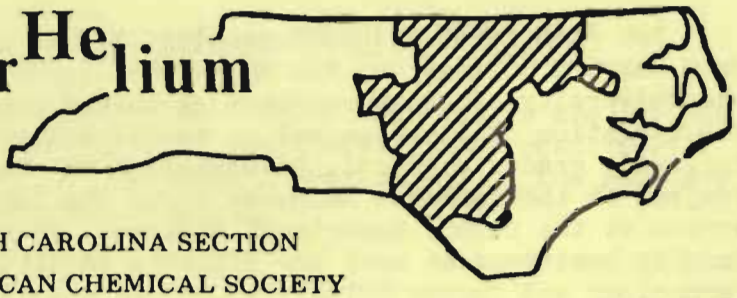
TarHelium



NORTH CAROLINA SECTION
AMERICAN CHEMICAL SOCIETY

Vol. 11, No. 5 Raleigh, N.C. January, 1981

"ORGANIC CHEMISTRY WITHOUT CARBON"

Speaker: Dr. Alan F. Clifford
Virginia Ploytechnic Institute
and State University

Date: Tuesday, January 13, 1981

Place: University of North Carolina - Chapel Hill

Time: 5:30 Reception
Ninth Floor Lounge
Kenan Hall

6:30 Dinner*
Carolina Inn Cafeteria

8:00 Lecture
Room 224 Venable Hall

* Reservations are not required. Students will be reimbursed for ½ the cost of their dinner if they present their receipt to the treasurer following dinner.

Dr. ALAN FRANK CLIFFORD received his AB degree from Harvard College and his MS and PhD degrees from the University of Delaware where he worked both on the isolation of Samarium and on the HF solvent system. Following graduate school, he worked on the Manhattan Project at the Kankakee Ordnance Works and later he worked at the DuPont Experiment Station. He held faculty positions at both the Illinois Institute of Technology and Purdue University before moving to VPI where he has been Head of the Chemistry Department since 1966. Dr. Clifford has been active in the ACS serving as Councilor and Alternate Councilor for the Division of Fluorine Chemistry and serving on several nomenclature committees for both the Inorganic and Fluorine Chemistry Divisions. He has also served on the Council Committee on Local Section Activities as well as on the Council Committee on Nominations and Elections.

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The thiazyl fluorides, NSF and NSF_3, are simple gasseous substances at room temperature. The latter, in particular, undergoes both substitution and addition reactions to produce monomeric compounds, most of which are volatile liquids. These compounds are "organic" in the sense of being relatively nonpolar and soluble in organic solvents. Also they have remarkable thermal and hydrolytic stability and they undergo reactions typical of organic substances. Defining a thiazyl fluoride generally as any compound containing the NSF group, compounds now known include: amines, isocyanates, isothiocyanates, urethanes, ureas, amides, fluorocarbamates and others. Also known are many derivatives with organic and fluororganic groups attached to either the nitrogen or the sulfur of the NSF_x or to both. Monomer molecules as large as $SF_5N{=}SF_2{-}NSF_5$ have been made. The similarity between organic chemistry and thiazyl chemistry will be discussed. Problems of synthesis, reaction mechanisms, isomerization and others will be discussed, as well as the potential utility of thiazyl derivatives.

ELECTION RESULTS

Ballots are being counted but results are not yet available for the 1981 elections. These results will be reported at the January meeting and in the February *TarHelium*.

Jan 9 Dr. ROBERT A. HOLTON, Virginia Polytechnic Institute and State University "Palladium-Mediated Organic Synthesis," 3:30 pm, Room 103 Gross Chemical Laboratory, Duke.

16 Dr. LELAND C. ALLEN, Princeton University, "Nitrogen-Fluorine Compounds and the Breakdown of the Octet Rule," 3:30 pm, Room 103 Gross Chemical Laboratory, Duke.

19 Dr. BERT FRAZER-REID, University of Maryland, "Carbohydrate Derivatives in Asymmetric Synthesis of Natural Products," 3:30 pm, Room 124 Dabney Hall, NCSU.

23 Dr. RONALD J. PARRY, Rice University, "Recent Investigations of Biosynthesis of Natural Products," 3:30 pm, Room 103 Gross Chemical Laboratory, Duke.

26 Dr. NED PORTER, Duke University, "The Free Radical Oxidation of Unsaturated Hydrocarbons: Fatty Acid and Model Membrane Oxidation," 3:30 pm, Room 124 Dabney Hall, NCSU.

30 Dr. ELIZABETH C. THIEL, North Carolina State University, "Ferritin Structure and Function," 3:30 pm, Room 103 Gross Chemical Laboratory, Duke.

Feb 2 Dr. R. BRUCE KING, University of Georgia, "Metal Carbonyl Catalysis of Water Gas Shift Reaction," 3:30 pm, Room 124 Dabney Hall, NCSU.

4 Dr. HANS H. JAFFE, University of Cincinnati, "The Development and Use of Semi-Emperical Methods in Molecular Quantum Mechanics," Venable Lecture, 8:00 pm, Room 207 Venable Hall UNC-CH.

6 Dr. CLAUDE Y. YODER, Franklin and Marshall College, "Organosilicon Amides," 3:30 pm, Room 103 Gross Chemical Laboratory, Duke.

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