



THE

CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXXVII

FEBRUARY, 1981

NUMBER 2

EXECUTIVE COMMITTEE MINUTES

The Executive Committee of the American Chemical Society was called to order by the Chairman, Dr. Miller, at 7:35 P.M. on Monday, December 1, 1980 at the Knott Science Center, College of Notre Dame, Baltimore, Maryland. The following members were present: A. Bober, R. L. Caret, H. Cohen, S. Courtade, M. Eiss, F. Hummel, D. Jones, M. Kirk, H. Klapper, E. C. Penski, R. Petersen, N. Phillips, C. F. Rowell, L. Sacchetti, M. Salb, J. Topping, Sister M. Vincent.

Since the minutes were published in the December issue of *The Chesapeake Chemist*, now in our hands, they were accepted as published. The following reports were given:

Chairman. Dr. Miller announced that the Officers proposed by the Nominating Committee had been elected for the coming year.

Dr. Miller and Dr. Rebbert gave a talk on Chemical Safety before the Maryland Association of Science Teachers at the Convention Center on October 17, 1980. It was well attended.

The Membership Chairman, R. Kreps, has resigned because of the pressure of work.

The Annual Report for 1980 must be in the hands of the National Officers before February 1, 1981.

One nomination from the Section has been received for the E. Emmett Reid Award and forwarded to the awards chairman at Lehigh University.

A letter of thanks from Dr. Silversmith was read, for the support sent by the Maryland Section, \$300.00, for the Intercollegiate Student Chemists Conference to be held at Morgan State University on April 11, 1981.

Treasurer. Mr. Klapper distributed the financial statement for the Section: the only outstanding bill at present is that of the caterer for the November dinner. The Government Investment Trust earned 11% in October.

Program. Mr. Penski distributed copies of the tentative program for the Section meetings for 1980-1981.

Chemical Education and Safety. The Workshop on Applied Problem Solving through Creative Thinking will be held at the Quality Inn, Towson, on January 31, 1981, from 9 A.M. to 5 P.M. A moderator is needed; the Committee requests suggestions.

Public Relations. Mr. Caret sent a letter to the photography departments of all Maryland Schools before the lecture by Dr. Walsh of Eastman Kodak. He will continue to send notices about the meetings. W.R. Grace will handle the publicity for the December meeting, at which Dr. Sanchez of Grace will receive the Maryland Chemist Award, and will send a photographer.

Publicity. Dr. Jones is handling the publicity since Dr. Smith resigned.

Finance. Mr. Bober presented a budget for 1981. Suggestions were made for Councilor expenses, since it is desirable to have as many Councilors at each meeting as possible. Allowance should be made for at least two nights and one day. The price of the dinners, as well as local dues, could be raised to provide revenue, if necessary. It was decided to adopt the budget suggested as a guide to expenses. No restrictions will be made until necessary; an increase in the dues will be discussed in the spring.

Membership. Mr. Phillips reported attendance at the year's meetings.

Student Awards. The annual student award meeting will be held in April. Announcement letters have been sent out, and four responses received. Sr. Vincent will need the addresses of the recipients for the Journal of Chemical Education. Awards have been purchased.

Chesapeake Chemist. Mrs. Eiss announced that Mary Salb, of McCormick, will be the Business Manager for *The Chesapeake Chemist* after January 1, 1981. We have very little advertising at present. Several community colleges may advertise a special course this year, and it is hoped that other colleges will also do so. Mr. Sacchetti suggested that Fisher Scientific be approached on the subject.

MARM. Dr. Caret announced that the Steering Committee has been selected for the MARM to be held in Baltimore, at the Baltimore Hilton, either on May 3-7 or May 10-14, 1986. Dr. Joseph Topping will be Vice-Chairman; Dr. Craig Townsend, Program Chairman; Ms. Merle Eiss, Publicity and Abstracts; Alvin Bober, Exhibits and Facilities; and Don Jones, Consultant.

Old Business. Mr. Penski presented a revised copy of the proposed changes in the By-Laws. The disadvantage of the change is that Chairmen-elect would have to commit themselves for three years. Merle is planning to have a Program Committee with a separate chairman for each meeting, which will distribute the work. The group decided to table any revision of the By-Laws for one year.

New Business. A letter has been received from Dr. Henry Butcher, Chairman of the Biology Department at Loyola College, and Chairman of the Towson State Chapter of Sigma Xi. He wishes to notify all scientific societies in the state about a proposal to bring persons from various disciplines together and to publish the results of local research efforts. This was discussed. Mr. Penski suggested that notices of all scientific and engineering meetings in the area be published in *the Chemist*, to encourage interest in groups other than our own. He announced that the Executive Committee meetings would be held on March 4, May 6, September 2, and December 2, 1981.

Candidates are being solicited for the F.J. Zimmerman Award in Environmental Science, sponsored by the Central Wisconsin Section and Zimpro, Inc.

The meeting was adjourned at 9:15 P.M.

Respectfully submitted,
F.C. Hummel, Secretary

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COMMITTEE CHAIRPEOPLE - 1981

Awards and National Nominations.....
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338-7417

Chemical Education...Sr. Mary Vincent
The College of Notre Dame of MD
435-D10D

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531-5711

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760-9631

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Western Maryland College

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Community College of Baltimore
396-7991

Remsen Award.....Dean Robinson
The Johns Hopkins University
338-7430

Finance.....Alvin Bober
655-5254

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267-3302

Timothy Parr.....Westinghouse
747-4195

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Donald Hoster Richard Rebert
Maria Kirk Sister Vincent
Cheryl Manger

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Linda Sweeting Alvin Bober
Robert L. Caret Clara Adams

The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Raymond C. Petersen, 9329 Joey Drive, Ellicott City, Md. 21043. Send advertising copy and inquiries to Mary Salb, McCormick and Co., Inc., 204 Wight Avenue, Hunt Valley, Md. 21031. The Maryland Section is not responsible for opinions expressed herein. Editorials express the opinions only of their authors. The Editor is responsible for all unsigned material.

JOHN T. YATES, JR.

John Yates received his B.S. degree in chemistry from Juniata College in 1956. He worked with Professor Garland and obtained his Ph.D. in Physical Chemistry from MIT in 1960. He taught physical chemistry at Antloch College, Ohio from 1960 to 1963. In 1963 Dr. Yates joined the staff at the National Bureau of Standards where he is currently the Chief of the Surface Processes and Catalysis Section. He has been the Chairman of the Board of Trustees of the American Vacuum Society and the Chairman of the Division of Colloid and Surface Chemistry, ACS. Dr. Yates has authored over one hundred technical reports and he has received numerous awards and honors, the latest being selected as the A. D. Little Lecturer at MIT.

STRUCTURE OF CHEMISORBED SPECIES ON SINGLE CRYSTALS

Within the last 10 years it has become possible to structurally characterize chemisorbed layers with increasing accuracy. In this lecture the nature of chemisorption by transition metal single crystals will be examined from three different viewpoints:

- (1) adsorption energetics.
- (2) long-range two-dimensional overlayer order.
- (3) local molecular structure at surface atomic binding sites.

It will be shown that modern experimental methods such as LEED (low energy electron diffraction) and ESDIAD (electron stimulated desorption - ion angular distribution) permit one to obtain structural information specifying the atomic site location of an atomic or molecular adsorbate on a single crystal surface. Information of this kind forms the foundation of modern surface chemistry today.

ARTHUR H. MCCREESH

Arthur McCreesh received his B.S. degree from St. John's University in New York in 1953 and his M.S. and Ph.D. degrees from Temple University in 1957 and 1960, respectively. He served as a Research Pharmacologist in the Organic Chemistry Division of the Army Chemical Research & Development Laboratories from 1960 to 1973. In that capacity he tested and developed test procedures for evaluating the toxicity of a great variety of chemicals of military importance. In 1973 he was appointed Chief of the Toxicology Division, Army Environmental Hygiene Agency. This division has the responsibility for evaluating the potential occupational or environmental hazards of the many chemical and chemical systems in use by the Army throughout the world. Dr. McCreesh participates in or chairs many intergovernmental committees and activities dealing with the toxicity of propulsion chemicals and pest control materials, as well as exhaust and combustion products to which military personnel or property may be exposed. He has served the American Society for Testing and Materials as a sub-committee chairman, developing standardized procedures for evaluating the effects of pesticides on man and the environment.

CHEMICAL TOXICOLOGY

Toxicology is a very integrated science, incorporating expertise in chemistry, biology, pathology, engineering, physics, mathematics and, increasingly, law and politics. These influences develop health assessments in terms of toxicity, hazard and risk, based heavily on dose-response relationships developed from laboratory, field and human data. *cont. on p 6...*

FEBRUARY MEETING

DATE:

Wednesday, February 18, 1981

PLACE:

Knott Science Center
The College of Notre Dame
of Maryland
North Charles Street
Baltimore

SPEAKERS AND TOPICS:

6:00 pm
John T. Yates, Jr.
National Bureau of Standards
"Structure of Chemisorbed
Species of Single Crystals"

8:30 pm
Arthur H. McCreesh
US Army Environmental Hygiene
Agency
"Chemical Toxicology"



JOHN T. YATES, JR.

COCKTAILS AND DINNER:

Doyle Building Dining Room

Cocktails 7:00 - 7:30 pm

Hot buffet dinner (7:30) \$8.50 per person, except spouses, retired chemists and students may attend the dinner for \$6.50

Please make reservations by mailing checks to

Elwin C. Penski
2515 Jerusalem Road
Joppa, MD 21085

by February 9. Late reservations may be made by calling

879-8589 (Baltimore local)
or 671-2243 (8:00 to 4:30
weekdays)
877-2923 (evenings after 7:00)

before February 11.

The exact number of dinner reservations must be provided to the caterer by February 11. Mailing checks early will reduce the length of lines at the door, make for a smoother operation, and assure your being served.

It is not necessary to be a member of the American Chemical Society to attend. You may attend the lectures without attending the dinner.

...cont from p 4

The impact of State and Federal Regulations dealing with the toxic effects of chemicals has caused a massive increase in data required before materials can be released into our world, resulting in reevaluations in the values demanded of new chemicals and chemical systems. Current testing requirements and alternatives under review will be the main topics of this presentation.

MARYLAND SECTION FUTURE PROGRAM

<u>Date</u>	<u>Location</u>	<u>Speakers</u>	<u>Topics</u>
March 18	U.S. Naval Academy	Edward J. Poziomek (APG Chem. Systems Lab.)	Perspectives on Chemical Defense Research
		William H. Zoller (Univ. of Maryland)	Atmospheric Chemistry
April 15	College of Notre Dame	Robert J. Huggett (Va. Institute of Marine Science)	Trace Metals in Coastal Plain Estuaries
		Ralph W. F. Hardy (E. I. duPont)	Chemical Research to Feed the Expanding Billions

TOWSON STATE UNIVERSITY CHEMISTRY SEMINARS

February 17 Tuesday	Dr. Nordulf Debye, Chemistry Department Towson State University	Tin Mossbauer Spectroscopy
March 12 Thursday	Dr. Ralph Blomster, School of Pharmacy University of Maryland, Baltimore	Plants as a Source of Drugs
April 9 Thursday	Dr. Richard Heck, Chemistry Department University of Delaware	Organopalladium Compounds: Versatile Reagents for Organic Synthesis

Place: Towson State University - Smith Hall - Room 541

Time: 12:45 pm Coffee & Doughnuts: 12:30 pm

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CHEMISTRY COLLOQUIA

Colloquia are held at 4:15 p.m. in Remsen Hall 221 on the Homewood Campus of the Johns Hopkins University. Refreshments are served at 4:00 p.m.

<u>Day and Date</u>	<u>Speaker and Affiliation</u>	<u>Title or Topic</u>
Tuesday January 27	William Klemperer Harvard University	The Nature of Intermolecular Potentials as Determined by Spectroscopy of van der Waals' Molecules
Tuesday February 3	Joseph Katz The Johns Hopkins University	Photo-Induced Nucleation
Tuesday February 10	Gary Pruett University of Pennsylvania	State-to-State Reactive Dynamics of Vibrating Molecules
Tuesday February 17	Richard Cavanagh National Bureau of Standards	Adsorbate Vibrational Modes as Probes of Surface Chemistry: Infrared and Neutron Studies
Tuesday February 24	Howard Zimmerman Univ. of Wisconsin, Madison	Recent Advances in Mechanistic and Exploratory Photochemistry
Tuesday March 3	Mary Roberts M. I. T.	Synthetic Lipoprotein Models: Short Chain Lecithin Mixed Micelles
Tuesday March 10	Steve Harris General Motors Research Labs	Two New Laser Diagnostic Techniques for Combustion Studies
Tuesday March 17	Yuan Lee Univ. of California, Berkeley	Crossed Molecular Beams Studies of Elementary Molecular Processes
Thurs. or Fri.* March 26 or 27	Klaas Bergmann Universität Kaiserslautern	Studies of Collisionally-Induced Rotational Transitions w/Lasers
Tuesday April 7	Gregory Geoffroy Penn. State University	Synthesis and Reactivity of Hetero-nuclear Bimetallic Organometallic Compounds
Tuesday April 14	M. C. Lin Naval Research Laboratory	Laser Applications to Heterogeneous Catalysis
Friday April 24	Eric Heller Univ. of California, L.A.	How Important are Quantum Effects in Molecular Vibrations?
Tues. or Wed.* April 28 or 29	Carl Lineberger Joint Institute for Laboratory Astrophysics	Negative Ion Spectroscopy

*Call (301) 338-7423 (or 8425) for final dates.

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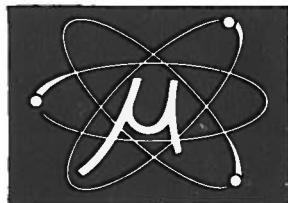
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