-day Regional conference on local section activities in Saddle Brook, New Jersey, as the representative from the Maryland Section. This conference attracted delegates, primarily local section chairmen and chairmen-elect, from the New England, New York, Pennsylvania, New Jersey, Delaware, Washington, D.C. and Maryland areas. There was also representation from the National Committee on local section activities. The meeting was organized and conducted by Marshall Mead, Manager of the Local Section Activities Office.

The meeting agenda covered all the facets of local section activities, and the delegates present discussed many of these in detail. Some of the enlightening comments heard on a variety of topics are as follows.

The subject of finances came up for discussion. It was disclosed that the local section publications are run at a loss in general. In contrast to this, the *Chesapeake Chemist* has for the most part been run on a self-supporting basis over the years.

Continuing education in the form of lecture series have been carried on very successfully for many years in some large sections. However, in contrast to this success a chairman of one of the medium size sections reported that he had experienced some trouble along that line. His section offered $50 plus expenses to a professor at a local school to teach a course once a week, and found no takers. As you all know, when a lecture series has been sponsored by the Maryland Section it has been very successful both academically and financially. During 1967 the Maryland Section sponsored two ACS short courses. The attendance at these courses indicated the interest of the membership in this type of activity.

In regard to regional meetings, those present felt that the quality of the papers presented was not too good, and that the committee on acceptance should be much more selective with the papers. Others felt that if an individual had a worthwhile paper to present, he would rather give it at a national meeting than at a regional one, because of the prestige involved.

As was announced several months ago, the Maryland Section will participate this year in the Middle Atlantic Regional Meeting on February 1 and 2 in Philadelphia. Despite the objections of some people to this type of meeting, they have become very popular in recent years and will no doubt continue to be so. The national office likes them, because they help take some of the pressure off the national meetings.

The statement was made that a section cannot progress nor survive without a long-range planning committee. The group felt that the committee should consist of at least eight members with a former section chairman as head. The Maryland Section has had such a committee for several years and will continue to have one in the future.

(*Continued on Page* 14)

MARYLAND SECTION NEWS

Are you doing (or have done recently) anything of interest to your colleagues in the Maryland Section, and would like them to know about it? Have you recently changed jobs? Been promoted? Presented a paper? Awarded a patent? Received a citation for outstanding service? If you have, please let the other members know by sending the information, in any form, to the Editor, James Leslie, University of Maryland, 636 W. Lombard Street, Baltimore, Md. 21201.

GENERAL

Dr. Edward Koubek participated in the dedication of the new campus of Anne Arundel Community College in Arnold, Md., on November 3.

Dr. William H. Stahl participated in the convocation in observance of the 100th anniversary of the founding of Western Maryland College in Westminster on October 21.

Dr. Richard J. Kokes, secretary of the Maryland Section and professor of chemistry at Johns Hopkins University, spoke to the South Jersey Section on November 21. The topic was "Catalytic Hydrogenation of Ethylene".

ACADEMIC

THE JOHNS HOPKINS UNIVERSITY

Dr. D. O. Cowan attended the International Conference on Photo-chemistry held in Munich September 6-9 and discussed some of his recent work on Heavy-Atom Effects. **Professor J. D. H. Donnay** participated in the 25th anniversary celebration of the Pittsburgh Diffraction Conference, November 1-3, 1967, at the Mellon Institute, where he gave an invited lecture entitled "The Geometrical Approach to Crystal Morphology". **Dr. E. H. White** spoke on October 13, 1967 at the DuPont Experimental Station on "The Deamination of Aliphatic Amines."

UNIVERSITY OF MARYLAND

Dr. Masao L. Honjoh, Research Chemist, Research Triangle Institute at Durham, North Carolina, visited the Department of Pharmaceutical Chemistry at the University of Maryland, Baltimore Campus on November 28. During his visit he delivered a seminar on "Biosynthesis and Chemistry of *Mesembrianthem tortuosum* Alkaloids".

WESTERN MARYLAND COLLEGE

Dr. Donald E. Jones, associate professor of chemistry, has been elected president of the Association of Liberal Arts Chemistry Teachers.

INDUSTRIAL

W. R. GRACE AND COMPANY

Dr. M. Gali Sanchez has been appointed General Manager of the Research Division of W. R. Grace & Co. Dr. Sanchez was also appointed a Vice President of the Technical Group. He will be responsible for the Management of the Research Division and for the Administration of the Washington Research Center at Clarksville, Maryland.

Charles E. Brookes was appointed President of the Davison Chemical Division of W. R. Grace and Co. Mr. Brookes succeeds **Page Edmunds,** who has resigned to become Executive Vice President of the J. S. Young Co. of Baltimore. Mr. Brookes, who is 42 years old, assumes the Presidency of Davison

(*Continued on Page* 13)

MEETINGS AND COURSES

There is a number of interesting courses and meetings being presented during the next few months for chemists of the Maryland Section interested in furthering their chemical experience, either by attending a course or two or by participating in a meeting. Descriptions of those events which are convenient to the Maryland area are presented below.

ACS SHORT COURSES

Molecular Orbital Theory — Baltimore, February 9-10, 1968 (see page 9 of the December issue of the *Chesapeake Chemist* for details).

Interpretation of Mass Spectra — Baltimore, March 8-9, 1968 (see this issue for details).

Interpretation of Infrared Spectra — Washington, D. C., February 16-17, 1968 (see *Chemical and Engineering News*, November 20, for details).

PROFESSIONAL DEVELOPMENT PROGRAM

The Professional Development Program sponsored by the Baltimore-Washington Spectroscopy Society in collaboration with the Chemical Society of Washington and the Maryland Section of the ACS has been an outstanding success. There were 101 attendees for the five Tuesday evening sessions at the W. R. Grace Research Center in Clarksville.

Dr. Leopold May, Catholic University, announces the Spring Program on X-Ray Spectroscopy:

February 27 — *Theory* — Dr. Isidore Adler, National Aeronautical and Space Administration.

March 12—*Mathematical Analysis*—Mr. LaVerne Birks, Naval Research Laboratory.

April 2 — *Quantitative Methods* — Mr. Harry Rose, Jr., U. S. Geological Survey.

April 30 — *Semi-Micro Analysis* — Mr. Frank Cuttitta, U. S. Geological Survey.

May 21—*Soft X-ray Spectroscopy*—Mr. Ronald Matson, General Electric Company.

Reservations for attendance will be limited. Contact either **Dr. Leopold May, Catholic University, Washington, D. C., or Alvin Bober, U. S. Customs Laboratory, 103 S. Gay Street, Baltimore, Md. 21202.**

THIRD MIDDLE ATLANTIC REGIONAL MEETING

The third Middle Atlantic Regional Meeting will be held on Thursday and Friday, February 1 and 2, 1968 in the Marriott Motor Hotel in Philadelphia. The Maryland Section is one of the sponsors of this meeting. Papers and Symposia will be presented in Analytical Chemistry, Chemical Documentation, Chemical Education, Chemical Marketing and Economics, Industrial and Engineering Chemistry, Inorganic Chemistry, Medicinal Chemistry and Biochemistry, Organic Chemistry, Petroleum Chemistry, Physical Chemistry, and Polymer Chemistry. In addition to the meetings, there will be a Chemical Exhibition. A banquet on the evening of February 1st will feature Dr. Glenn Seaborg, Chairman, U.S. Atomic Energy Commission. The dinner reservation MUST be made in advance and will be accepted up to the deadline of January 17, 1968. Meeting pre-registration will be accepted up to January 26, 1968. The reservation form below may be used. The complete program for the meeting was published in *Chemical and Engineering News* on December 18.

In conjunction with the Middle Atlantic Regional Meeting the First Eastern Regional Conference of the Two-year College Chemistry Conference will be held on February 2-3 at the Community College of Philadelphia. A conference of this type is designed to promote interchange of ideas and information among two-year college chemistry faculty members, to acquaint faculty with programs afforded by ACS, to allow ACS to review programs and problems of the courses, and to increase participation in the ACS by chemistry faculty and students in two year colleges. Further details may be obtained from William T. Mooney, El Camino College, El Camino, Calif.

MODERN PRACTICE OF GAS CHROMATOGRAPHY

Also coinciding with the Middle States Regional Meeting is a workshop on the Modern Practice of Gas Chromatography presented by the Gas Chromatography Forum of Delaware Valley on January 30-31 at the Marriott Motor Hotel in Philadelphia. There is a registration fee of $50 which includes; registration, copy of syllabus, two luncheons, and a social hour and dinner. Checks should be made payable to Gas Chromatography Forum, and mailed to Dr. Joseph Touchstone, Hospital of the University of Pennsylvania, Philadelphia, Penna. 19104.

The program to be presented is:

Introduction and Principles — S. Dal Nogare, duPont Co.

Current Instrumentation — M. G. Bloch, Mobil Oil Co.

Good GC Practice—L. Mikkelson, Hewlett-Packard Co.

Identification Procedures — F. Rieders, Medical Examiners Office, Philadelphia.

Quantitative Procedures — G. Umbreit, Greenwood Laboratories.

Column Components — Selection, Packing, and Adsorbents — W. Supina, Supelco Laboratories.

Derivatization — G. Kurtz, Dalare Associates.

Limits of GC; Noise and Trace Analysis —J. J. Kirkland, duPont Co.

Pyrolysis for GC and *Integrated Computer Systems* will also be covered. Scheduled colloquia include Auxiliary Equipment, Petroleum, Pesticides and Herbicides, Food and Flavor, Medical and Clinical, Polymers and Pyrolysis, Air Pollution, Aqueous Systems and Water Pollution, and Drugs.

MARYLAND-WASHINGTON MEETING-IN-MINIATURE

It is about time for Maryland Section members to be thinking of the papers they are going to present at the meeting-in-miniature to be held on May 3. Further details will appear in the next issue of the *Chesapeake Chemist.*

FORM FOR ADVANCE REGISTRATION

MIDDLE ATLANTIC REGIONAL MEETING

Please encircle your choice:

	ACS Members	Non-Member Chemists or Chem. Engrs.	Non-Chemists	High School Teachers/ Full-Time Students
Registration and Abstracts	$ 5.00	$ 7.00	$ 5.00	$ 2.00
Abstracts Only	3.00	3.00	3.00	3.00
Dinner Only	8.00	8.00	8.00	8.00
Special Package	11.00	13.00	11.00	8.00

including registration fee, abstracts, and dinner

Name .....

Address .....

Section Affiliation .....

Mail this form and your check for item circled above to Philadelphia Section *ACS*, 212 Harrison Laboratory, 34th and Spruce Streets, Philadelphia, Pa. 19104 (make checks payable to Philadelphia Section, *ACS*). Tickets will be returned by mail before the meeting. Abstracts may be picked up at the registration area durin the meeting.

☐ Check here if you wish to receive a hotel reservation form.

ACS SHORT COURSE

INTERPRETATION OF MASS SPECTRA

Another ACS Short Course will be offered in Baltimore. This course, entitled *Interpretation of Mass Spectra,* will be offered on March 8-9, 1968. The instructors for the two-day course will be Dr. Fred McLafferty, Dr. Don DeJongh, and Dr. David Kingston. The registration fee is $50, and two texts are required, *Mass Spectral Correlations* by F. W. McLafferty, American Chemical Society, Washington, 1963 (Advances in Chemistry Series No. 40), $5.00, and *Interpretation of Mass Spectra—an Introduction* by F. W. McLafferty, Benjamin, New York, 1966, $4.00.

The program, which is sponsored by the Maryland Section of the ACS, is intended to give the student a basic knowledge and capability in the interpretation of the mass spectra of organic molecules. The basic relationships between molecular structure and mass spectra will be discussed in a series of lectures. Students will work unknown mass spectra utilizing these principles and will meet in small group discussion sessions. The only background requirement is college-level organic chemistry; no previous experience with mass spectrometry will be expected.

Complete information about the course, as well as housing near the course site, may be obtained by using the coupon below.

There is no deadline for registration as applications are accepted as long as there is room, even after the cancellation deadline. Early enrollment is strongly encouraged, however, both to allow sufficient time for precourse study and to ensure registration since the enrollments are limited. The course is open to all, and it is not necessary to be a member of the ACS or the Maryland Section.

A person requiring employer authorization should enroll without payment. However, if he then does not receive authorization, he must cancel before the cancellation deadline of February 23 or else be personally responsible for payment of the fee. A limited number of student registrations at one half the regular fee will be available. Each student application must be accompanied by a letter from a faculty member, on the department letterhead, stating that the registrant is a full-time student.

Education Office Chesapeake Chemist—Jan. 1968
AMERICAN CHEMICAL SOCIETY
1155—16th St., N.W., Washington, D.C. 20036

Please send me information on the ACS Short Course—*Interpretation of Mass Spectra* in Baltimore, March 8-9, 1968 .....

Please enroll me in the above course, as indicated below:

Interpretation of Mass Spectra:

.....registration only, $50; cancellation deadline, Feb. 23
.....registration plus "Mass Spectral Correlations," $55
.....registration plus "Interpretration of Mass Spectra," $54
.....registration plus both texts, $59

Payment:

.....is enclosed.
.....please send invoice (.... to me, ... to my employer).
.....will be sent when I receive authorization to attend. In the event that I do not receive such authorization, I am still personally responsible for payment of the fee unless I send my cancellation to the ACS Education Office, Washington, before the cancellation deadline.

Name.....
Address.....
City, State, ZIP.....
Employer.....

MARYLAND SECTION NEWS

(*Continued from Page 9*)

after serving 15 years in a number of capacities in W. R. Grace and Co.'s Dewey and Almy Chemical Division in Cambridge, Massachusetts. Most recently he had been Vice President for Organic Chemicals.

F. Emerson Ivey was also appointed Executive Vice President of Davison. He had previously been a Vice President.

GOVERNMENT

FORT DETRICK

Dr. Donald C. Fish, Process Development Division was moderator of a seminar on Biological Methods: Chromatography, Electrophoresis, and Gel Diffusion at Governor Thomas Johnson High School, Frederick, Md., on November 29th. **Dr. William G. Melson,** Associate Curator, Division of Petrology, Smithsonian Institution, Washington, D.C., presented a lecture on "The Theory of Continental Drift: Its New Scientific Respectability" to RESA, Fort Detrick Branch at Hood College on November 28th. **Dr. William F. Daniels** presented a paper at a Conference, on "Cell Cultures for Virus Vaccine Production", held at Clinical Center, Bethesda, Maryland, sponsored by the Division of Biologic Standards, N. I. H. on November 6-8.

ELECTRONIC INSTRUMENTATION FOR CHEMISTS

Methods are described by which a chemist can rapidly gain a working knowledge of electronic instrumentation. This information proves useful for more efficient use of instrumental methods, for accumulation of more reliable data, the design or modification of chemical methods, and for breaking down measurement and control barriers. The relationship between a few basic instrument systems and many specific chemical instruments and applications is illustrated. A concept of modular instrumentation is also presented.

COVER

Picture shows basic electronics instrumentation station developed by Professor H. V. Malmstadt of University of Illinois and Professor C. G. Enke of Michigan State University.

The system is designed to teach electronics with emphasis on the principles, design and use of instruments in scientific applications.

Tear-Out Dinner Reservation Form

There is enclosed $_____($3.50 per person)* for cocktails and dinner at Eudowood Caterers, Eudowood Plaza, on Wednesday, January 17, 1968 for the following persons.**

Name (Please Print or Typewrite.) Affiliation

*Please make checks payable to Maryland Section, ACS and mail together with reservation form to **Mr. Allen Bednarczyk, McCormick and Co., Inc., 204 Wight Ave., Cockeysville, Md. 21030,** or phone 666-3155, 666-3156.

**Return by January 16, 1968.

CHAIRMAN'S MESSAGE

(*Continue dfrom Page 7*)

Annual reports which are filed by the local section secretary each year in January, and later distributed by the national office to all local sections, is considered to be a good way to keep up with the progress being made by other ACS local sections. The November issue of the *Chesapeake Chemist* listed some of the statistics obtained from the *1966 Review of Local Section Annual Reports*. Except for a few very large sections, our section compares very well in the various catagories covered in the report with other large sections.

The Society feels that the main objective of a local section is to aid in the development and progress of its membership. This is best accomplished by having as many section members active on committees as possible. One local section which has 3000 plus members has 400 of these on various committees.

After studying the comments of the various local section representatives at the meeting, I feel that the Maryland Section compares favorably with the majority of the other sections in regard to accomplishments and activities offered its members. However, we are always willing to hear suggestions from the membership concerning their desires for some type of activity in which the section is not presently engaged. Also, we would like very much to have volunteers to work on any of the following committees: Awards, Chemical Education, Public Relations, House Committee and Hospitality.

Please, if any of you can spare the time, volunteer your services to the Maryland Section by informing either myself or an yof the other officers of your availability. We will be most happy to have you.

As you can see by the comparisons that I have drawn, the section has progressed under the very capable leadership of past chairmen and their hard-working committees. With this same spirit of cooperation I hope to make this year another year of progress for the Maryland Section. I will be looking for all of you at the monthly meetings in 1968.

F. T. PARR

MEMBERSHIP CHANGES

Lewis P. Fisher, 6119 Chinquapin Pkwy., Baltimore.

John C. Friedly, Dept. of Chemical Engineering, Johns Hopkins University, Baltimore.

Thomas Richard Jones, 902-A Long Bar Harbor Rd., Abingdon.

Charles G. McAlister, 606 Andover Rd., Lithicum Hgts.

S. Joseph Rosenbaum, Science Dept., United States Naval Academy, Annapolis.

Karl A. Schellenberg, Johns Hopkins Sch. of Med., 725 N. Wolfe St., Baltimore.

John James White, POB 326, Edgewood.

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Baltimore, Maryland 21201

PLEASE DO NOT DELAY — DATED NOTICE INSIDE

New... Model ED-5 with Stainless Steel Chamber

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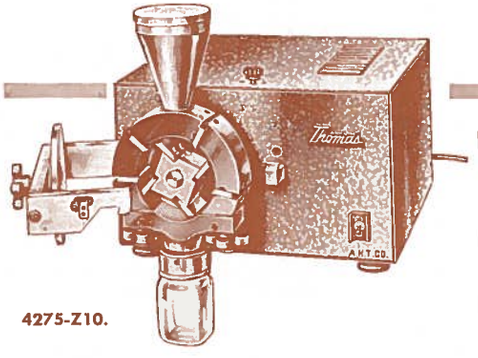

4275-Z10.

- ***Meets the demand for a size between Intermediate and Model 3***
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- ***Chamber 5 inches diameter; 3-speed enclosed drive***

LABORATORY MILL, Wiley Stainless Steel Model ED-5. For milling of a large variety of corrosive and other materials. Offers the advantages of the basic Wiley Mill shearing principle but with smaller chamber capacity.

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Door. Handwheel clamping screw seals heavy Stainless steel plate door against the face of Mill. When released, door pivots on an aluminum bracket for full diameter access to the grinding chamber. *Safety electrical interlock disconnects motor when door is open.*

Sieves. Curved, round hole screens of Stainless steel, inexpensive and easily interchangeable. With shim plates in the form of curved frames. Align automatically when inserted.

Receivers. Threaded collar at lower end of chute takes a standard 1-pint glass jar, permitting observation of finished product and is convenient for storage. Collar is removable for replacement of jar by a bag or smaller neck vessel.

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4275-Z22. Laboratory Mill, Wiley Stainless Steel Model ED-5, as described. Indentical with tool steel model ED-5 described in our 1965 catalog, except for Stainless steel parts. With ½, 1 and 2 mm sieves. For 115 volts, 60 cycles, a.c. Shipping weight 168 lbs.....1,365.00

NOTE—Can be converted for 230 volts, 60 cycles, in accordance with wiring instructions furnished.

4275-Z26. Ditto, but wired for 230 volts, 50 cycles, a.c.....1,380.00

Copy of Bulletin 129A with detailed descriptions of the complete line of Wiley Mill models sent upon request

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