



THE

# CHESAPEAKE CHEMIST

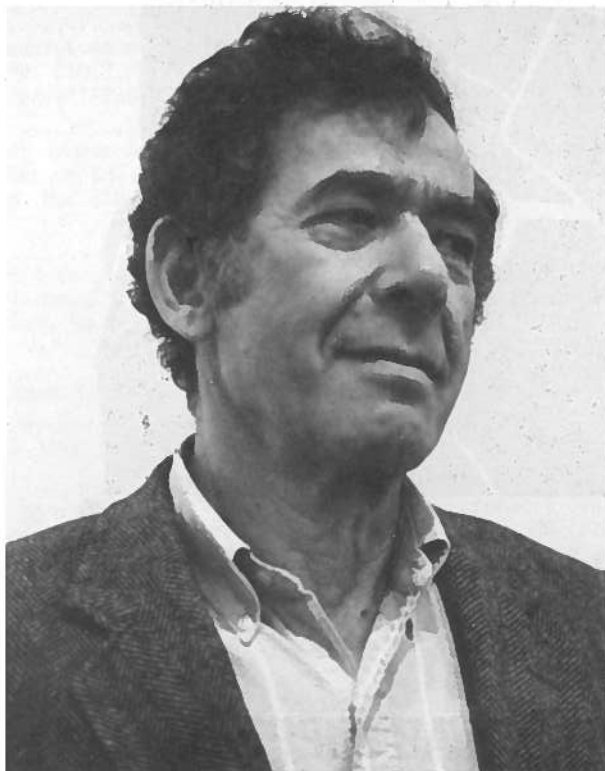
MARYLAND SECTION  
AMERICAN CHEMICAL SOCIETY

VOL. XLVIII

MAY, 1992

NUMBER 5

## 1992 REMSEN AWARD



**WILLIAM KLEMPERER**

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# THE CHESAPEAKE CHEMIST

VOL. XLVIII

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## THE 47th REMSEN LECTURER

WILLIAM KLEMPERER

Professor Klemperer was born in New York City in 1927. After service in the United States Navy, he entered Harvard College and received a B.A. degree in 1950. His Ph.D. degree was at the University of California, Berkeley (1954), where he studied with Professor George Pimentel. He joined the faculty at Harvard University as an instructor in Analytical Chemistry in 1954. He has remained there except for brief absences in 1968-69 when he spent an enjoyable sabbatical year with the astronomers at Cambridge, England, and in 1979-81 when he was at The National Science Foundation as Assistant Director for Mathematical and Physical Sciences. Professor Klemperer has co-authored a number of papers with his students and other colleagues. He is a member of The National Academy of Sciences, The American Academy of Arts and Sciences, The American Chemical Society and The American Physical Society. He has received the Wetherill Medal from the Franklin Institute, the Irving Langmuir Award in Chemical Physics from The American Chemical Society, the Earle K. Plyler Award from The American Physical Society and the Bomen Michelson Award from The Coblentz Society. He received the Distinguished Service Medal from the National Science Foundation.

Professor Klemperer's research interests lie in the area of molecular structure, energy transfer and intermolecular forces. Most of the research done in this area by his collaborators have involved experimental spectroscopic methods. He has also worked on modelling molecule formation and detection in the interstellar medium.

### HOW MOLECULES MOVE AGAINST ONE ANOTHER

Progress in spectroscopy allows us to observe molecular motion in a variety of conditions. Experimental high resolution spectra of molecular complexes provides a display of the motion of the molecular subunits comprising the supermolecule. With the increase of data that occurs in the course of natural growth of a field, there are now many examples of large amplitude motions. Of considerable interest among these are motions which couple several coordinates such as distances and angles. Information about potential energy surfaces is provided by non-classical tunneling.

It is hoped that the dynamics of weak bonds in isolated systems may provide insights into molecular superstructure and motion in condensed phases. At present that link appears to be made primarily through the testing of the applicability of theoretical methodologies on simple systems.

### SOUTHWEST REGIONAL MEETING

The 48th Southwest Regional Meeting of the ACS will be hosted by the South Plains Section at Lubbock, Texas, from October 21-23, 1992. Persons interested in submitting papers should contact Dr. Robert Holwerda, Department of Chemistry and Biochemistry, Texas Tech University, Lubbock, TX 79409-1061. Telephone (806) 742-3086; fax (806) 742-1289. Abstract deadline is July 3.

### SUMMER PICNIC

Plans are being made for a summer picnic to be held at the Belmont Conference Center. Once again it will be a joint affair with the Chemical Society of Washington. At press time the date could not yet be confirmed, but it will probably be a Sunday in August. Watch for a separate mailing.

## THE 47th REMSEN AWARD

### DATE:

Wednesday, May 20, 1992

### PLACE:

Mergenthaler III  
Homewood Campus of  
The Johns Hopkins University

### SPEAKER AND TOPIC:

8:00 pm  
THE REMSEN MEMORIAL LECTURE  
William Klemperer  
Harvard University  
"How Molecules Move Against  
One Another"

Dinner price is \$18.00 per person, but spouses and retired chemists may attend for \$16.00; students may attend for \$9.00.

### COCKTAILS AND DINNER:

The Johns Hopkins University  
Library  
Garrett Room

Social Hour 6:00 pm

Dinner 7:00 pm

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

Dr. Stephen Gregory  
College of Notre Dame  
4701 North Charles Street  
Baltimore, MD 21210

by May 12. Late reservations may be made by calling (410) 532-5714 by May 14. An answering machine is available at this number.

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

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## THE REMSEN AWARD

The annual Remsen Memorial Lectures were inaugurated in May, 1946 by the Maryland Section of the ACS to honor Ira Remsen, first Professor of Chemistry and second President of the Johns Hopkins University. The Remsen Memorial Lecturers are chemists of outstanding achievement, in keeping with Ira Remsen's long and devoted career as an exponent of the highest standards in teaching and research in chemistry.

### PREVIOUS REMSEN AWARD WINNERS

1991 Rudolph A. Marcus	1968 Har G. Khorana
1990 Robert G. Bergman	1967 Marshall W. Nirenberg
1989 K. Barry Sharpless	1966 Paul H. Emmett
1988 Mildred Cohn	1965 James R. Arnold
1987 Stephen J. Lippard	1964 Paul D. Bartlett
1986 Gilbert Stork	1963 Harold C. Urey
1985 Richard N. Zare	1962 George Porter
1984 Earl L. Muetterties	1961 Herbert C. Brown
1983 George M. Whitesides	1960 Henry Eyring
1982 Harden McConnell	1959 Edward Teller
1981 Koji Nakanishi	1958 Robert B. Woodward
1980 Roald Hoffman	1957 Melvin Calvin
1979 Harry B. Gray	1956 Farrington Daniels
1978 John Charles Polanyi	1955 Willard F. Libby
1977 Ronald Breslow	1954 Vincent du Vigneaud
1976 William N. Lipsomb, Jr.	1953 Edward L. Tatum
1975 Henry Taube	1952 W. Mansfield Clark
1974 Elias J. Corey	1951 Hugh S. Taylor
1973 Frank H. Westheimer	1950 Edward C. Kendall
1972 Charles H. Townes	1949 Joel H. Hildebrand
1971 George C. Pimentel	1948 Elmer V. McCollum
1970 George S. Hammond	1947 Samuel C. Lind
1969 Albert L. Lehninger	1946 Roger Adams

### REMSSEN AWARD NOMINATIONS

Please send nominations for the Remsen Award to one of the following members of the Remsen Award Selection Committee. The nomination should be accompanied by a curriculum vitae and publication list of the nominee, as well as any other information that will help the Selection Committee.

### REMSSEN AWARD SELECTION COMMITTEE

Timothy J. McNeese, Chairman  
Department of Chemistry  
Loyola College  
4501 North Charles St.  
Baltimore, MD 21210  
(410) 617-2237

Cráig A. Townsend  
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Johns Hopkins University  
Charles and 34th Streets  
Baltimore, MD 21218  
(410) 516-7432

Ron Erickson  
Nova Pharmaceutical Corporation  
6200 Freeport Center  
Baltimore, MD 21224  
(410) 563-6162

### CAPILLARY CHROMATOGRAPHY SYMPOSIUM

Remember the 14th International Symposium on Capillary Chromatography to be held May 25-29, 1992 in Baltimore's Stouffer Harborplace Hotel. For information call or write FISCC, P.O. Box 164552, Miami, FL 33116-4552, telephone and fax (305) 270-8585.

## AMERICAN CHEMICAL SOCIETY DIVISION OF POLYMER CHEMISTRY, INC. 1992 WORKSHOPS

### May 10-14, 1992: RECENT DEVELOPMENTS IN IONOMERS

Organized by: Adi Eisenberg  
Department of Chemistry  
McGill University  
801 Sherbrooke Street West  
Montreal, Quebec, Canada H3A 2K6  
Fax (514) 398-3797

Bill McKnight  
University of Massachusetts  
Amherst, MA

R. A. Weiss  
University of Connecticut  
Storrs, CT

J. Pochan  
Eastman Kodak  
Rochester, NY

Location: Asilomar Conference Center, Pacific Grove, CA

Sponsored by: The ACS Division of Polymer Chemistry, Inc.

TOPICS TO BE COVERED AT THE WORKSHOP INCLUDE: BLENDS, BLOCKS AND TELECHELICS, PLASITICIZATION, SOLUTIONS, NEW MATERIALS, RECENT ADVANCES IN STRUCTURE AND MORPHOLOGY, RECENT ADVANCES IN BULK PROPERTIES, AND APPLICATIONS.

### U.S. TO HOST 1992 CHEMISTRY OLYMPIAD

The United States will host the 24th International Chemistry Olympiad for high school students from around the world. The American Chemical Society is the official sponsor of the event. This will be the first time the competition has been held in the U.S.

The 24th Chemistry Olympiad will be held July 11-17, 1992, in Pittsburgh, PA., followed by four days of sightseeing in Washington, D.C., and an awards ceremony on July 21 at the National Academy of Sciences.

The competition seeks to identify the best high school chemistry students in the world. Students undergo vigorous written and laboratory testing designed to challenge their skills in all areas of chemistry. Last year, 10,000 students took part in local competitions leading to selection of the four-person U.S. national team.

Over 35 countries from Europe, Asia, Australia, and North and South America will each send four students and two adult mentors to the competition. The exams will be prepared in English and translated into several languages.

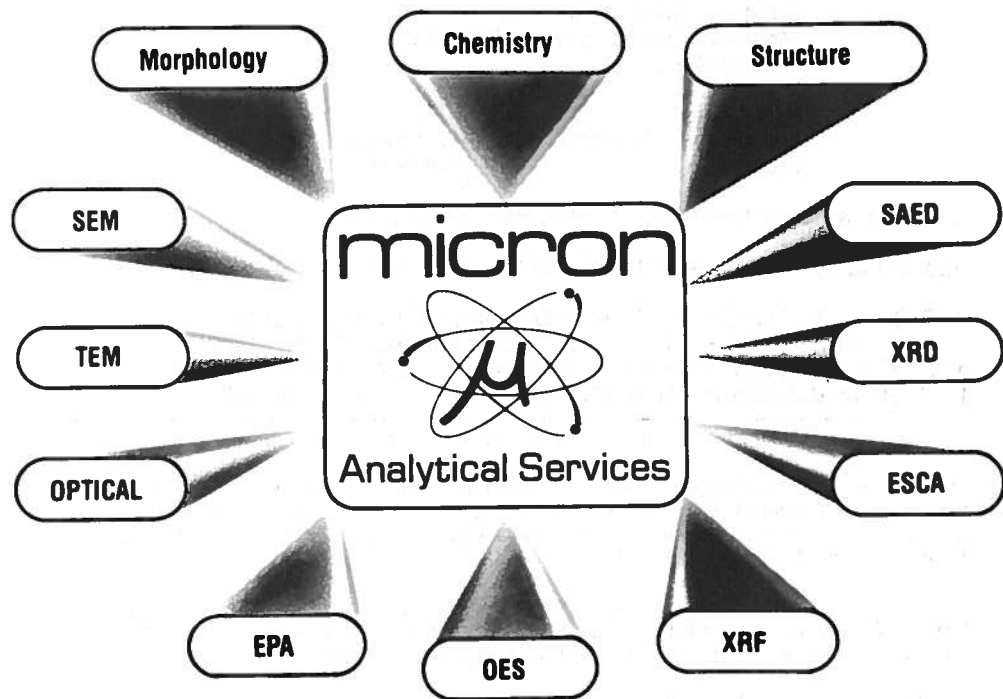
In the four days of activities in Washington, D.C., participants will tour their national embassies, among other points of interest. The winners of the Olympiad will be honored by chemistry Nobel laureates at a function at the National Academy of Sciences.

The United States has been participating in the Olympiad since 1984. U.S. teams have done well in recent years, winning three bronze medals and one diploma of recognition in 1989; a gold and three silver medals in 1990; and a gold, one silver, and two bronze medals in 1991.

The American Chemical Society is expected to spend about \$750,000 in sponsoring the competition. Some of the funds were raised through the Society's capital funding campaign -- the Campaign for Chemistry. ACS is continuing to seek support for sponsoring the Olympiad.

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## **CALL FOR NOMINATIONS**

**Now is the time for all good chemists to come  
to the aid of their Section.**

If you are a member of the Maryland Section of the American Chemical Society and are interested in taking a more active role in the operation of the Section, here is your opportunity.

The Section needs candidates for the following positions in 1993:

Chairman-Elect  
Treasurer  
Secretary  
Members-At-Large  
Councilor

Please suggest the names of suitable candidates to a member of the Nominating Committee by June 15, 1992.

The Nominating Committee shall select one or more candidates for each position and publish its recommendations in the September issue of the Chesapeake Chemist. Ballots will be sent to members in the October issue of the Chesapeake Chemist.

The name of a candidate will automatically be placed on the ballot if a nominating petition, signed by at least two percent of the membership (36 minimum), is provided to the Section Chairman before October 1, 1992.

Nominating Committee:

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Anne Arundel  
Community College  
101 College Parkway  
Arnold, MD 21012  
(410) 541-2266

Dr. Joseph Topping  
Towson State Univ.  
Chemistry Dept.  
Towson, MD 21204  
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Dr. Joseph DeFrank  
U.S. Army CRDEC  
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APG, MD 21010  
(410) 671-3972