



THE

CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXXVIII

OCTOBER, 1982

NUMBER 7



FRED BASOLO
ACS President-Elect

THE EDITOR NOTES

This month we are privileged to have with us Dr. Fred Basolo, the President-elect of the American Chemical Society. Dr. Basolo has agreed to participate in an informal discussion of ACS affairs following his formal talk.

The November meeting will be held at the Edgewood Area of the Aberdeen Proving Ground, and will include a poster session. The featured speaker in November will be Dr. Alfred Bader, Chairman and Chief Executive Officer of the Aldrich Chemical Company, who will talk about chemistry in art. Dr. Bader has also offered, preceding his talk, to give advice regarding restoration or identification of any old paintings which members may have.

December will see the 1982 Maryland Chemist Award, and we might note that it is time to begin thinking about nominations for the 1983 award.

THE AUSTIN M. PATTERSON - E. J. CRANE AWARD

The Dayton and Columbus Sections of ACS are soliciting nominations for the 1983 Austin M. Patterson - E. J. Crane Award for achievement in Chemical Literature and Documentation. Closing date for nominations is January 31, 1983. The award, consisting of an honorarium of \$2,000 and an illuminated scroll, will be presented at a dinner in Columbus, Ohio on May 16, 1983.

Additional information may be obtained from the Patterson-Crane Award Committee, P.O. Box 02159, Columbus, Ohio 43202.

AGRICULTURAL AND FOOD CHEMISTRY

The ACS Division of Agricultural and Food Chemistry is planning a large program of general papers for the Seattle ACS meeting of March 20-25, 1983, and is consequently soliciting contributions of papers.

Persons interested in presenting a paper should contact Dr. Steve Nagy, Florida Department of Citrus, P.O. Box 1088, Lake Alfred, Florida 33850.

ACS CONGRESSIONAL FELLOWS

The ACS is seeking candidates for a one year appointment for its two ACS Congressional Fellowships. The deadline for applications is January 31, 1983, and the fellowship term will begin in September 1983. Further information can be obtained from ACS Headquarters in Washington, the Department of Public Affairs: telephone (202) 872-4384.

MICROANALYSES

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Fred Basolo, a native of Coello, Illinois, received a B.Ed. degree from Southern Illinois Normal University and his M.S. and Ph.D. degrees from the University of Illinois. He was employed as a research chemist by the Rohm & Haas Chemical Company for three years prior to joining the faculty of Northwestern University in 1946. He was Chairman of the chemistry department from 1969 to 1972 and he is now Morrison Professor of Chemistry.

He has authored more than 250 scientific publications as well as books on the subjects of catalysis, coordination chemistry, transition metal chemistry, inorganic synthesis and mechanisms of inorganic reactions. He has served on editorial boards of numerous publications, including the Journal of Inorganic and Nuclear Chemistry and the Journal of Molecular Catalysis, and has been Assistant Editor of the Journal of the American Chemical Society and Associate Editor of Chemical Reviews.

He has also been a visiting lecturer at numerous universities and has been awarded Guggenheim, NSF and NATO fellowships. He is a Fellow of AAAS and a member of the National Academy of Sciences. His numerous awards include the Bailar Medal (1972) and the Dwyer Medal (1976) as well as the ACS Award for research in inorganic chemistry (1964), the ACS Award for distinguished service in inorganic chemistry (1975) and the James Flack Norris Award for outstanding achievement in the teaching of chemistry (1981).

Dr. Basolo is a member of the Chemical Society (London), AAAS, Sigma Xi, Phi Lambda Upsilon, Alpha Chi Sigma and Kappa Delta Phi. He has served on many prize committees and research grant panels, including those of the NIH, NATO and the Petroleum Research Fund. He has also served on numerous executive boards and committees, including those of the Gordon Research Conferences and the National Committee for the International Union of Pure and Applied Chemistry. He has been Chairman of the ACS Division of Inorganic Chemistry (1970) and he is the current President-elect of the ACS.

SYNTHETIC OXYGEN CARRIERS OF BIOLOGICAL INTEREST

An overview of our research on synthetic oxygen carriers will be presented. These metal complexes relate to the natural proteins hemoglobin and myoglobin, and their dioxygen adducts. Our work was the first to isolate and characterize a series of dioxygen cobalt Schiff base complexes. This led to studies on coboglobin, which models the natural protein with only Co taking the place of Fe in the natural system.

The development of synthetic iron complexes which are oxygen carriers will be discussed. Also the discovery of a manganese porphyrin which reversibly adds dioxygen will be described. Mention will be made of the importance of developing artificial blood, and the role these metal complexes may play in this research.

When did YOU last attend
a Maryland Section meeting?

DATE AND TIME:

Wednesday, October 20, 1982
7:45 pm

PLACE:

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

SOCIAL HOUR AND DINNER:

Doyle Building Dining Room
College of Notre Dame

Social Hour: 6:00 pm
Dinner: 6:45 pm

Dinner price \$9.50 per person, but
retired chemists and students may
attend the dinner for \$7.50

SPEAKER AND TOPIC:

Fred Basolo
Northwestern University
"Synthetic Oxygen Carriers
of Biological Interest"

Dinner reservations are necessary and
should be made by mailing checks to

Charles Rowell
Chemistry Department
U. S. Naval Academy
Annapolis, MD 21401

by October 11. Checks should be
payable to Maryland Section of ACS.
Late reservations may be made by
calling Lynn Cheong at

(301) 355-3600 ext 208

by October 13.

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

POLYMER SAMPLES NEEDED

A committee has been established by the Joint Polymer Education Committee of the Polymer Chemistry Division and the Organic Coatings and Plastics Chemistry Division of the ACS in order to determine how best to introduce polymers into the undergraduate core curriculum. One of the major conclusions of this committee was that teachers desperately need polymer samples (polymers themselves, or fabricated fibers, plastic parts, elastomers, inorganic polymers, etc.) and suitable photographs. This can also include product brochures and technical descriptions. A subcommittee has been established to put together a list of names and addresses where teachers can write to obtain samples and literature for classroom use. If you or your company can supply any of this material please send the name and address and what you can offer to either of the co-chairmen listed below. These will then be included in the list for teachers aids. Your help is greatly appreciated and essential.

Professor Raymond B. Seymour
Department of Polymer Science
University of Southern Mississippi
Southern Station Box 10076
Hattiesburg, MS 39406-0076

Dr. Gerald S. Kirshenbaum
Celanese Plastics and Specialties Co.
86 Monis Avenue
Summit, NJ 07901

GOVERNMENT AFFAIRS AND THE ACS

Each year legislation and regulations on public problems involving chemistry - toxic substances control, food safety, pollution - pour out of Washington and the state capitals. Getting accurate information on these proposals is critically important if the ACS is to fulfill its national charter obligations of insuring that the proposals are sound, reasonable, and consistent with current chemical knowledge.

To fulfill this important responsibility, ACS maintains a government affairs program as part of the activities of the Department of Public Affairs. The Department helps the Society's governance in developing ACS policy and keeps the federal government and the ACS membership informed of ACS views. It also encourages local sections to participate in their government affairs activities at the state and local levels.

One way this latter goal is brought about is through the Society's Local Section Public Affairs Coordinator Program. The national office strongly encourages sections to become more actively involved in state and local issues involving chemistry. Sections are encouraged to speak out on these matters, in conformance with ACS Bylaw IX, "Position Statements of Units of the Society." The national office depends heavily on local sections to keep up with new state and local proposals to complement the national office's activities at the federal level.

The Congressional Science Counselor Program is another area where strong support is needed from local sections. A volunteer member, selected by a section's executive committee, agrees to serve as an unofficial technical advisor to his or her Member of Congress and to assist with scientific and technical matters upon request. The success of this program depends almost entirely on the person selected. The selection process should be taken seriously.

Each year the ACS Congressional Fellowship Program supports two Fellows who work on Capitol Hill with Members of Congress and committee staffs on science issues. The program provides science expertise to the Congress, and gives scientists experience in congressional operations, thus letting each group learn from the other. Although the Fellows work in Washington on national issues, sections can participate by encouraging their members to apply for the fellowships. If a section member is selected, at the end of the year the section will benefit enormously by having a member in its ranks with direct legislative experience. This should prove valuable in future section public affairs work.

Regarding the Department's work at the national level, congressional and regulatory proposals affecting chemistry and chemists are continuously monitored through personal contact between ACS and government staff, and other means. A biweekly newsletter, the *Washington Alert*, carries brief notices of upcoming hearings and proposed legislation and regulations and informs members of significant government science activities. The *Alert* is sent free to any ACS member upon request.

The Department provides staff support to the ACS Board of Directors, which in its policy-making role approves 15-20 official ACS position statements a year. These statements give advice to the government on public policy matters related to chemistry. Studies on important issues such as food, the environment, and medicine are published so decision-makers can benefit from the Society's recommendations on how chemistry can be used in these areas. Also, symposia are held at ACS national meetings on such subjects as federal R&D funding, waste management, and other topics.

Beneficial changes in public policies affecting chemists are more likely to occur if a channel is available for chemists to speak out, and to provide technical advice to the government when needed. The Department of Public Affairs is such a channel, and invites each member and section to share in this important work.

MARYLAND SECTION FUTURE PROGRAM

<u>Date</u>	<u>Location</u>	<u>Speakers</u>	<u>Topic</u>
November 17	Edgewood	Alfred Bader Aldrich Chemical Co.	Chemistry in Art
		Poster Session	
December 15	College of Notre Dame		Maryland Chemist Award
January	No meeting		
February 23	College of Notre Dame	Mark Elert U. S. Naval Academy	
		Ahton Peterlin NBS	Deformation of Semi-crystalline Polymers
March 30	College of Notre Dame	V. Frank Boyd Litton Bionetics	Pesticides - Chemistry and Politics
		Dorit Noether CHEMTECH	H ₂ O - a 360° View
April 20	U. S. Naval Academy	Nina Roscher American University	Careers in Chemistry
		Charles Braun Dartmouth College	
May			Remsen Award

ELECTION OF SECTION OFFICERS

Please complete the following ballot for the election of the 1983 officers, councilors, and members-at-large of the Maryland Section, and mail it to Cheryl Manger, 2533 Ebony Road, Baltimore, MD 21234. Please sign the envelope so that Section membership can be verified, but do not sign the ballot itself.

Chairman-elect	Nolan Phillips	_____
Secretary	Cheryl Manger	_____
Treasurer	Harold Klapper	_____
Alternate Councilor	Merle Eiss	_____
Members-at-large	Paul Gabbert	_____
(Vote for five)	John Roach	_____
	Timothy McNeese	_____
	Alice Zeiger	_____
	Thomas Bitterworth	_____

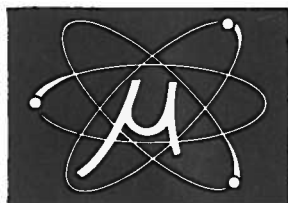
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- ☐ **Transmission Electron Microscopy**
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- ☐ **Optical Microscopy**
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- ☐ **Quantitative Image Analysis (Stereology)**
Particle or feature size and size distribution analysis
- ☐ **Electron Probe X-Ray Microanalysis**
Qualitative and quantitative elemental (>Be) microanalysis
- ☐ **Electron Spectroscopy for Chemical Analysis**
Analysis of thin (25-50A) surface films
- ☐ **Optical Emission Spectroscopy**
Semi quantitative and quantitative analysis of trace elements
- ☐ **X-Ray and Electron Diffraction**
Identification of crystalline compounds
- ☐ **X-Ray Fluorescence**
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- ☐ **Differential Scanning Calorimetry**
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