



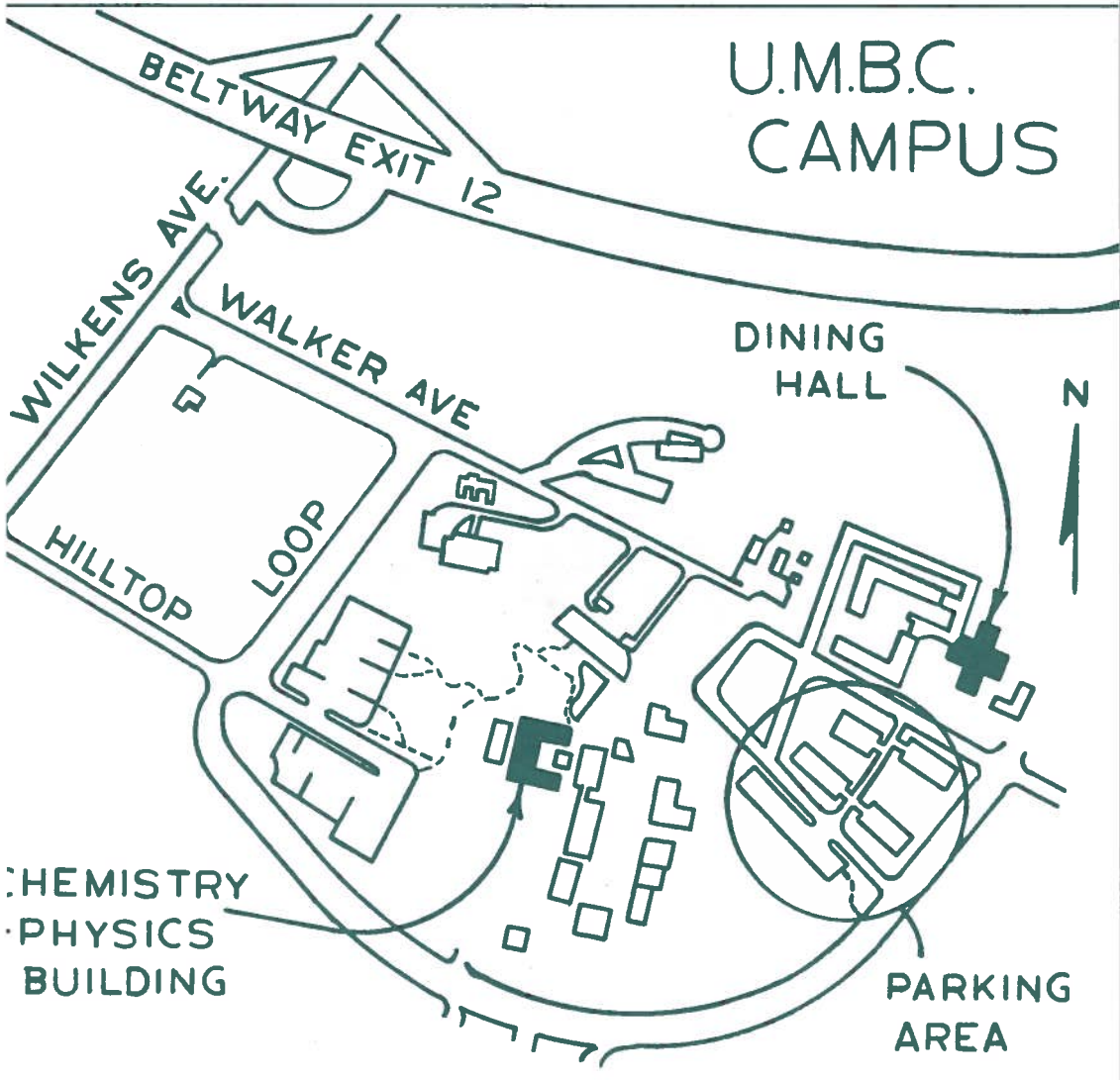
THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXVIII

APRIL, 1972

NUMBER 4



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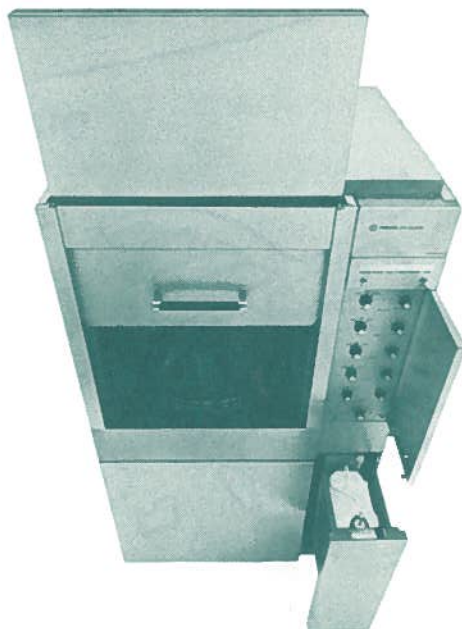
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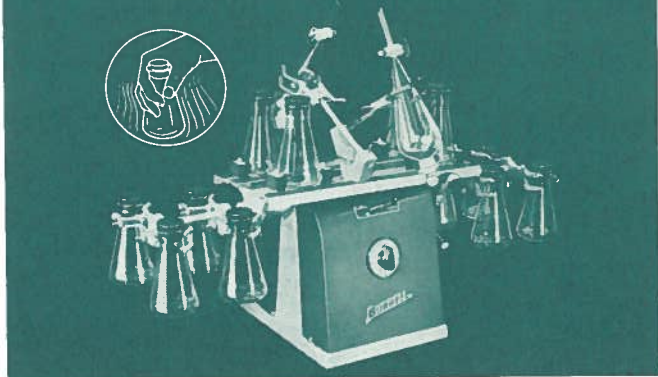
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The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Dr. William Galetto, McCormick and Co., 204 Wight Ave., Hunt Valley, Md. 21031. Phone 666-3155. Address advertising inquiries and copy to Mr. Kent R. Zeller, McCormick and Company, 204 Wight Ave., Hunt Valley, Md. 21031.

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APRIL MEETING

MOLECULAR ORBITALS



DR. ROBERT S. MULLIKEN

DATE:

WEDNESDAY, APRIL 19, 1972

SPEAKERS AND TOPICS:

5:30 P.M.

Tour of Chem. Department facilities, meet in room 314, Chemistry-Physics Building.

8:30 P.M.

Dr. Robert Mulliken, Univ. of Chicago. "Structure in Some Simple Molecules." To be held in Lecture Hall, Chemistry-Physics Building.

TOUR OF UMBC

PLACE:

University of Maryland Baltimore Campus, located just off Wilkens Avenue.

COCKTAILS AND DINNER:

Dining Hall, U.M.B.C. Campus. Price is \$6.00 per person for cocktails (6:30-7:30) and hot buffet dinner (7:30). Reservations are necessary for the dinner, and should be made with Mr. Allen Bednarczyk, McCormick and Co., Inc., 204 Wight Avenue, Hunt Valley, Md. 21031, phone 666-3155, by Friday preceding meeting. It is not necessary to be a member of the American Chemical Society to attend the dinner and/or talks.

SOCIAL HOUR:

There will be a social hour after the meeting. Refreshments will be served.

CALL FOR PAPERS

A joint conference on optics, spectroscopy and chemistry will be held at the Jack Tar Hotel in San Francisco, California, October 16-20, 1972. The conference combines the 57th ANNUAL MEETING OF THE OPTICAL SOCIETY OF AMERICA with the 1972 PACIFIC CONFERENCE ON CHEMISTRY AND SPECTROSCOPY. Sponsors are The Optical Society of America, The Northern California Society for Applied Spectroscopy, and the Santa Clara Section of the American Chemical Society.

A separate, unique program is being arranged for the Optical Society Meeting. For details, contact the Optical Society program chairman listed below.

This notice is a call for papers for that part of the program pertaining to chemistry and applied spectroscopy. Sessions and symposia on the following subjects are being arranged.

Agricultural Chemistry
Analytical Chemistry
Atomic Absorption &
Emission Spectroscopy
Biochemistry
Bioorganic Chemistry
Chemical Education
Clinical Chemistry
Colloid Chemistry
Environmental Chemistry
Inorganic Chemistry

Mass Spectroscopy
Metalloorganic Chemistry
Multichannel Analyzers, Computers &
Interfaces
Organic Chemistry
Petroleum Chemistry
Physical Chemistry
Polymer Chemistry
Sampling
Vibrational Spectroscopy
X-Ray Spectroscopy (Wavelength &
Energy Dispersive)

Authors who wish to present papers on any of the above subjects should submit an Abstract of 200 words or less to the appropriate program chairman listed below.

All abstracts will be reproduced by the photo offset process. The standard ACS abstract form for regional meetings is recommended and is available on request.

The closing date for abstracts is May 1, 1972.

Dr. Albert Castro
Program chairman, ACS
Chemistry Department
San Jose State College
San Jose, Ca. 95114

Dr. Victor Buhrke
Program Chairman, SAS
The Buhrke Company
P.O. Box 2243
Menlo Park, Ca. 94025

For information regarding the Optical Society Program, contact:

Dr. Sumner P. Davis
Program Chairman, OSA
University of California
Physics Department
Berkeley, Ca. 94720

ROBERT S. MULLIKEN

Robert S. Mulliken was born in Newburyport, Massachusetts on June 7, 1896. He received his B.S. degree from MIT in 1917 and his Ph.D. from the University of Chicago in 1921.

Dr. Mulliken began his chemistry career as a Junior Chemical Engineer with the Bureau of Mines in 1917. In 1919, he joined the New Jersey Zinc Company as an Assistant in Rubber Research. Dr. Mulliken began his Academic career in 1926 as an Assistant Professor of Physics at Washington Square College, New York University. In 1928, he joined the staff of the University of Chicago as Associate Professor of Physics and served as Professor of Physics from 1931-1961. In 1961, Dr. Mulliken became the Distinguished Service Professor of Physics and Chemistry at the University of Chicago, a position he holds until today. During the winter months (January-March), Dr. Mulliken works out of the Florida State University Institute of Molecular Biophysics where he is Distinguished Research Professor of Chemical Physics.

Additional professional positions held by Dr. Mulliken include: Director, Editorial Work and Information, Plutonium Project, University of Chicago, 1942-45; Scientific Attaché, U. S. Embassy, London, 1955; Baker Lecturer, Cornell University, 1960; Siliman Lecturer, Yale University, Spring, 1965; and Scientific and Editorial Consultant.

Dr. Mulliken was a National Research Council Fellow from 1921-1925 at the University of Chicago and Harvard University; a Guggenheim Fellow, Germany and Europe, 1930, 1932-1933; Fulbright Scholar, Oxford University, 1952-1953. He has also received honorary degrees from Columbia University (1939) and Cambridge University (1967).

Besides being the recipient of the Nobel Prize in Chemistry in 1966, Dr. Mulliken has also been the recipient of the following awards: Bronze Medal Award, University of Liège; Theodore William Richards Gold Medal, Northeastern Section, A.C.S.; Gilbert Newton Lewis Gold Medal Award, California Section, A.C.S.; Willard Gibbs Medal Award, Chicago Section, A.C.S.; plus

numerous other professional awards and academic honors.

Among Dr. Mulliken's professional memberships are included the National Academy of Sciences, the American Academy of Arts and Sciences, A.C.S. and American Philosophical Society. He is also a Fellow of the American Physical Society and the American Academy for the Advancement of Science.

STRUCTURE IN SOME SIMPLE MOLECULES

Some *ab initio* quantum chemical calculations on the forms and energies of the molecular orbitals of the N_2 molecule for internuclear distances from equilibrium to the united atom will be discussed. Results will also be presented on two triplet pi excited states of N_2 . Calculations on related excited states of other molecules will be reviewed along with the puzzle of the $\pi-\pi^*$ absorption spectrum of ethylene.



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U.M.B.C. - CHEMISTRY DEPARTMENT

On April 19th of this year members of the Maryland section of the American Chemical Society and their guests will have an opportunity to tour the facilities of the Chemistry Department at the rapidly expanding campus of the University of Maryland Baltimore County (UMBC). On that date, the faculty in Chemistry will act as hosts for the section meeting at which Nobel Laureate Robert S. Mulliken of the University of Chicago will be the featured evening speaker, the tour of the teaching and research laboratories being held at 5:30 P.M. in lieu of the customary late afternoon talk.

For many of those attending the April meeting, the campus tour will be a first introduction to the newest institutional member of the community of chemists in Maryland. UMBC is now in its sixth year of operation as the only publicly-supported university level institution in the Baltimore

Metropolitan area. Its student population has grown at an average rate of 20% per year from 650 in September of 1966 to about 3700 at the present time, most of these students being commuting residents of the City of Baltimore and its surrounding suburban areas.

The growth of the Chemistry Department at UMBC has paralleled the growth of the campus as a whole. Starting with a faculty of three in 1966 and with course offerings then confined to the freshman level, a full four-year undergraduate program leading to the baccalaureate degree in Chemistry has been developed, two classes having been graduated to date. Nine regular faculty members now hold the rank of assistant professor or above with the equivalent of three other positions held by teaching assistants and laboratory instructors. To date all of the regular faculty in Chemis-



U.M.B.C. FACULTY

Left to right: F. Gornick, H. Silber, R. Steiner, J. Vincent, R. Pollack, A. Hyman, M. Logue and D. Whalen. Front center, V. Vitullo.

try have joined the faculty with a minimum of two years of postdoctoral experience obtained at leading research laboratories across the country. The range of their teaching and research interests includes all the recognized branches of chemistry with the exception of analytical chemistry, this omission to be rectified at some future date.

The recruitment policy of the Chemistry Department at UMBC has reflected its expectation of expansion into graduate studies. A program leading to the M.S. in Chemistry and to the Ph.D. in molecular biology, the latter an interdisciplinary venture with Biology has been proposed and is in the final stages of administrative approval. All of the regular faculty members have continuously engaged in research, seven of the nine of them being currently funded by the National Science Foundation, the Petroleum Research Fund or the Research Corporation. The acquisition of a new building in 1970 has provided ample space for faculty research which, in the absence of graduate students, has involved the extensive participation of undergraduates.

The major commitment of the Chemistry Department has been and will continue to be the fostering of chemical education at various levels. As part of an urban university catering to the needs of a highly diversified student body, the Chemistry Department must therefore apportion its efforts and resources so that all students who embark upon the study of Chemistry will have the maximal opportunity to attain their full potential.

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MEMBERSHIP CHANGES

The Chairman and Officers of the Maryland Section of the American Chemical Society welcome the following new members of the Section, and cordially invite them to attend the monthly meetings and participate in other Section affairs.

Mr. Thomas A. Andersen
Baltimore, Md.

Mr. David P. Beggs
Baltimore, Md.

Mrs. Betty Lee Chen
Baltimore, Md.

Robert Wheeler Egan
Baltimore, Md.

Dr. Victor A. Ferraris
Ft. Detrick, Md.

Mr. Ronald J. Gutowski
Baltimore, Md.

Gary Joseph Hermann
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Dr. Judith T. Levy
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Mr. Jeffrey D. Miano
Baltimore, Md.

Dr. Richard Stanley Miller
Harwood, Md.

Mr. Robert Carl Moser
Glen Burnie, Md.

Mr. Eric David Mueller
Baltimore, Md.

(Continued on Page 11)

8th MARM CALL FOR PAPERS

8th MARM January 14-17, 1973 Washington, D. C.

Members of the American Chemical Society are invited to present papers at the Eighth Middle Atlantic Regional Meeting. In addition to the Symposia listed below, General Papers are solicited for all Divisions.

An abstract (original and two copies) of the paper to be presented must be submitted on the standard abstract form (obtainable from A. T. Winstead, American Chemical Society, 1155 16th Street, N. W., Washington, D. C., 20036) to the appropriate Divisional Chairman listed below. The **deadline** for receipt of abstracts is **October 1, 1972**.

PLENARY LECTURERS:

Professor George C Pimentel (Berkeley)
 Professor Gilbert Stork (Columbia)
 Professor Robert West (Wisconsin)

Divisional Chairman

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 Washington, D. C. 20234

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 Catholic University of America
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MOLECULAR SPECTROSCOPY

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 Department of Chemistry
 Georgetown University
 Washington, D. C. 20007

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(Continued from Page 9)

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THE REMSEN MEMORIAL LECTURE

MAY 24, 1972

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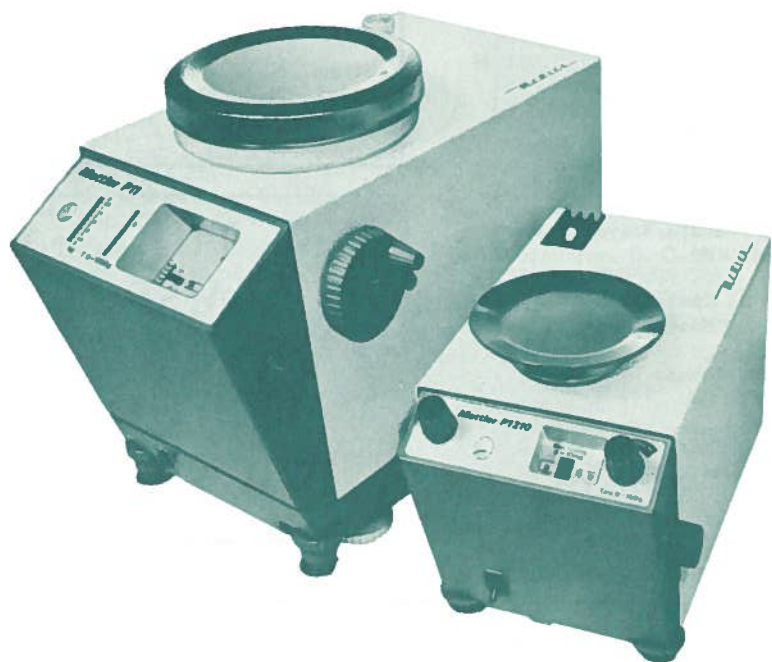
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