

Tar Helium



NORTH CAROLINA SECTION
AMERICAN CHEMICAL SOCIETY

Vol. 7, No. 3 Raleigh, N.C. November, 1976

"POLYQUINOLINES: A NEW CLASS OF HIGH PERFORMANCE MATERIALS"

Speaker: Dr. John K. Stille
University of Iowa

Date: Wednesday, November 17, 1976

*Place: Balentines Buffet
 410 Oberlin Road, Raleigh, N.C.

Time: 5:30 Happy Hour
 Confederate Room

 6:30 Dinner
 Confederate Room (buffet, \$6.00)

 7:30 Lecture
 Confederate Room

*Note: In order to assure adequate arrangements, please make a reservation by contacting one of the following: Bill Switzer, NCSU, 737-2945; Bill Gutknecht, Duke, 684-2414; Derek Hodgson, UNC-CH, 933-6195, by Friday, November 12.

John K. Stille was born on May 8, 1930. John was educated at the University of Arizona where he received a B.S. in 1952 and a M.S. in 1953. In 1957 he obtained his Ph.D. at the University of Illinois. Dr. Stille joined the Faculty at the State University of Iowa in 1957 and is currently Professor of Chemistry there. Dr. Stille has been a Visiting Professor at the Royal Institute in Stockholm, the University of Utah and at the University of California at Irvine. In addition, he was a Visiting Lecturer at the University of Illinois in 1975. He has served on the Advisory Board of J. Polymer Science since 1963, the Editorial Board of Advances in Polymer Science since 1964, the Editorial Board of Macromolecular Syntheses since 1967 and as Associate Editor of Macromolecules since 1967. Dr. Stille is also an active member of ACS in Iowa and was Chairman of the Iowa Section in 1965.

"POLYQUINOLINES: A NEW CLASS OF HIGH PERFORMANCE MATERIALS"

The condensation of either 4,4'-bis(2-amino-benzoyl)diphenyl ether or 4,4'-diamino-3,3'-dibenzoyldiphenyl ether with a series of diacetyl and diphenacetyl aromatic monomers afforded a series of new high molecular weight polyquinolines. The polyquinolines were soluble in phenolic and chlorinated hydrocarbon solvents, and clear, tough flexible films of the polymers were cast from 15-30 weight percent solutions, although the polymers tended to crystallize from chloroform upon prolong standing. All the polyquinolines have excellent thermal and oxidative stability; thermogravimetric analysis showed breaks in air and nitrogen near 550°C. The glass transition temperatures for the polymers ranged from 266-351°C. Thermal treatment of either film or fiber samples afforded partially crystalline materials. Analysis by differential scanning

calorimetry afforded crystalline melting temperatures ranging from 448-552°C for all polymers in the series. Thus, these polymers could be fabricated by solution or melt techniques and then treated to induce crystallinity affording materials having extended use-temperatures.

REPORT ON THE SAN FRANCISCO COUNCIL MEETING

The following remarks are a summary of reports on the San Francisco Council Meeting submitted to the Executive Board of the North Carolina Section by Ernest L. Eliel and Richard J. Thompson who represented this Section at that meeting. They refer you to a detailed report on this meeting if you desire additional information which appeared in C&E News, Sept. 20, page 55.

The meeting was long and at times contentious. Lengthy discussions were held concerning amendments to the constitution and bylaws. With regard to fair election procedures, the Society is enjoined from making available to any candidate funds or facilities. Mailing lists may be made available, but not mailing permits. If any candidate is given space in a local, regional or national publication, the same privilege must be awarded to his opponent. No action was taken on those parts of the bylaws dealing with punitive measures for violations. An amendment for sending any constitutional or bylaw amendments which had not been approved by Council to the membership for possible ratification was defeated. The base allotment to Local Sections was increased from \$450 to \$850 and this was put on an inflationary escalator.

The Council Committee on Publications, of which Dr. Eliel is Chairman, foresees increases

in subscription rates for the Society's journals in the range of \$1-\$6 per year effective in 1978. The outlook for the dual journal experiment is not favorable. Page charges will remain on a voluntary basis, but an effort will be made for greater compliance. Overall, the books and journals program is in sound financial and intellectual shape. It has been proposed that the publication of ACS monographs be resumed. The Committee would like advice on this program. The magazines are still operating at a very substantial deficit; Chemistry is losing about \$200,000 per year, C&EN is doing better but may need additional help. It is proposed that there be three joint Council-Board Committees: one on primary publications, one on Chemical Abstracts, one on magazines.

The Committee on Professional Relations submitted for consideration a "Definition of a Chemist". This was rejected by the council and the action sent back to the committee for re-working. This definition is the first step toward the consideration by the ACS of the issue of certification, accreditation of testing laboratories. A more comprehensive account of this issue will be made in the near future.

POLYMER SECTION TO HOST DR. MICHAEL SZWARC

The next meeting of the North Carolina Polymer Section of the ACS will take place on November 10 with a Social Hour at 5:30, Dinner at 6:30 (fried chicken and pork chops, \$6.00) and lecture at 7:30. If your interested in attending you should contact Dr. Harry Sugg at 549-8641, ext 115. Dr. Swarc will speak on "Poly(para-Xylylene) in Coating Technology"

Dr. Szwarc was born in Poland and received a degree in Chemical engineering there at Warsaw Polytechnic College. He spent ten years at Hebrew University and earned a Ph.D. in organic chemistry there. He moved to the University of Manchester where he received a Ph.D. in 1947 and D.Sc. in 1949. In 1952 he went to Syracuse University as Professor of Physical and Polymer Chemistry. He has been a visiting Professor and Lecturer at several prominent locations. His work has been concerned with studies of reactivities of free radicals in the gas phase and in solution, studies of caged reactions, photochemistry, anionic polymerization and studies of ion pairs and electron transfer reactions.

AREA SEMINARS

UNC-CH; 11:00 am, Rm. 308, Venable

- Nov. 10 Sung-Hou Kim, Duke, "The Three Dimensional Structure of a Transfer RNA and Its Functional Implications"
- Dec. 8 L.R. Faulkner, Norman Sutin, M.S. Wrighton, "Minisymposium on Light Induced Electron Transfer Processes and Energy Conversions"

NCSU; 4:00 pm, Rm. 124, Babney Hall

- Nov. 15 Lawrence H. Bowen, NCSU, "Red Clay and Gamma Rays: Mossbauer Effect Applied to Soil Chemistry"
- Nov. 22 Donald E. Leyden, U. of Denver, "Applications of Treated Glass Surfaces to Analytical Chem."
- Dec. 6 Paul D. Ellis, U. of S.C., "Multinuclear Mag. Res. Spec. in Bioinorganic Chem."

Duke; 3:30 pm, Rm 103, Gross Chem. Labs.

- Nov. 19 P.D. Sullivan, Ohio University

NEXT SECTIONAL MEETING IS DECEMBER 7 AT UNC.

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- Awards - Forrest Getzen (*NCSU*)
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