



THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXXVII

MARCH, 1981

NUMBER 3

THE JOHNS HOPKINS UNIVERSITY

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 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 Mole- cular 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 Hetero- geneous Catalysis
Friday April 24	Eric Heller Univ. of California, L.A.	How Important are Quantum Ef- fects in Molecular Vibrations?
Tuesday April 28	Carl Lineberger Joint Institute for Laboratory Astrophysics	Laser Photodetachment Spec- troscopy of Negative Ions and Small Free Radicals

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

BOARD OF TRUSTEES, GROUP INSURANCE PLANS FOR ACS MEMBERS

Group insurance plans are another service offered by the ACS to its members. These plans provide a wide variety of coverages at low group rates.

For members under age 65 who join the Society for the first time in 1980, the Board of Trustees is offering, at no cost, \$15,000 life insurance, including \$15,000 accidental death and dismemberment (AD&D) for the period January 1, 1980 - March 31, 1981. Those eligible members over age 45 will receive only minimum underwriting; those under 45 must only meet a work requirement.

The ACS offers term life insurance coverage up to \$105,000. Included in this plan are such options as coverage for spouse and dependent children and Hospital Indemnity benefits for those who participate in the ACS life plan. The Hospital Indemnity plan pays \$30 per day for up to 365 days for any one period of hospital confinement. These benefits are in addition to any other medical coverage one may have.

High Limit Accidental Death & Dismemberment insurance, covering losses due to any accident 24 hours a day, is also available to ACS members in \$50,000 increments up to \$200,000. One may also obtain optional coverage for spouse and children. This coverage is available to any member under age 65 regardless of whether or not the member is insured under the life plan.

The Disability Income Plan provides a means of support for one's family and business should one become disabled from either accident or sickness and is under a doctor's care. The amount of benefits depend on one's salary and other disability insurance one may have (up to \$2,400 per month). The waiting period one can select varies from 30 days to 365 days. Coverage is not affected by job changes. The plan includes a cost-of-living benefit adjustment.

The Professional Liability (malpractice) insurance is the most recent coverage made available to ACS members. It is specifically designed to protect chemists and chemical engineers in the event that one's professional judgment is challenged.

The Board of Trustees, Group Insurance Plans for ACS Members is also currently reviewing proposals for a Personal Umbrella Plan, including excess major medical coverage. Such a plan would protect ACS members against the financial dangers of a massive personal lawsuit beyond their existing auto and homeowners' coverage.

All insurance plans are approved and overseen by a nine-member Board of Trustees who serve without pay and seven of whom are appointed by the Chairman of the ACS Board of Directors. (The other two Trustees are ex officio - the chairman of the Committee on Membership Affairs and the chairman of the Subcommittee on Insurance of the Committee on Membership Affairs.) The programs are solely for the benefit of the participants and dues to the American Chemical Society are not used in any manner to support or promote the insurance plans.

TOWSON STATE UNIVERSITY
CHEMISTRY SEMINARS

March 12 Dr. Ralph Blomster, School of Pharmacy Plants as a Source
Thursday University of Maryland, Baltimore of Drugs

Place: Towson State University - Smith Hall - Room 541

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



THE CHESAPEAKE CHEMIST

VOL. XXXVII MARCH, 1981 NUMBER 3

THE CHESAPEAKE CHEMIST STAFF		COMMITTEE CHAIRPEOPLE - 1981	
Raymond C. Petersen.....Editor	9329 Joey Drive Ellicott City, MD 21043 465-8520	Awards and National Nominations.....	Joyce J. Kaufman The Johns Hopkins University 338-7417
Linda M. Sweeting...Associate Editor	Department of Chemistry Towson State University 321-3113	Chemical Education...Sr. Mary Vincent	The College of Notre Dame of MD 435-0100
Eli Freedman.....Contributing Editor		Program.....Elwin C. Penski	
Mary Salb.....Business Manager	McCormick & Co., Inc. Hunt Valley, MD 21031 667-7483	Archives.....Ernest Silversmith	
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		Remsen Award.....Dean Robinson	The Johns Hopkins University 338-7430
		Finance.....Alvin Bober	655-5254
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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.

DIRECTIONS TO MARCH MEETING: After crossing the Severn River on Rte. 2, turn left at the 2nd light onto King George St. At the end of King George St. enter Gate 1 into the Academy. Continue straight to the sea wall, then follow the wall to the left around Farragut Field to Santee Basin (the sailboat harbor). Turn right to follow the harbor, keeping buildings to your left. The parking lot will be on your left, a short distance beyond Santee Basin. As you enter the parking lot, Chauvenet Hall is the building on your right. Go to the back of the lot, climb the stairs to the parapet level and walk around the building to the fountain. Enter Chauvenet Hall by the main doors.

From Rte 50, exit at Rowe Blvd. Follow Naval Academy Visitors signs to Gate 1, then follow above directions.

WILLIAM H. ZOLLER

Dr. Zoller did his undergraduate work at the University of Alaska where he majored in Chemistry and received his B.S. degree in 1965. He did his graduate work at the Massachusetts Institute of Technology in Nuclear Chemistry. When he graduated from M.I.T. in 1969, he went to Hawaii for a brief post-doctoral appointment before joining the faculty at the University of Maryland early in 1970. While at Maryland, his research has included studies of atmospheric chemistry in remote areas of the world (South Pole, Hawaii and Alaska) as well as urban pollution and sources of atmospheric particulates. During the last few years, his research efforts have centered upon studies of volcanic emissions and the recent eruption of Mt. St. Helens has provided his research group with plenty of samples.

THE IMPACT OF VOLCANIC EMISSIONS ON ATMOSPHERIC CHEMISTRY: THE ERUPTION OF MT. ST. HELENS

Numerous studies on volcanic emissions have shown that the plumes from volcanoes contain relatively large quantities of the volatile elements arsenic, selenium and antimony, in addition to sulfur and the halogens. With the eruption of Mt. St. Helens much new information on the chemistry of volcanic emissions was obtained. The chemical composition of the Mt. St. Helens plume changes with each stage in the eruption cycle and during some stages the chemistry of the emissions is similar to that observed in other volcanoes. The problems associated with volcanic studies, such as flying through plumes or landing in the crater of an active volcano, as well as the results of these investigations will be discussed.

EDWARD J. POZIOMEK

Dr. Poziomek received his B.S. degree from Rensselaer Polytechnic Institute in 1954 and his M.S. and Ph.D degrees from the University of Delaware in 1960 and 1961 respectively. In 1962-63 he was a Secretary of the Army Research Fellow at the State University of New York at Stony Brook. In 1965-1966 he was a Fulbright Research Scholar at the University of Leiden in The Netherlands. In 1975-1976 he was a Fellow at the Center for Advanced Engineering Studies at MIT. He has one year of industrial experience with Durez Plastics Division of the Hooker Chemical Company, and has taught graduate extension courses at the University of Delaware. He has been a member of the Board of Directors of Sigma Xi, The Scientific Research Society since 1976.

He has held various research and development assignments since 1958 at Edgewood Arsenal (now the Chemical Systems Laboratory, Aberdeen Proving Ground). He is presently Chief Scientist of the Research Division. He is also the point of contact for National Research Council Research Associateships and university sabbaticals at Chemical Systems Laboratory. *cont on p 6...*

MARCH MEETING

DATE:

Wednesday, March 18, 1981

PLACE:

Chauvenet Hall, Room 116
U.S. Naval Academy
Annapolis, Maryland

SPEAKERS AND TOPICS:

6:00 pm
William H. Zoller
University of Maryland
"The Impact of Volcanic Emissions on
Atmospheric Chemistry: The Eruption
of Mount Saint Helens"

8:30 pm
Edward J. Poziomek
Chemical Systems Laboratory
Aberdeen Proving Ground
"Perspectives on Chemical Defense
Research"



WILLIAM H. ZOLLER

COCKTAILS AND DINNER:

Hubbard Hall

Cocktails 7:00 - 7:30 pm

Dinner (7:30) \$10 per person, except spouses, retired chemists and students may attend the dinner for \$8.

Please make reservations by mailing checks to

Elwin C. Penski
2515 Jerusalem Road
Joppa, MD 21085

by March 11. Late reservations may be made by calling

879-8589 (Baltimore local)
or 671-3953 (8:00 to 4:30
weekdays)
877-2923 (evenings after 7:00)

before March 13.



EDWARD J. POZIOMEK

The exact number of dinner reservations must be known before March 14. 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

Dr. Poziomek's current research interests are in synthesis of reactive liquid crystals, spectra of oriented molecules, and chemical reactions on surfaces. In 1980, he received an Army Research and Development Achievement Award for his research on auto-alignment of molecules in porous polymers.

PERSPECTIVES ON CHEMICAL DEFENSE RESEARCH

A recent editorial in *Chemical & Engineering News* (Dec 15, 1980) on chemical warfare mentioned that, "There is agreement that Soviet military forces are better equipped and better trained to operate in a chemical environment than are U.S. and NATO forces. And the suggestion that allied forces should be improved in this defensive regard is not seriously questioned". There are a variety of directions that can be undertaken toward providing the base of scientific knowledge needed in approaching the problem mentioned above. The potential for basic research causing significant positive change for mission accomplishment in a chemical environment is great. The research interests are broad and span many areas of science, as well as several Department of Defense organizations. Specific examples of current research and perspectives on future research directions related to individual and collective protection, detection devices, decontamination, contamination avoidance and training needs will be presented.

"WHEN DID YOU LAST ATTEND AN ACS MEETING?"

MARYLAND SECTION FUTURE PROGRAM

<u>Date</u>	<u>Location</u>	<u>Speakers</u>	<u>Topics</u>
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
May	Johns Hopkins Univ.	Remsen Award	

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NOMINATING COMMITTEE SELECTED

The nominating committee for the 1982 officers, councilors, and executive committee members of the Maryland Section is soliciting nominations for the following positions in 1982: chairperson-elect (who will become chairman in 1983), secretary, treasurer, councilor, alternate councilor, and 5 members-at-large. Candidates must be members of the Maryland Section and have expressed a willingness to serve if elected. Incumbents (other than the chairman-elect) are eligible for reelection.

We very much want to have broad participation in the Section's activities, and we are always looking for new ideas and new blood. Therefore, if you have thoughts or ideas about persons who should be considered for offices, please give your suggestions to a member of the nominating committee by April 20, 1981. The members of the committee are:

Melvin P. Miller, Loyola College	323-1010 (work)
Merle Eiss, McCormick & Co., Inc.	667-7485
Samuel Goldheim, ABCO Lab. Inc.	944-8110
James Leslie, University of Maryland	528-6573
Robert Caret, Towson State University	667-7471

PROPOSED AMENDMENT TO THE BYLAWS TO PROVIDE PROCEDURES FOR THE SELECTION OF AWARDEES

It is proposed that the following section be added to Bylaw VII of the Maryland Section of the ACS.

Section 4. The final selection of individuals for awards or nominations for awards shall be made by the Section Chairman, Chairman-Elect, Treasurer, Secretary and Past-Chairman of the Section. The Chairman of the Awards and National Nominations Committee will submit the names of all nominees and all supporting documents along with his or her recommendations to the Section Chairman. In the case of the Maryland Chemist Award, submissions to the Section Chairman will be on or before 1 August of the year of the award. This Bylaw does not apply to the Remsen Award.

This amendment has been proposed to clarify the procedures and responsibilities for the selection of awardees.

The Executive Committee approved this amendment unanimously on January 28, 1981. Now, two-thirds of the members of the Section must approve this amendment in accordance with Section Bylaw XI. Finally, the Bylaws must be approved by the ACS Council.

This ballot on the January 28, 1981 amendment to the Bylaws must be mailed within thirty days to: Elwin C. Penski, 2515 Jerusalem Road, Joppa, MD 21085.

APPROVE AMENDMENT

DISAPPROVE AMENDMENT

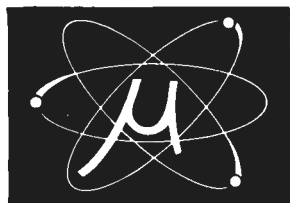
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Qualitative and quantitative elemental (>Be) microanalysis
- ☐ **Electron Spectroscopy for Chemical Analysis**
Analysis of thin (25-50A) surface films
- ☐ **Optical Emission Spectroscopy**
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- ☐ **X-Ray Fluorescence**
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