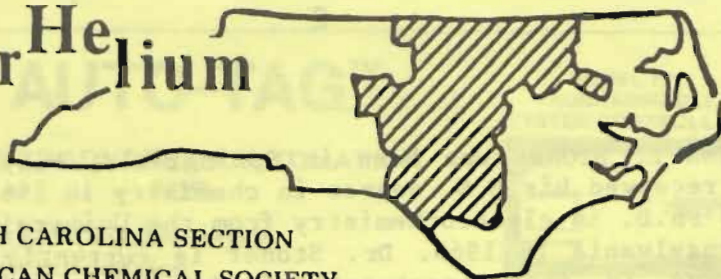


# Tar Helium



NORTH CAROLINA SECTION  
AMERICAN CHEMICAL SOCIETY

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Vol. 14, No. 3

November, 1983

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Thursday, November 17, 1983

The Polymer Discussion Group and the  
NC Section Present

IONIZED MONOMER IMPLANTATION IN ALUMINUM-  
A SEAWATER IMMERSION STUDY

by

Dr. Glenn E. Stoner  
School of Engineering and Applied Science  
University of Virginia

Social: 5:30 pm, NCSU Faculty Club

Dinner: 6:30 pm, NCSU Faculty Club  
\$10.25 for full members, \$5.15 for students

Lecture: 7:30 pm, NCSU Faculty Club

For reservations, please call one of the following by  
November 14: In Durham, Ms. Nancy Kearns at 684-3010;  
in Chapel Hill, Ms. Helen Heriford at 962-4403; and in  
Raleigh, Ms. Tana Taylor at 737-2548.

GLENN E. STONER was born in Springfield, Missouri. He received his M.S. degree in chemistry in 1963 and his Ph.D. in electrochemistry from the University of Pennsylvania in 1968. Dr. Stoner is currently Professor in the Department of Materials Science, School of Engineering and Applied Science, University of Virginia. He has been at the University since 1968 where he has served as Research Associate Professor, Lecturer and Senior Scientist. In 1975 and again in 1977, Dr. Stoner received the NASA Certificate of Recognition. He has published more than 35 technical papers, holds 7 patents and is interested in bioelectrochemistry, corrosion, energy conversion and biomaterials.

IONIZED MONOMER IMPLANTATION-  
A SEAWATER IMMERSION STUDY

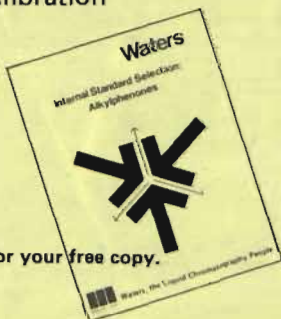
Abstract

Molecular implantation of ionized monomer gases has been used to form thin organic films in Al(6061-T6) substrates. Several schemes were used: (1) acceleration (30kV), focusing, and implantation of ionized ethylene, (2) collisional implantation where an ion beam (30kV) collides into a monomeric target gas (butadiene in front of the Al substrate, (3) process (1) and (2) in parallel with ion plating of monomer (butadiene). The films formed by these processes were screened for their ability to protect Al(6061-T6) in a seawater immersion test (30 to 120 days). Analysis was carried out by surface morphology assessment.

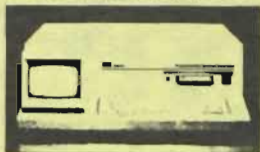
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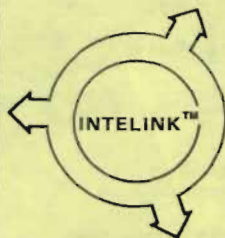
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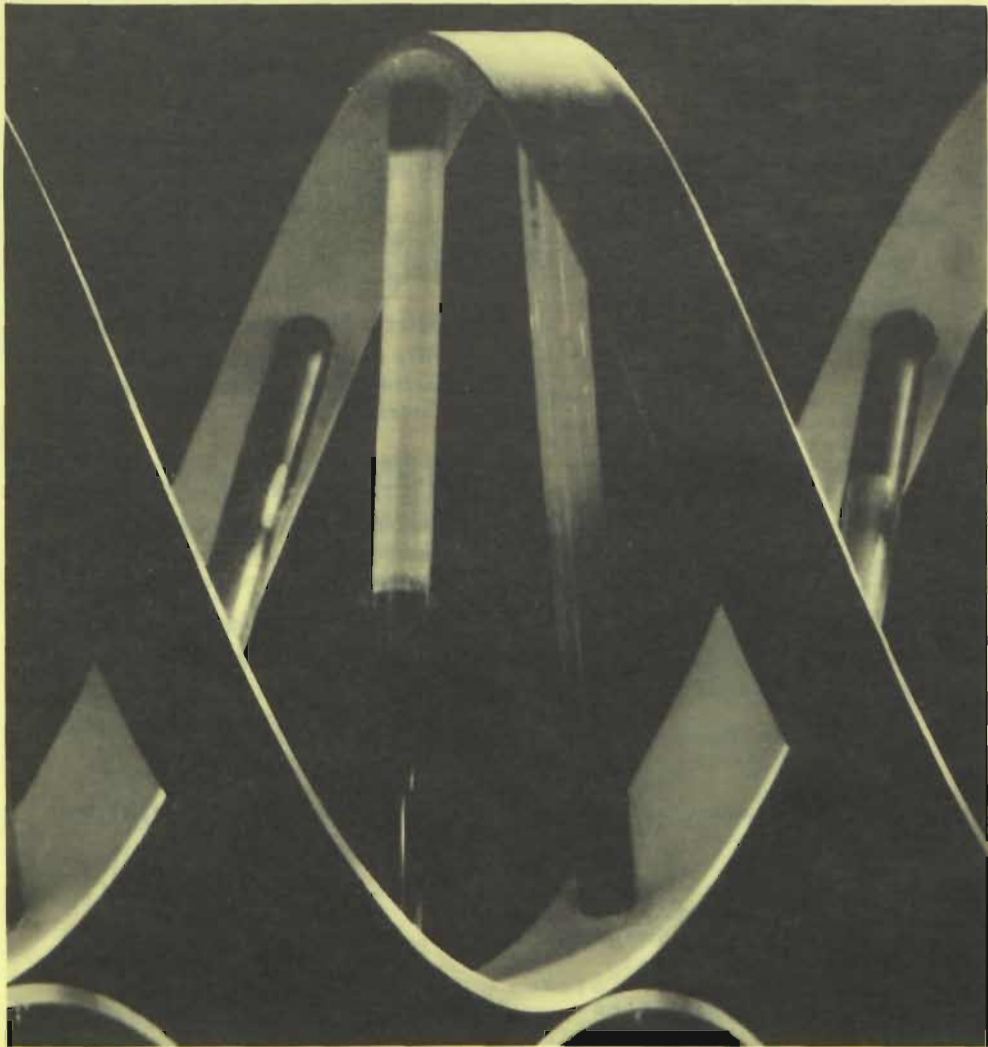
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## LOCAL SECTION MEETINGS

December 13, 1983:

NC Distinguished Chemist  
Dr. Ned Porter  
Duke University  
Location:  
Meredith College

Also, Mr. Jeffrey Hughes,  
Winner of the 1983 Cen-  
tennial Scholarship

January:

Speaker and topic to be  
announced  
Location:  
Fayetteville State  
University

February: (tentative)

Dr. Alfred Bader  
Aldrich Chemical Company  
Location:  
NC Museum of Art

March:

Dr. Jack Stocker  
University of New Orleans  
Location:  
NC School of Science  
and Mathematics

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## NEWS FROM THE EXECUTIVE COMMITTEE

The treasurer, Eric Bigham, disclosed that as of September 29, the Section's accounts held the following:

Checking : \$ 1,083.60  
Savings: \$15,890.42

The Section has three Congressional science advisors: Marcus Hobbs--Representative Valentine; Lee Rand--Representative Rose; and Forest Getzen--Senator Helms. In response to a question from the National Office, several Executive Committee members reported that this service was useful and should be continued; Dr. Quin will report this opinion to the National Office.



TARHELIUM IS PUBLISHED BY THE NORTH CAROLINA SECTION OF THE AMERICAN CHEMICAL SOCIETY. THE VIEWS EXPRESSED HEREIN ARE NOT NECESSARILY THOSE OF THE SECTION. DIRECT ALL CORRESPONDENCE TO DR. WILLIAM F. GUTKNECHT, EDITOR, ENVIRONMENTAL CHEMISTRY DEPARTMENT, RESEARCH TRIANGLE INSTITUTE, P. O. BOX 12194, RESEARCH TRIANGLE PARK, N. C. 27709.

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