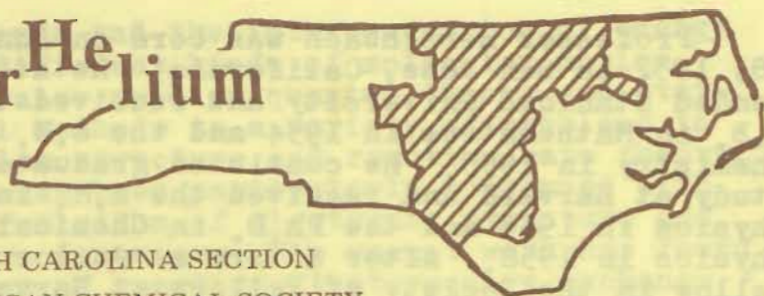


Tar^{He}lium



NORTH CAROLINA SECTION
AMERICAN CHEMICAL SOCIETY

Vol. 7, No. 2 Raleigh, N.C. October, 1976

"MOLECULAR BEAM CHEMISTRY"

Speaker: Dr. Dudley Herschbach
Harvard University

***Date:** Tuesday, October 26, 1976

Place: Duke University
Durham, North Carolina

Time: 5:30 Happy Hour
President's Room
6:30 Dinner
Oak Room (from the menu)
8:00 Lecture
Gross Chemical Lab., Room 103

***Note:** This is a change from the original date
of October 25.

Professor Herschbach was born on June 18, 1932 in San Jose, California. He attended Stanford University and received the S.B. in Mathematics in 1954 and the S.M. in Chemistry in 1955. He continued graduate study at Harvard and received the A.M. in Physics in 1956 and the Ph.D. in Chemical Physics in 1958. After a term as Junior Fellow in the Society of Fellows at Harvard (1957-1959), he was Assistant Professor (1959-1961) and Associate Professor (1961-1963) at the University of California, Berkeley, where he also held an Alfred P. Sloan Research Fellowship (1959-1963). He became Professor of Chemistry at Harvard in 1963.

Dr. Herschbach was awarded the Pure Chemistry Prize of the American Chemical Society in 1965 and elected to the National Academy of Sciences in 1967. He was a Guggenheim Fellow at Freiburg University in 1968 and has held many distinguished lectureships. Most recently, he was a Sherman Fairchild Distinguished Scholar at the California Institute of Technology and he was awarded the Spiers Medal of the Faraday Society for 1976.

"MOLECULAR BEAM CHEMISTRY"

The major theme of Professor Herschbach's research in recent years has been the study of molecular dynamics of chemical reactions. He has developed molecular beam and spectroscopic techniques which allow the observation of reaction products immediately after the single collision events in which the new molecules are formed. This work has provided a detailed picture of transfer of energy and angular momentum during the formation and decomposition of chem-

ical bonds and the interconversion of energy among different kinds of molecular motion. He has also applied quantum theory and statistical methods to a variety of problems in molecular structure and reaction rate theory and he has been particularly concerned with the correlation of electronic structure and reaction dynamics. His recent work has found examples of reactions that require exchange of two or three pairs of bonds in a single collision event yet proceed with practically no activation energy. Processes akin to liquid phase reactions are now also being studied in his laboratory using beams of van der Waals polymers or solvation clusters.

THANK YOU, BURROUGHS WELLCOME

A special note of appreciation is due Dr. David Yeowell and others at Burroughs Wellcome for providing the North Carolina Section of the ACS not only a location to hold its September meeting, but especially for providing free drinks and refreshments at Happy Hour and a free dinner. THANK YOU! To the approximately 145 who attended this proved to be a special occasion. Hopefully, we will see nearly as many members at the other meetings throughout the year.

BALLOTS COMING SOON

As noted in the September issue of TARHELIUM, this year the local Section elections will be handled in a slightly different manner. The ballot will not be part of the regular issue of TARHELIUM. Instead a separate envelope will be sent to each member and will contain two envelopes (both

of which are to be returned), a ballot, instructions for marking and returning the ballot and a short biography of each candidate.

The candidates for this year's election are: Richard Gilbert (NCSU) and Richard Palmer (Duke) for Chair-Elect; Kathy MacLeod (EPA) and Robert Izydore (NCCU) for Secretary (for 1 year); Forrest Getzen (NCSU) and Eric Wiechert (Meredith) for Treasurer (for 2 years); Marcus Hobbs (Duke) for Councilor (for 3 years); and Robert Ghiradelli (ARO) for Alternate Councilor (for 3 years).

As also explained in the September issue of TARHELIUM, the ballots will be verified and counted and the results announced at the November meeting. To be counted the ballot must be received by Dr. Howard Clark for verification before 12:00 (noon) on November 17, 1976. Ballots can not be hand carried to the November meeting.

MEMBERSHIP COMMITTEE ASKS YOUR HELP

If you know of any colleagues who may be qualified and interested in joining the ACS, please give us their names and addresses so that we may contact them with further information and/or applications. All new memberships (except student affiliates) and renewed lapsed memberships result in an extra contribution from the National Office to our Section, but only if sent in through the Section Committee before January 1.

Larry Bowen, Chairman	NCSU	737-2995
Slayton Evans	UNC-CH	933-6319
Robert Izydore	NCCU	683-6351
Peter Smith	Duke	684-2238

MEETING NEXT MONTH AT NCSU

The November meeting of the North Carolina

Section of the ACS will take place on November 17 at NCSU with Dr. John K. Stille as the scheduled speaker.

NOMINATIONS FOR NATIONAL AWARDS

Any member of the Section who wants to submit a nomination of an individual for an award at the National level is asked to contact Dr. Forrest Getzen at NCSU or a member of the Awards Committee. Those who submit nominations should send, in addition to the name of their nominee, the appropriate information required by National for consideration of that individual for the award.

AREA SEMINARS

- NCSU, 4:00 p.m., Rm. 124 Dabney Hall
- Oct. 25 Morton Z. Hoffman, Boston Univ.,
"Inter- and Intramolecular Electron Transfer Reactions in Transition Metal Coordination Complexes"
- Nov. 1 Harvey B. Hopps, Aldrich-Boranes
"Developments in Boranes"
- Duke 3:30 p.m., Rm. 103 Gross Chemical Lab.
- Oct. 22 M.D. Joesten, Vanderbilt Univ.
- Nov. 5 Dr. L.D. Faller, National Science Foundation
- UNC-CH 11:00 a.m., Rm. 308 Venable
- Oct. 20 Nicholas J. Turro, Columbia Univ.
"Chemiluminescent Organic Reactions. Synthetic, Mechanistic and Theoretical Aspects"
- Oct. 22 Jack D. Dunitz, ETH-Zurich,
"From Crystal Structure Data To Chemical Reaction Pathways"
- Oct. 27 Robert E. Wyatt, Univ. of Texas
"Recent Advances in the Quantum Dynamics of Chemical Reactions"

EXECUTIVE COMMITTEE

- Monica R. Nees (*NC STRC*), Chairman
Suzanne T. Purrington (*Peace*), Chairman-Elect
Howard G. Clark (*Duke*), Secretary-Treasurer
 Marcus Hobbs (*Duke*), Councilor
 Maurice M. Bursey (*UNC*), Councilor
 Ernest L. Eliel (*UNC*), Councilor
Keith Lawson (*Monsanto*), Alternate Councilor
Sally M. Horner (*Meredith*), Alternate Councilor
 Maurice M. Bursey (*UNC*), Past Chairman
Richard J. Thompson (*EPA*), Alternate Councilor
 and Past Chairman
Halbert Carmichael (*NCSU*), Past Chairman

COMMITTEE CHAIRMEN

- Awards - Forrest Getzen (*NCSU*)
Centennial - Marcus Hobbs (*Duke*)
Certification - Richard J. Thompson (*EPA*)
Education - Maurice M. Bursey (*UNC*)
Hospitality - William Gutknecht (*Duke*)
Membership - Lawrence Bowen (*NCSU*)
Program - Suzanne T. Purrington (*Peace*)
Publication - Halbert Carmichael (*NCSU*)
Public Relations - Arthur Diesing (*L&M*)
 Safety - Nash Collier (*UNC*)
Scholarship - Robert G. Lewis (*EPA*)

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