



THE

CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

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MAY, 1991

NUMBER 5

1991 REMSEN AWARD



RUDOLPH A. MARCUS

Plans for National Chemistry Week are advancing rapidly. The kick-off is Sunday, November 3, and will probably be held at the Maryland Science Center. The featured speaker is still tentative, but a strong possibility is the popular Bassam Shakhshiri, formerly assistant director for science and engineering education of the National Science Foundation. Focus will then circulate among area colleges through the rest of the week.

1991 HERMAN SKOLNIK AWARD

Dr. W. Todd Wipke, Professor of Chemistry at the University of California at Santa Cruz, has been named to receive the 1991 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. The award will be presented to Dr. Wipke at the 202nd ACS National Meeting in New York, N.Y., on Tuesday, August 27, 1991. A special symposium in Dr. Wipke's honor will also be held at that time.

PATENT PUBLICATIONS AVAILABLE FROM ACS

The American Chemical Society's Committee on Patents and Related Matters recently has published a pamphlet entitled *Electronic Record-Keeping for Patent Purposes: Cautions and Pitfalls*. Understanding that computers are increasingly being used as a means of gathering original data, the Committee has written this pamphlet to alert the scientific community to legal considerations and the pitfalls and precautions in maintaining research records on computers and data storage devices. This publication is available free of charge by sending requests and a self-addressed mailing label to the American Chemical Society, Department of Government Relations and Science Policy, 1155 16th Street, NW, Washington, DC 20036-4849.

The "Record Keeping Fact Sheet," a two-page guideline for maintaining complete and proper research records, lists the do's and don'ts of laboratory notebook record-keeping for the protection of intellectual property. It also is available free of charge from the above mailing address.

What Every Chemist Should Know About Patents is an introduction to understanding patents and patenting procedures. This handbook presents an easy-to-understand overview on obtaining patents, their use and their value. Copies are available for \$2.00 each by sending requests and payment to the American Chemical Society, P.O. Box 57136, West End Station, Washington, DC 20037. The "Fact Sheet" and the "Electronic Record-Keeping" pamphlet automatically will be sent along with this "patent primer."

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THE 46th REMSEN AWARD

RUDOLPH A. MARCUS

Professor Rudolph A. Marcus was born in Montreal, Canada in 1923, and received his B.Sc. and Ph.D. from McGill University (1943, 1946). His graduate research, under the direction of C.A. Winkler, was on reactions in solution. After postdoctoral experimental research on free radical reactions with E.W.R. Steacie at the National Research Council of Canada and theoretical research with O.K. Rice at the University of North Carolina, he joined the faculty of the Polytechnic Institute of Brooklyn in 1951. He became Professor of Physical Chemistry at the University of Illinois, in 1964 and, in 1978, Arthur Amos Noyes Professor of Chemistry at the California Institute of Technology. In 1960-61 he was a Temporary Member of the Courant Institute of Mathematical Sciences at New York University, in 1975-76 Visiting Professor of Theoretical Chemistry at the University of Oxford, a Professorial Fellow of University College, Oxford, and an Alexander von Humboldt Awardee at the Technical University of Munich.

He has served as Chairman of the Board of Trustees of the Gordon Research Conferences, Chairman of the Division of Physical Chemistry of the American Chemical Society, member of the Executive Committee of the Division of Chemical Physics of the American Physical Society, Committee on Research and Planning of the American Academy of Arts and Sciences, and as co-Chairman of the Western Section of that Academy. He has been a member of Chemistry review committees of various national laboratories and universities, the Advisory Board of the Petroleum Research Fund (ACS), the NSF Advisory Committee for Chemistry, several NAS-NRC Committees [Climatic Impact Panel on Atmospheric Chemistry, Committee on Chemical Sciences, Committee on Kinetics of Chemical Reactions (past Chairman), and Committee to Survey Opportunities in the Chemical Sciences], and is a member of the Executive Advisory Board of the NSF/Rochester Center for Photoinduced Charge Transfer.

Professor Marcus has been or is a member of the Editorial Boards of *Annual Review of Physical Chemistry*, *Accounts of Chemical Research*, the *Journal of Physical Chemistry*, the *Journal of Chemical Physics*, the *International Journal of Chemical Kinetics*, *Molecular Physics*, *Chemical Physics*, *Letters*, *Laser Chemistry*, *Advances in Chemical Physics*, *Theoretica Chimica Acta*, *International Reviews in Physical Chemistry*, *Progress in Physics*, *Chemistry and Mechanics (China)*, *Journal of the Chemical Society (Faraday Transactions)*, and is a member of the International Advisory Board in Chemistry, World Scientific Publishing Company.

He is known for his work in many fields of theoretical chemical kinetics, including the theories of unimolecular reactions (RRKM theory), electron transfer reactions, electrode reactions, and various transfer reactions, the semiclassical theory of collisions and of bound states, and collision coordinates.

He has been the recipient of an Alfred P. Sloan Foundation Fellowship, a National Science Foundation Senior Postdoctoral Fellowship, a senior Fulbright-Hayes Scholarship, the Anne Molson Prize in Chemistry of McGill University, the Chandler Medal of Columbia University, the Evans Award of Ohio State University, the Robinson and the Centenary Medals of the Faraday Division, Royal Society of Chemistry, the Irving Langmuir Award in Chemical Physics, Peter Debye Award in Physical Chemistry, Willard Gibbs Medal and Theodore William Richards Medal of the American Chemical Society, the Wolf Prize in Chemistry, and the National Medal of Science. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the American Philosophical Society, and a Foreign Member of the Royal Society (London). He has been awarded the honorary degrees of Doctor of Science by the Polytechnic University, the University of Chicago, the University of Göteborg, Sweden, and McGill University.

DATE:

Thursday, May 9, 1991

PLACE:

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

SPEAKER AND TOPIC:

8:00 pm
THE REMSEN MEMORIAL LECTURE
Rudolph A. Marcus
California Institute of Technology
'Electron Transfer Reactions in
Chemistry: Theory and Experiment'

Dinner price is \$15.00 per person,
but spouses and retired chemists
may attend for \$13.00; students
may attend for \$8.00

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

COCKTAILS AND DINNER:

The Johns Hopkins University
Glass Pavilion

Social Hour 6:00 pm
sponsored by
Macalaster Bicknell
Dinner 7:00 pm

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

Dr. J. Paul Carter
Nova Pharmaceutical Corp.
6200 Freeport Center
Baltimore, MD 21224

by May 1. Late reservations may
be made by calling (301) 563-6168
by May 3. An answering machine
is available at this number.

DREYFUS GRANT TO GOUCHER

Goucher College announces that it has been awarded a \$15,000 grant from the Camille and Henry Dreyfus Foundation Special Grant Program in the Chemical Sciences.

The grant will provide funding for restructuring and modernizing the college's curriculum in chemistry and the biological sciences "in order to continue our tradition of quality science education," says Dr. Esther Gibbs, associate professor of chemistry and project director. In particular, the grant will go towards a high field Fourier-Transform Nuclear Magnetic Resonance Spectrometer (NMR) which will be used in courses ranging from freshman honors chemistry to upper level courses in organic chemistry, biochemistry, molecular biology, and advanced inorganic chemistry.

"The NMR is part of the important new instrumentation we are acquiring that will allow us to teach students science by providing them with experiences that represent the methods of today's practicing scientists," notes Dr. Gibbs. She adds that the new instrumentation is also integral to research conducted by the college's science faculty. "We will be able to use the NMR, often in collaboration with students, for research projects such as the study of fluorine imaging compounds and the synthesis of possible anti-tumor drugs."

Founded in 1885, Goucher ranks among the top 20 undergraduate institutions in the country in the number of women graduates with earned doctorates in the natural sciences. Over the past ten years, nearly 100 percent of the college's biology and chemistry graduates seeking admission to graduate school have been accepted. Almost 80 percent of Goucher students applying to medical schools in the same period have also been accepted.

ELECTRON TRANSFER REACTIONS IN CHEMISTRY THEORY AND EXPERIMENT

The field of electron transfer reactions has grown considerably since the late 1940s and now embraces many areas. They include electron transfers between simple inorganic reactants in solution, organic systems, photoinduced electron transfers, electron transfers at metal or semiconductor electrodes or across liquid-liquid interfaces, photosynthetic and other biological electron transfers, long range electron transfers in rigid organic bridged systems and in proteins, among others. Many effects have been studied - "driving force", solvents, changes in equilibrium bond length differences upon electron transfer, ionic size, and others, in elucidating the role played by solvent and vibrational reorganization in facilitating electron transfer. There has been a considerable interaction between theory and experiment in these areas, involving in part the prediction of various relations between rate constants for electron transfers of different process and the prediction of an unusual effect, the inverted effect. Examples of different aspects of the electron transfer field will be given.

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

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
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1983 George M. Whitesides	1960 Henry Eyring
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1974 Elias J. Corey	1951 Hugh S. Taylor
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1971 George C. Pimentel	1948 Elmer V. McCollum
1970 George S. Hammond	1947 Samuel C. Lind
1969 Albert L. Lehninger	1946 Roger Adams
1968 Har G. Khorana	

REMSSEN AWARD NOMINATIONS

With the 1990 Remsen Award fresh in our minds, it is a good time to think about nominations for the 1991 award. A nomination should be accompanied by a curriculum vita and a list of the nominee's publications as well as any other information which would be helpful. Nominations should be sent to Catherine Fenselau, Chemistry and Biochemistry, UMBC 21228.

NATIONAL CHEMISTRY WEEK

The American Chemical Society invites Marylanders to get involved in National Chemistry Week. It is designed to educate the our entire community of parents, children, TEACHERS, and business professionals, about chemistry. By participating, 1) you will be helping to strengthen scientific awareness within your community, 2) learn something about chemistry which is of interest to you, 3) take part in a nationwide effort focusing on the ways which chemicals affect all of us, 4) make professional contacts with chemists in your community, who can support your school's science activities, 5) motivate students in science, with exposure to local demonstrations and lectures.

This activity is supported and encouraged by the highest levels of the Federal Government. Educators are well aware of the positive and negatives within our educational system. By getting involved, as teachers, parents, and taxpaying citizens, you will be able to have an input into the direction National Chemistry Week activities will be directed, encourage scientific learning, and share in a very positive learning experience. The American Chemical Society is the largest professional organization in the country. Members range from college chemistry students and laboratory analysts to researchers in universities, government, and industry. THIS IS THE OPPORTUNITY TO LEARN ABOUT CHEMISTRY AND WHAT IS AVAILABLE THROUGH THE AMERICAN CHEMICAL SOCIETY, AND ITS AFFILIATES.

NATIONAL CHEMISTRY WEEK WILL BE HELD NOVEMBER 3-NOVEMBER 9, 1991.

ACTIVITIES ARE BEING PLANNED NOW, SO GET INVOLVED NOW!

LOCAL POINTS OF CONTACT: National Chemistry Week Chairman, Joseph B. Yellin, Harford Community College, 401 Thomas Run Road, Bel Air, Maryland, (301) 836-4434 or (301) 358-1545.

National Headquarters of the American Chemical Society, National Chemistry Week Chairman, Jim Bradford (800) 227-5558 digital phone selection #9.

The Maryland Section of the American Chemical Society needs volunteers to serve on the 1991 National Chemistry Week Committee. ACS members are preferred but anyone with interest is welcome to help. Many positions need filling including coordinators for events in schools and public areas, publicity/Media Relations, Finance, scheduling demonstrations and exhibits, recruiting involvement by government, research and industrial institutions, logistics, monitoring safety regulations at area events and we also need one or more co-chairmen. We would hope the NCW chairman from 1989 would be willing to help.

PLEASE CONTACT LOCAL NCW CHAIRMAN (Joseph B. Yellin, Harford Community College, 401 Thomas Run Road, Bel Air, Maryland, (301) 836-4434 or (301) 358-1545) AS SOON AS POSSIBLE.

MARYLAND CHEMIST AWARD COMMITTEE

The Maryland Chemist Award Committee is constantly seeking nominees for this award. For details concerning the criteria for the award or method for making nominations, contact the chairman of the committee, Elwin C. Penski (671-3953 or 671-2366 during normal work hours, 877-2923 or 879-8589 at other times).

Members interested in serving on the award committee are also invited to contact Mr. Penski.

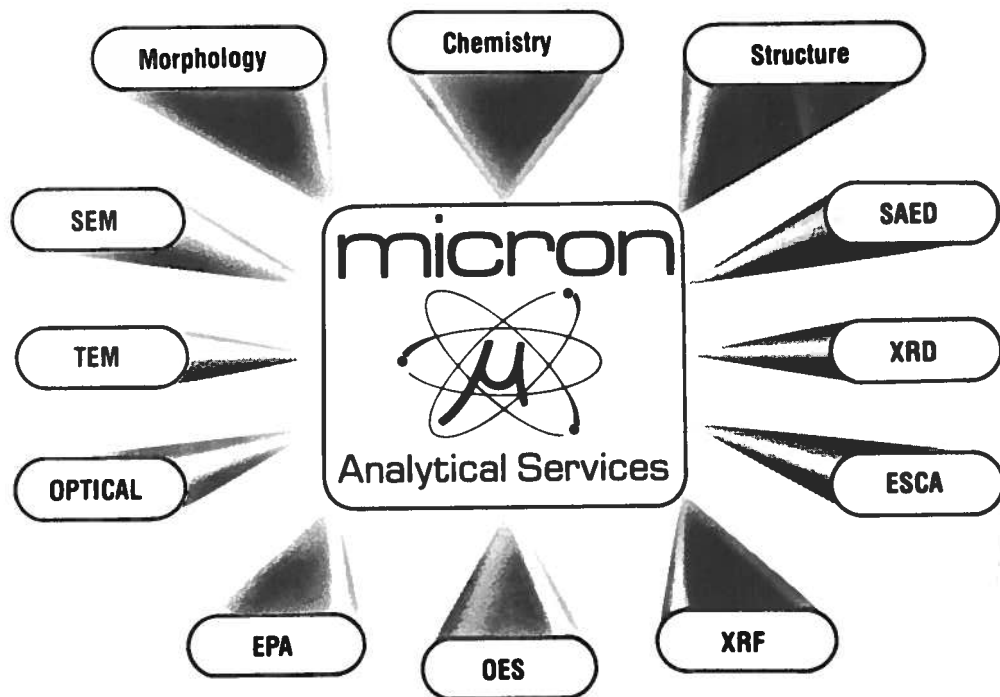
REMEMBER THE MARM

The 25th Middle Atlantic Regional Meeting is scheduled for May 21-23 at the University of Delaware.

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