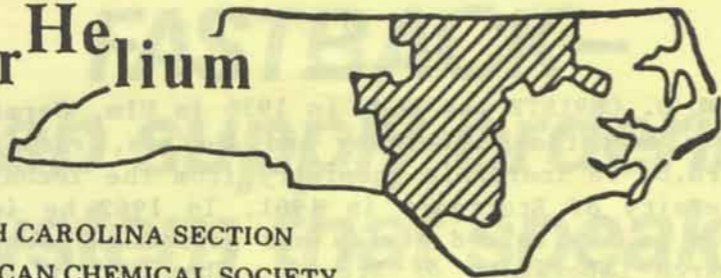


# Tar Helium



NORTH CAROLINA SECTION  
AMERICAN CHEMICAL SOCIETY

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Vol. 14, No. 1

October, 1983

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Thursday, October 20, 1983

## HIGH ENERGY HALOGEN OXIDIZERS

by

Dr. Karl O. Christe  
Rocketdyne  
Canoga Park, California

- Social: 5:30 pm, Eagle's Nest  
A. Elder Student Union, NCCU\*
- Dinner: 6:30 pm, Eagle's Nest  
\$7.50 for full members, \$3.75 for students
- Lecture: 8:00 pm, Room 112, Auditorium  
Hubbard Chemistry Building, NCCU

For reservations, please call one of the following by  
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in Chapel Hill, Ms. Helen Heriford at 962-4403; and in  
Raleigh, Ms. Tana Taylor at 737-2548.

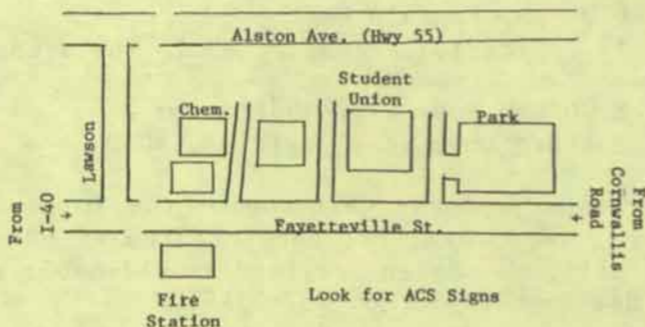
\*Cash Bar

KARL O. CHRISTE was born in 1936 in Ulm, Germany. He was educated in Germany and Austria, receiving his Ph.D. in inorganic chemistry from the Technical University of Stuttgart in 1961. In 1962 he immigrated to the United States and joined the Western Research Laboratory of Stauffer Chemical in Richmond, California, as a research chemist. In 1967, he became a US citizen and in the same year joined Rocketdyne in Canoga Park, California, as a member of the technical staff. Since 1978, Dr. Christe has been manager of Rocketdyne's Exploratory Chemistry group. He has published more than 170 technical papers and holds 30 US patents, mainly in the area of halogen chemistry.

## HIGH ENERGY HALOGEN OXIDIZERS

### Abstract

A review of the author's past and current activity in high energy halogen oxidizers will be presented, followed by a brief outline of experimental techniques and two case studies of compounds near the limits of oxidation and bonding. The first compound discussed will be chlorine trifluoride dioxide and the second, fluoroammonium cation and its chemistry. The development of  $NF_4^+$  salts from laboratory curiosities to readily available chemicals and their potential applications will be described.



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OF CANDIDATES FOR 1984 ELECTION

FOR CHAIRMAN ELECT:

DR. ROBERT A. IZYDORE received his B.S. degree from the Pennsylvania State University and his Ph.D. degree in organic chemistry from Duquesne University. He was an instructor at the McKeesport Campus of the Pennsylvania State University and held a postdoctoral appointment at Duke University before joining the faculty at North Carolina Central University where he now holds the rank of Professor. Dr. Izydore was Treasurer of the North Carolina Section (NCS) in 1980-81. He has served on the Budget and Nominations Committees and is currently on the Membership Committee.

DR. JOHN A. MYERS received his B.S. degree in chemistry from Carson-Newman College and his Ph.D. degree in organic chemistry from the University of Florida. After Postdoctoral study at Michigan State, he joined the faculty at North Carolina Central University in 1971. He currently holds the rank of Professor. His research interests include synthesis of nitrogen heterocycles, 1,3-dipolar cycloaddition reactions, and development of non-nitro radiation sensitizers. He has served the NCS on the Hospitality, Awards and Nominations Committees.

FOR SECRETARY:

DR LYNN WRIGHT received his B.S. degree in chemistry from Mississippi State University and his M.S. degree from Clemson University. In 1970, he completed his Ph.D. degree in organic chemistry at the University of Georgia. After post-doctoral study at Michigan State University, he joined the NCI Frederick Cancer Research Center. Since 1976, he has worked at

**DR. LYNN H. WRIGHT (continued)**

the US Environmental Protection Agency in RTP. Currently he is involved in the development of target compound identification and quantification algorithms for GC/MS data systems. Dr. Wright has been an ACS member since 1963 and is also a member of the American Society for Mass Spectrometry, AAAS, and the Royal Society of Chemistry. He has served the NC Section as Chairman of the Scholarship Committee since 1981.

MS. IRENE W. UTTERBACK received her B.S. degree in chemistry from Winthrop College in 1957. She is now employed as an Information Scientist at the North Carolina Science and Technology Research Center (NC/STRC) at RTP. Before joining NC/STRC, Ms. Utterback was the Quality Assurance Officer at the Chemical Industry Institute of Toxicology. A long-time ACS member, she has a wide variety of experience in the fields of analytical chemistry, quality control, research and development, organic synthesis and environmental protection.

**COUNCILOR:**

DR. F. IVY CARROLL received his B.S. degree in chemistry from Auburn University in 1957 and his Ph.D. degree from the University of North Carolina, Chapel Hill, in 1961. He joined Research Triangle Institute (RTI) in RTP in 1964 where he has been Director of the Organics and Medicinal Chemistry Department of the Chemistry and Life Sciences Division since 1975. Dr. Carroll's research at RTI has been concerned mainly with the application of organic chemistry to biological problems. Much of his research has involved the synthesis of compounds of potential chemotherapeutic value. He served two consecutive terms on the ACS Offices and Awards Committee in 1980-81.

DR. ERNEST ELIEL is William Rand Kenan, Jr., Professor of Chemistry at the University of North Carolina, Chapel Hill. He received his D. Phy. Chem. Sci. degree from the University of Havana and his Ph.D. degree from the University of Illinois. He is a member of the American Academy of Arts and Sciences and of the National Academy of Sciences. With the ACS he has served on the advisory board of the Petroleum Research Fund and as Chairman of both the Executive Committee of the Division of Organic Chemistry and the Society Committee on Publications. He is a member of the Society's Nominations and Elections and Professional Training Committees. He presently serves as Councilor of the NCS.

ALTERNATE COUNCILOR:

DR. HALBERT C. CARMICHAEL received his B.S. degree from the University of Tennessee and his Ph.D. degree from the University of California. He has been a member of the Department of Chemistry at North Carolina State University since 1964. Dr. Carmichael served as Secretary-Treasurer of the NC Section of ACS in 1971-72 and as Chairman in 1973.

DR WILLIAM F. GUTKNECHT received his B.S. degree in chemistry from the University of Wisconsin in 1964 and his Ph.D. degree in analytical chemistry from Purdue University in 1970. After postdoctoral work at Louisiana State University, he joined the Chemistry Department of Duke University in 1971. He moved to Research Triangle Institute in RTP in 1978 where he has served as Supervisor of the Chemical Analysis Section, Environmental Chemistry Department, since 1980. He has been a member of Hospitality, Membership and Nominations Committees of the NCS and is currently the editor of the TarHelium.

# B A L L O T

## Election of Officers for 1984 North Carolina Section-American Chemical Society

Please indicate your choice for each of the offices below in the space provided and mail ballots to:

- Chairman: Dr. Peter Smith
- Secretary: Chemistry Department
- Treasurer: Duke University
- Director: Durham, NC 27706

Please sign the outside of your mailing envelope to validate your vote and print your name underneath legibly if there might be any misinterpretation of your signature. Ballots cannot be counted unless your membership can be verified and your signature is present on the envelope. Deadline for receipt of ballots is **Monday, October 31, 1983.**

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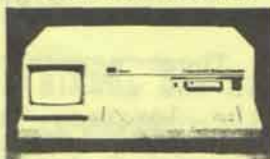
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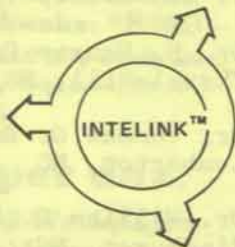
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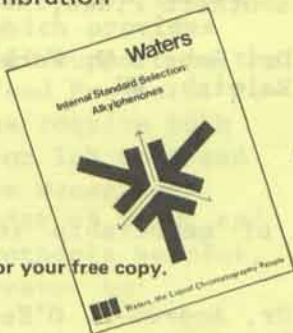
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## FIFTY-YEAR MEMBERS RECOGNIZED

Those persons completing fifty years of membership in the ACS in either 1982 or 1983 were recognized at the luncheon following the Meeting-in-Miniature on April 16, 1983 at UNC. Those completing fifty years of membership in 1982 were

Dr. H. Mauzee Davis  
Chapel Hill, NC

Dr. E. W. Scott  
(deceased Nov. 1982)  
Southern Pines, NC

Dr. Thomas G. Day  
Lumberton, NC

Dr. Robert W. Work  
Raleigh, NC

Dr. William C. Kay  
Pinehurst, NC

Those completing fifty years of membership in 1983 were

Dr. George O. Doak  
Raleigh, NC

Dr. Andrew E. O'Keeffe  
Raleigh, NC

Dr. George W. Fowler  
Chapel Hill, NC

Dr. Carlyle J. Stehman  
Chapel Hill, NC

Dr. Ivan D. Jones  
Raleigh, NC

Others completing fifty years of membership in the recent past are as follows:

1980

Dr. Henry C. Thomas  
Chapel Hill, NC

Dr. Oscar K. Rice  
Durham, NC

1981

Dr. Frances C. Brown  
Durham, NC

Dr. G. H. Hitchings  
Durham, NC

Dr. Fred Ebersole  
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