



THE **CHESAPEAKE  
CHEMIST**

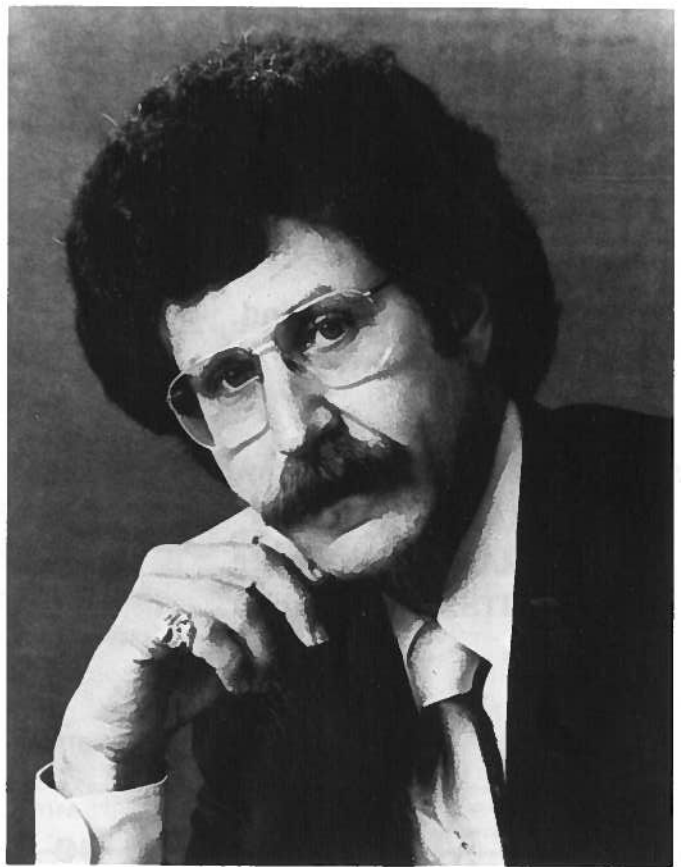
MARYLAND SECTION  
AMERICAN CHEMICAL SOCIETY

VOL. L

MAY, 1994

NUMBER 5

**1994 REMSEN AWARD**



**EDWARD I. SOLOMON**



**Hear Ye! Hear Ye!**

**The MARM is coming!**

**The MARM is coming!**

**When: May 25-27, 1994**

**Where: University of Maryland  
Baltimore County**

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**Plan To Attend**

**The XXVIIIth MARM It will be SUPER!**

**BALTIMORE 94**



# THE CHESAPEAKE CHEMIST

**VOL. L**

**MAY, 1994**

**NUMBER 5**

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# THE 49th REMSEN LECTURER

EDWARD I. SOLOMON

Professor Edward I. Solomon received a B.S. in Chemistry from Rensselaer Polytechnic Institute in 1968 and his M.A. and Ph.D. in Chemistry from Princeton University in 1970 and 1972, respectively. He was a Danish National Science Foundation Fellow of the H.C. Orsted Institute, Copenhagen, while studying with C.J. Ballhausen from 1973-1974, and a National Institutes of Health Postdoctoral Fellow in the laboratory of H.B. Gray at the California Institute of Technology (1974-75). Professor Solomon began his teaching career at the Massachusetts Institute of Technology in 1975 and became a Full Professor of Chemistry in 1981. He has been a Professor of Chemistry at Stanford University since 1982 and in 1991 was named the first Monroe E. Spaght Professor of Chemistry.

Professor Solomon is a fellow of the American Association for the Advancement of Science and a member of the American Chemical Society, the American Physical Society, Sigma Xi and the International EPR Society. He is an associate editor of *Inorganic Chemistry* and an editorial board advisor for a number of other scientific journals. Among his many awards and lectureships are the Deans Award for Distinguished Teaching, 1900; the DuPont Young Faculty Award, 1979; the Alfred P. Sloan Foundation Fellowship, 1976 and the Westinghouse Foundation National Science Talent Search Award, 1964.

The focus of Professor Solomon's research is on fundamental problems in Bioinorganic Chemistry. A wide variety of spectroscopic methods are employed to experimentally determine the electronic structure, spectral features and structural contributions to reactivity of metal ion active sites in catalysis. Other interests include the application of photoelectron spectroscopy to inorganic materials and in particular to heterogeneous catalysts, and high resolution, low temperature electronic absorption spectroscopic studies of excited states.

## ELECTRONIC STRUCTURE CONTRIBUTIONS TO FUNCTION IN BIOINORGANIC CHEMISTRY

Many metalloenzymes exhibit unique spectral features that are now becoming well understood. These reflect novel active site electronic structures that can make significant contributions to catalysis. Copper proteins provide well understood examples in which the unusual electronic structures of the active sites contribute to rapid, long-range electron transfer reactivity, oxygen binding and activation, and the multielectron reduction of dioxygen to water.

### 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  
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(410) 617-2237

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

# THE 49th REMSEN AWARD

### DATE:

Wednesday, May 18, 1994

### PLACE:

Remsen Hall, Room 101  
Homewood Campus of  
The Johns Hopkins University

### SPEAKER AND TOPIC:

8:00 pm  
THE REMSEN MEMORIAL LECTURE  
Edward I. Solomon  
Stanford University  
"Electronic Structure Contributions to Function in Bioinorganic Chemistry"

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

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

### 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

1993	Christopher T. Walsh	1969	Albert L. Lehninger
1992	William Klemperer	1968	Har G. Khorana
1991	Rudolph A. Marcus	1967	Marshall W. Nirenberg
1990	Robert G. Bergman	1966	Paul H. Emmett
1989	K. Barry Sharpless	1965	James R. Arnold
1988	Mildred Cohn	1964	Paul D. Bartlett
1987	Stephen J. Lippard	1963	Harold C. Urey
1986	Gilbert Stork	1962	George Porter
1985	Richard N. Zare	1961	Herbert C. Brown
1984	Earl L. Muetterties	1960	Henry Eyring
1983	George M. Whitesides	1959	Edward Teller
1982	Harden McConnell	1958	Robert B. Woodward
1981	Koji Nakanishi	1957	Melvin Calvin
1980	Roald Hoffman	1956	Farrington Daniels
1979	Harry B. Gray	1955	Willard F. Libby
1978	John Charles Polanyi	1954	Vincent du Vigneaud
1977	Ronald Breslow	1953	Edward L. Tatum
1976	William N. Lipsomb, Jr.	1952	W. Mansfield Clark
1975	Henry Taube	1951	Hugh S. Taylor
1974	Elias J. Corey	1950	Edward C. Kendall
1973	Frank H. Westheimer	1949	Joel H. Hildebrand
1972	Charles H. Townes	1948	Elmer V. McCollum
1971	George C. Pimentel	1947	Samuel C. Lind
1970	George S. Hammond	1946	Roger Adams

### 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 M. Gregory  
College of Notre Dame  
4701 North Charles Street  
Baltimore, MD 21210

by May 11. Late reservations may be made by calling (410) 532-5714 or (410) 833-9366 by May 13. Answering machines are available at these numbers.

# THE W. R. GRACE & CO. AWARD

## DATE & PLACE:

Thursday, May 26, 1994  
University of Maryland  
Baltimore County  
Faculty/Staff Dining Room

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

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

by May 18. Late reservations may be made by calling

(410) 532-5714 or  
(410) 833-9366

by May 20. Answering machines are available at these numbers.

Dinner price is \$22.50 per person, but spouses and retired chemists may attend for \$20.50; students may attend for \$11.25.

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

Congressman George E. Brown, Jr., Chairman of the Science, Space and Technology Committee, has been selected to be the recipient of the 1994 W.R. Grace & Co. Award. This award was created in 1991 to recognize individuals whose achievements, stimulation and/or support have enabled others to make significant scientific discoveries.

Previous recipients of the award have been Robert D. Kennedy, in 1991, Chairman and CEO of Union Carbide, Emilio Q. Daddario, in 1992, former Congressman and first Chairman of the Sub-committee on Science, Research and Development, and D. Bruce Merrifield, in 1993, Assistant Secretary for Productivity, Technology and Innovation during the Reagan administration.

## THE SUMMER PICNIC

The annual summer picnic will be held again this year. Plans are not complete yet, but it will probably be held jointly with the Chemical Society of Washington at Belmont Manor, as in past years. The date has not yet been determined, but past history suggests late July or the first half of August with Sunday being the probable day.

## CHANGE OF ADDRESS

It is not necessary to notify *The Chesapeake Chemist* of address changes. We get our mailing labels from the ACS each month, so if you inform the ACS of your address change, we will automatically receive the correct label.



GEORGE E. BROWN, JR.

## SCHEDULE:

- 6:00 Social Hour  
7:00 Dinner  
8:30 THE W.R. GRACE & CO.  
AWARD ADDRESS  
GEORGE E. BROWN, JR.  
Member of Congress

## THE HONORABLE GEORGE E. BROWN, JR.

Rep. George E. Brown, Jr. (D-CA) became Chairman of the Science, Space, and Technology Committee in January of 1991 at the beginning of the 102nd Congress. He brings to the Chairmanship scientific and technical training as an industrial physicist as well as several decades of public-policy experience in local, state, and national government.

First elected to the House of Representatives in 1962, Brown has been a member of the Science, Space, and Technology Committee since 1965. He has spent almost three decades working to strengthen America's scientific and technological base and to improve the process by which science and technology can serve national needs. His strong support for institutionalizing long-range planning and investment in science and technology distinguishes his tenure as a creative and supportive leader in advancing science.

Rep. Brown has emphasized the development of a dynamic, evolving Federal science and technology apparatus that is responsive to changing domestic and international needs. In the mid-1960s, and again in 1979, he led an effort to restructure and strengthen the National Science Foundation in the changing science and technology environment. He was an active participant in shaping the permanent science advisory mechanism in the Executive Office of the President, which was established in 1976 as the Office of Science and Technology Policy. As an energetic proponent of environmental preservation and of science and technology in the service of society, Rep. Brown championed the establishment of the Environmental Protection Agency in 1970, and the Office of Technology Assessment in 1972.

Brown's foresight has served Congress as an early -warning system on issues as diverse as national dependency on imported oil to the danger of carcinogenic pesticides in the food supply. He recognized early on the environmental hazards of burning fossil fuels, the destructive effect of freons on the ozone layer, the importance of keeping space development under civilian control, and the necessity of monitoring global climate change. In due course, the Congress adopted provisions in the Clean Air Act to protect the ozone layer from freons; passed a national climate monitoring program; funded research and development programs in hydrogen, geothermal, photovoltaics, and wind energy; and developed a global change research program. Rep. Brown also has helped direct the Congress toward initiatives for energy conservation, national information systems, advanced technology development, and the integration of technology in education.

Throughout his career, Rep. Brown enthusiastically has supported both manned and unmanned space exploration. An aggressive proponent of strategic planning, he has developed plans to improve U.S. manufacturing capability, maintain the Landsat remote-sensing system, and restructure the national weapons labs in a peacetime economy.

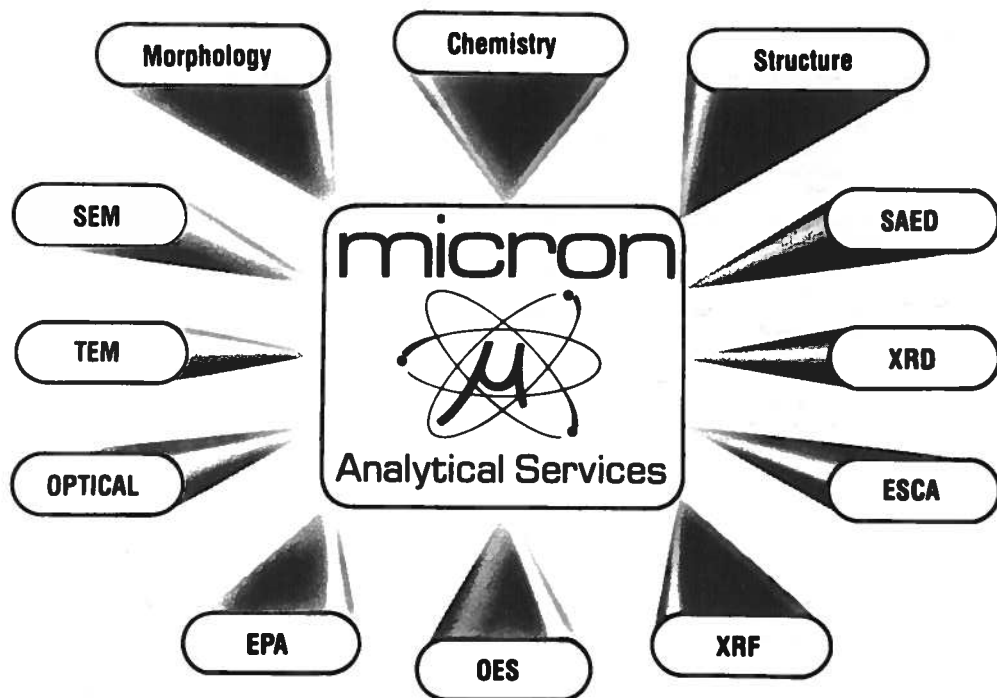
A graduate of the University of California at Los Angeles in Industrial Physics, he later did graduate work at UCLA in industrial relations, adult education, and political science, partially supported by a Ford Foundation grant. Rep. Brown served in the House of Representatives for eight years before running unsuccessfully for the Senate in 1970. He returned to the Congress in 1972 and has served continuously since then. He currently represents California's 42nd Congressional district.

Rep. Brown is a member of the Council of Scientific Society Presidents and the American Association for the Advancement of Science. Rep. Brown's many awards include: The AAAS Philip Hauge Abelson Prize for distinguished public service and leadership in the field of science; the National Science Foundation's Distinguished Public Service Award; and membership in Sigma Xi, a national science honorary society.

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