



THE **CHESAPEAKE  
CHEMIST**

**MARYLAND SECTION  
AMERICAN CHEMICAL SOCIETY**

VOL. XLVI

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NUMBER 1-2



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# THE CHESAPEAKE CHEMIST

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## FUTURE MEETINGS

MARCH 21:

U.S. Naval Academy  
Oceanology

APRIL 18:

Western Maryland College  
A. McClelland  
NSF  
Careers in Chemistry

MAY 16:

Johns Hopkins  
Remsen Award

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## ACCS 1990 MEETING IN BALTIMORE

The American Oil Chemists' Society will hold its annual meeting in 1990 at the Baltimore Convention Center from April 22-25. Details will appear next month.

## ACS ISSUES "WHITE PAPER" ON SCIENCE EDUCATION

The crisis affecting science education in the United States is well-documented, and defining the problems without offering solutions has become a popular pastime. In "Education Policies for National Survival," the ACS is taking a different approach by making specific recommendations to improve the quality of science education at all levels -- from kindergarten to continuing education.

The "White Paper," which was developed by the Society Committee on Education and introduced at a recent Congressional briefing, addresses such areas as teacher education and assessment, curriculum, faculty supply and development, underrepresented populations, and research support. Recommendations are grouped according to educational system levels: prehigh school (K-8); secondary schools (9-12); two-year colleges four-year colleges, universities, and graduate education; and continuing education.

As professionals in the chemical sciences, you are uniquely qualified to help ensure that the recommendations in "Education Policies for National Survival" are implemented. "Emerging Issues for Involvement," a brochure available from ACS's State and Local Government Affairs program, can provide you with the information you need to discuss the "White Paper's" recommendations with your state and federal legislators and your state department of education. As ACS President Dr. Paul Gassman stated in a letter to all local section chairmen, "We need to educate our local media, our friends and neighbors, our local science teachers, and our local, state, and federal legislative representatives concerning the benefits of chemistry."

For assistance in getting involved in public affairs activities, please contact Jane Risk, ACS State and Local Government Affairs, at (202) 872-4391. Copies of the "White Paper" and the "Emerging Issues" brochure are available free by calling the above number or by sending a self-addressed mailing label to State and Local Government Affairs, ACS, 1155 16th St. NW, Washington, DC 20036.

The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to the Editor. Send advertising copy and inquiries to the Business Manager. 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.

## DARRELL F. STROBEL

Darrell F. Strobel is a native of North Dakota. He received his B.S. (honors) degree in Physics in 1964 from North Dakota State University and his A.M. and Ph.D. degrees in 1965 and 1969, respectively, from Harvard University in Applied Physics.

In 1968 Dr. Strobel joined the Planetary Science Division at the Kitt Peak National Observatory in Tucson as a Research Associate where he began theoretical studies of planetary atmospheres and continued his research in terrestrial aeronomy. In 1970 Dr. Strobel was promoted to Assistant Physicist and in 1972 to Associate Physicist. Dr. Strobel joined the Naval Research Laboratory Plasma Physics Division in 1973 as a research physicist responsible for theoretical studies of the earth's atmosphere. In 1976 he was promoted to the Head of the Atmospheric Dynamics Section in the Geophysical and Plasma Dynamics Branch. In 1984 Dr. Strobel joined the Department of Earth and Planetary Sciences of The Johns Hopkins University as a Professor, and was also appointed Professor in the Department of Physics and Astronomy.

Dr. Strobel is a physicist by training who is an expert in the chemistry, dynamics, and physics of planetary atmospheres. He has actively worked in the areas of photochemical processes, middle and upper atmospheric dynamics, transport processes, atmospheric radiation, and physics of the ionosphere and thermosphere. In the field of planetary atmospheres, Dr. Strobel is an expert on the outer planets and their large satellites with atmospheres. His definitive studies of their photochemistry have predicted the production of significant amounts of  $C_2H_6$ ,  $C_2H_2$ , and other hydrocarbons in their atmospheres, explained the absence of  $NH_3$  and  $PH_3$  in the upper atmospheres of Jupiter and Saturn through irreversible conversion to  $N_2H_4$  and  $P_2H_4$  hazes, and identified probable HCN sources on Jupiter and Titan. Dr. Strobel was an original Co-Investigator for the UV Spectrometer Experiment on the Voyager Mission and served as the science team leader. He led in the identification of  $N_2$  as the major constituent and EUV emitter on Titan and Triton. His seminal studies of the aeronomy and upper atmosphere of Titan based on Voyager data analysis and interpretation include the estimate of nonthermal escape rate of N atoms, thermal escape rates of H and  $H_2$ , the power dissipation rate by magnetospheric suprathermal electrons, the basic photochemistry of  $N_2$ ,  $CH_4$ , and other hydrocarbons, and the analysis and interpretation of Voyager UVS solar and stellar occultation data. Dr. Strobel is also an expert on the remote sensing of planetary magnetospheres. He has been a leader in the analysis and interpretation of Voyager UVS measurements of the Io plasma torus. He is the author of approximately 90 journal articles and 10 chapters in books.

Dr. Stroebel is an Associate Editor of *Icarus* and a Co-Investigator on the Cometary Gas Analyzer Experiment, CRAF Mission. He has served on the Space Science Board and Committee on Solar and Space Physics, National Academy of Sciences. He is a member of the Division of Planetary Sciences-American Astronomical Society, American Geophysical Union, American Meteorological Society, and International Astronomical Union.

### TEMPORARY PART-TIME OPPORTUNITY

There is an opportunity locally for some temporary part-time work for chemists. Any type of chemist is acceptable, and it is suggested that retired chemists might be especially appropriate. Various types of paperwork are involved; some literature searching; no lab work.

Anyone interested should contact the Member Assistance Committee, Merle Eiss, at 771-7861.

## FEBRUARY MEETING

### DATE:

Wednesday, February 21, 1990

### PLACE:

W. R. Grace Research Center  
Rte 32 West of Rte 29  
Clarksville, Maryland

Dinner reservations should be made by mailing checks, payable to Maryland Section of ACS, to

Ms. Menyan Chang  
Nova Pharmaceutical Corp.  
6200 Freeport Center  
Baltimore, MD 21224



DR. DARRELL F. STROBEL

by February 14. Late reservations may be made by calling

(301) 563-6183

by February 16; answering machine is available at this number.

Dinner price is \$14.00 per person, but spouses, retired chemists and students may attend for \$12.00.

### SCHEDULE:

6:00 Social Hour - Building 1

7:00 Dinner

8:00 Darrell F. Strobel  
The Johns Hopkins University  
"The Atmospheres of the Outer  
Planets and their Satellites"

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

### DIRECTIONS:

From I-95 take Route 32 west for about five miles. At second traffic light (flashing yellow after 6 p.m.) turn right into Grace driveway. After stopping at guardhouse, park in front of building 1 (first building on right) or on far side of building 25 (second building on right).

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## 1990 HERMAN SKOLNIK AWARD

Dr. Ernst Meyer, formerly of BASF-AG of the Federal Republic of Germany, has been named to receive the 1990 Herman Skolnik Award of the Division of Chemical Information of the American Chemical Society (ACS). The award was established in 1976 at the ACS Centennial Meeting in New York to recognize outstanding contributions to and achievements in the theory and practice of chemical information science, and was named after its first recipient. It will be presented to Dr. Meyer at the 200th ACS National Meeting in Washington, D.C., on Tuesday afternoon, August 28, 1990. A special symposium in Dr. Meyer's honor will also be held at that time.

Dr. Meyer has played a major pioneering role in revolutionizing chemical information handling through the use of computer methodology since the late 1950s. In particular, he was a leader in the development of input and searching techniques for topological and fragment representations of chemical substances, including generic or Markush representations, intended to be used for large-scale operations. In recent years, Dr. Meyer has broadened his area of research into that of structure-activity correlations.

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## ACS TO DISTRIBUTE CONSUMER CHEMISTRY TEXT

*Chemistry in the Marketplace*, a popular text by Australian chemistry professor Ben Selinger is now available in the United States from the American Chemical Society. The book gives a simple and unique explanation of the chemistry of everyday things.

The humorous and user-friendly approach makes this book easy to read and to use. *Chemistry in the Marketplace* is packed with information and explanations about products found all over the house, including chapters describing chemistry in the laundry, kitchen, boudoir, garden, medicine cabinet, dining room, office, and work rooms. Other chapters detail the chemistry of energy, heavy metals and radiation, and experiments in consumer chemistry.

The extensive appendices include case studies on water quality in private swimming pools, polymers, flammability of fibers, Thalidomide, and child poisoning. Lists of pharmaceuticals, food additives, pottery glazes, and octane ratings, are provided along with a consumer information section and description of Australian food laws. "The entropy game," also in the appendix, will be of special interest to teachers. Other helps include an extensive glossary and index.

*Chemistry in the Marketplace* is an invaluable aid for teachers who want to help their classes see the importance and relevance of chemistry using examples from everyday life. Everyone will enjoy the clear and clever explanations of how things work as Selinger details the chemistry of paints, soaps, garden spray, detergents, and a host of other items essential to the modern household.

Teachers and students alike will enjoy this interesting volume. It makes a perfect gift or award for the U.S. National Chemistry Olympiad winners, honored teachers, and others. Schools will appreciate this addition to their libraries.

The 636-page book, which includes color illustrations, regularly sells for \$39.50. For a limited time, ACS is offering *Chemistry in the Marketplace* at the special introductory price of \$31.95. This offer is good only until April 30, 1990. Orders must be placed with the ACS Distribution Office. *Chemistry in the Marketplace* is published by Harcourt, Brace, Jovanovich Group (Australia), Pty. Limited, copyright 1989.

## NATIONAL CHEMISTRY WEEK IN MARYLAND



Invited lecturer Alfred Burger of the University of Virginia with Catherine Clarke Fenselau and J. Paul Carter.

Martin Walsh, Secretary of the Maryland Department of the Environment, also presented an excellent talk.

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## CHEMICAL RISK: PERSONAL DECISIONS

Recent information about the amounts of chemicals released to the environment has added to the growing public concern about the health effects of chemicals in our food, air, waters, and households. ACS has published *Chemical Risk: Personal Decisions*, a pamphlet designed to help readers make personal, common-sense decisions about chemicals in their environment. Examples of personal options for radon, lead, and pesticides are given to illustrate the pamphlet's suggestions.

The pamphlet, written for the non-scientist who is concerned about exposure to chemicals from environmental and household sources, explains concepts of risk assessment and risk management and will be a helpful tool for those involved in the field of risk communication.

Copies of the pamphlet are available free by calling (202) 872-8725 or by sending a self-addressed mailing label to Ms. Nancy Todd, Department of Government Relations and Science Policy, ACS, 1155 16th St. NW, Washington, DC 20036. For information about bulk orders (over 50 copies), call Ms. Jean A. Parr at (202) 872-5395.

## PITTSBURGH IN NEW YORK

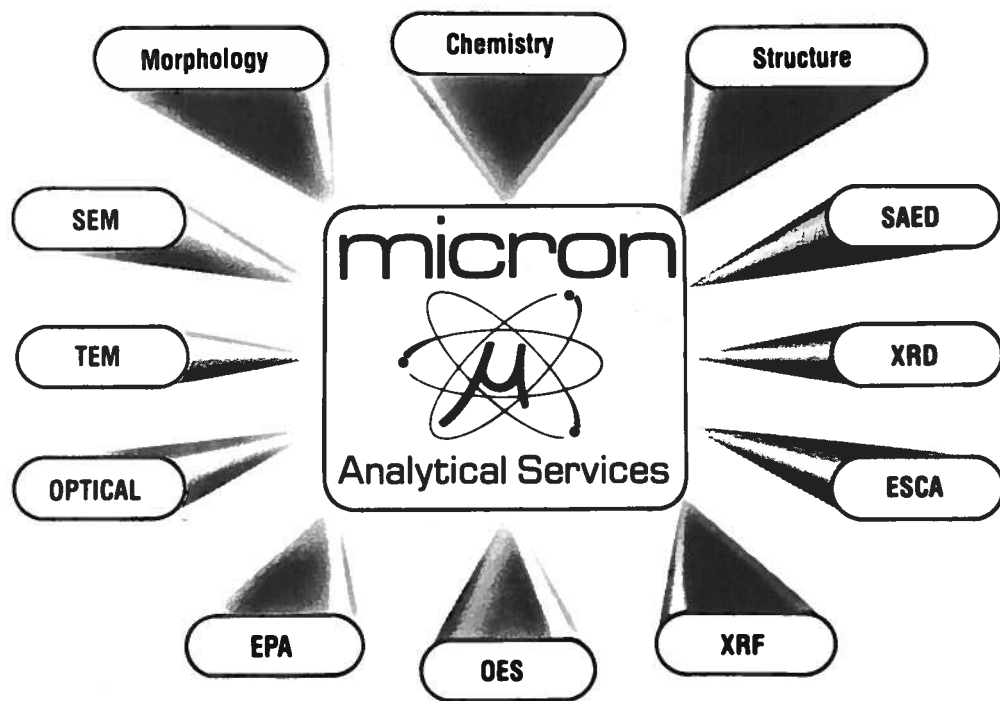
The Pittsburgh Conference & Exposition will be held March 5-9, 1990 at the Jacob K. Javits Convention Center in New York City.

In addition to the general papers, the conference will feature seven awards symposia and twenty short courses. The exposition will have exhibits from about 800 companies occupying 2500 booths.

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