

Tar^{He}lium



North Carolina Section

AMERICAN CHEMICAL SOCIETY

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March, 1975

"LARGEST MEETING-IN-MINIATURE PROGRAM
EVER SET FOR SATURDAY APRIL 5, 1975"
SEE PROGRAM SCHEDULE INSIDE...

"STUDIES ON THE SYNTHESIS OF CORRINS AND RE-
LATED LIGANDS- AN APPROACH TO THE TOTAL SYN-
THESIS OF VITAMIN B-12"

Speaker: Dr. Robert V. Stevens
Rice University

Date: Friday, March 28, 1975

Place: Duke University
Durham, North Carolina

Time: 3:30 Seminar
Gross Chemical Laboratory
Room 103

5:30 Happy Hour
President's Room, Student Union

6:30 Dinner
Oak Room, Student Union

Robert V. Stevens was born in 1941 in Iowa. He received his B.S. degree from Iowa State in 1963 and his Ph.D. from Indiana University in 1966 where he worked under Professor Wenkert. Since 1966 Dr. Stevens has been at Rice University where he is now Professor of Chemistry. His general interests are in new organic synthetic methods for the preparation of natural products especially alkaloids.

SHORT COURSE PROGRAM AT UNC-CH

The University of North Carolina at Chapel Hill will offer its Third Annual Short Course program on April 18 and 19, 1975. Courses will be offered in Electrochemistry, Computerized Literature Searching, Photochemistry, and Biological Applications of Electron Spin Resonance. There will be a small fee charged for the courses, with student discounts. The banquet on Friday evening April 18 will be followed by an appropriate discussion by Congressman James G. Martin (R. -N.C.) formerly on the chemistry faculty at Davidson College. For further information contact Professor Maurice Bursey, Department of Chemistry, University of North Carolina, Chapel Hill, North Carolina 27514.

MEETING-IN-MINIATURE

Saturday April 5 at Duke University are the time and place to remember. This year's meeting-in miniature with close to fifty papers being presented promises to be a glowing success. It is being held jointly with the N. C. Academy of Science. An additional highlight will be the plenary lecture at 10:00 by Dr. Hitchings, Vice-President of Burroughs Wellcome. A lunch is planned for 1:00 in the Oak Room. Detach your enclosed copy of the program and bring it with you Saturday April 5. See you there!

MEETING - IN - MINIATURE

AT

DUKE UNIVERSITY

SATURDAY APRIL 5, 1975

jointly sponsored with the North Carolina
Academy of Science

PLENARY LECTURE

A Biochemical Approach to Drug Discovery

George H. Hitchings

Vice-President for Research

Burroughs Wellcome Company

Dr. Hitchings is a native of the state of Washington. He earned his bachelor's and master's degrees at the University of Washington, and his Ph.D. from Harvard University. He also holds an honorary doctorate from the University of Michigan.

After teaching at Harvard and at Western Reserve, Dr. Hitchings joined the Burroughs Wellcome Company in 1942. He has held positions of chief biochemist, associate research director and research director of the chemotherapy division, vice-president for research, and president of the Burroughs Wellcome Fund. He has been a member of the committee on growth of the National Research Council, the national committee on cancer chemotherapy, the board of trustees of the Leukemia Foundation, and a consultant to the U.S. Public Health Service. His many honors include the Clowes lectureship, the Charles E. Dohme lectureship, the Gregor Mendel medal, the Gairdner Award, the Passano Award, and the Robert de Villier Science Award. He has also been a visiting professor at Brown University and is an adjunct professor at Duke University.

His research interests include condensed pyrimidine systems, purine and pyrimidine antagonists, nutrition and disease, antimalarials, antibacterials, cancer chemotherapy, and immunosuppressive drugs. His plenary lecture will review aspects of some of these topics.

107 Paul M. Gross Laboratory

10:00 A.M.

A business meeting will follow at 11:00 A.M., during which the Section awards will be presented.

CHEMISTRY SECTION, NORTH CAROLINA ACADEMY OF SCIENCE

103 Paul M. Gross Laboratory

1. 9:20 A.M. The Study of Water-Nonelectrolyte Interactions Using Transfer Enthalpies of Sparingly Soluble Salts. J. R. Jesorek, University of North Carolina at Greensboro.
2. 9:40 A.M. Synthesis and Reactions of 9-Chloromethylenexanthenes. N. H. Martin, University of North Carolina at Wilmington.

ADJOURNMENT FOR PLENARY SESSION
10:00 to 11:00 A.M.

3. 11:00 A.M. Quantitative Chemical Ionization Mass Spectrometry. E. Heckel, East Carolina University.
 4. 11:20 A.M. Phenoxyphosphinic Acids. J. B. Levy. University of North Carolina at Wilmington.
 5. 11:40 A.M. Electron Transfer Properties of Transition Metal Phthalocyanine Complexes. C. Li and E. Koszulinski, East Carolina University.
 7. 12:00 P.M. The Kinetics of the Decarboxylation of n-Butylmalonic Acid in Polar Solvents. L. W. Clark, Western Carolina University.
- 12:20 P.M. BUSINESS MEETING

ANALYTICAL CHEMISTRY
222 Paul M. Gross Laboratory
C. H. Lochmüller, Presiding

1. 9:00 A.M. The Analysis of Some Thiols Using Sulfide Ion-Selective Electrodes. W. F. Gutknecht and P. Tseng, Duke University.
2. 9:20 A.M. Structure and Selectivity in Modern High-Resolution Liquid Chromatography. C. H. Lochmüller and C. W. Amoss, Duke University.
3. 9:40 A.M. Chiral, Liquid-Crystal Stationary Phases for the Direct Chromatographic Resolution of Enantiomers. C. H. Lochmüller, L. J. Deutsch, and R. W. Souter,

CHEMICAL EDUCATION

222 Paul M. Gross Laboratory
J. F. Bonk, Presiding

1. 11:20 A.M. The Use of Inexpensive Color Slides for Laboratory Instruction. J. F. Bonk, L. J. Deutsch, and R. R. Hendrixson, Duke University.
2. 11:40 A.M. An Inorganic Kinetics Experiment for Freshman Chemistry. M. E. McCabe III and A. L. Crumbliss, Duke University.
3. 12:00 P.M. Anovative Experiments for Upper-Level Courses in Modern Analysis. C. H. Lochmüller, L. J. Deutsch, and R. B. Myers, Duke University.

PHYSICAL CHEMISTRY

111 Paul M. Gross Laboratory
P. Smith, Presiding

1. 8:20 A.M. X-ray Crystal Structure of a Simple Protein. J. Bordner, R. L. Greene, and G. H. Wahl, North Carolina State University.
2. 8:40 A.M. Conformational Studies on Some Perhydroazulenenic Sesquiterpene Lactones. A. T. McPhail and K. D. Onan, Duke University.
3. 9:00 A.M. Information about Luminescing States Using Laser Magnetic Circular Luminescence. J. D. Gunter and A. F. Schreiner, North Carolina State University.
4. 9:20 A.M. EPR Study of Radicals from Aliphatic Formates in Aqueous Solution. P. Smith, R. A. Kaba, and L. D. Dominguez, Duke University.
- 5: 9:40 A.M. Spin Label Investigation of the Effects of Antibody Binding and Complement-Mediated Lysis on Membrane Lipids. C. C. Whisnant and D. B. Chesnut, Duke University.

BIOLOGICAL CHEMISTRY
111 Paul M. Gross Laboratory
R. W. Henkens, Presiding

1. 11:20 A.M. ESR Studies of Membrane Proteins in Erythrocytes in Myotonic Muscular Dystrophy. D. A. Butterfield, A. D. Roses, S. H. Appel, and D. B. Chesnut, Duke University.
2. 11:40 A.M. The Observation of a Cyclic 5,5'-Guanosine Monophosphate Stimulating Factor in the Amoebae of Dictyostelium discoideum. J. B. Putnam, Jr., and L. Pedersen, University of North Carolina at Chapel Hill.
3. 12:00 P.M. Fluorescence and Phosphorescence of Carbonic Anhydrase. P. J. Stein and R. W. Henkens, Duke University.
4. 12:20 P.M. Aryl Sulfonamide Complexes of Carbonic Anhydrase. D. A. Jarvis and R. W. Henkens, Duke University.

INORGANIC CHEMISTRY

Section A
110 Paul M. Gross Laboratory
R. A. Palmer, Presiding

1. 8:40 A.M. The Synthesis of Iron-Specific Chelators for Use in Treatment of Cooley's Anemia. A. L. Crumbliss, R. A. Palmer, K. A. Sprinkle, and D. R. Whitcomb, Duke University.
2. 9:00 A.M. Kinetic Control in the Synthesis of Mono- and Diacido Cobaloximes. P. L. Gaus and A. L. Crumbliss, Duke University.
3. 9:20 A.M. New Synthetic Routes to Crown Ethers and Their Metal Complexes. R. G. Ghirardelli, R. R. Hendrixson, R. A. Palmer, and E. Southwick, Duke University.
4. 9:40 A.M. Trimeric Ligand-bridged Complexes of Ruthenium. M. J. Powers, R. W. Callahan, and T. J. Meyer, University of North Carolina at Chapel Hill.

ADJOURNMENT FOR
PLENARY AND BUSINESS SESSIONS
10:00 to 11:20 A.M.

5. 11:20 A.M. Spontaneous Resolution, Absolute Configuration, and Sign of Rotational Strength in Divalent Tris-Ethylenediamine Complexes. R. A. Palmer and M. C. Yang, Duke University.
6. 11:40 A.M. Oxidation of Coordinated Amines. D. J. Salmon, F. R. Keene, and T. J. Meyer, University of North Carolina at Chapel Hill.
7. 12:00 P.M. The Role of Thermal Intermediates in the Photochemistry of $Mn_2(CO)_{10}$. J. L. Hughey, IV, and T. J. Meyer, University of North Carolina at Chapel Hill.
8. 12:20 P.M. Spectroscopic Properties of Chiral Crown Ethers and Their Metal Complexes. J. C. Hempel, E. Southwick, R. G. Ghirardelli, and R. A. Palmer, Duke University.

INORGANIC CHEMISTRY

Section B

105 Paul M. Gross Laboratory
R. L. Wells, Presiding

9. 8:20 A.M. The Measurement of the Rate of Very Rapid Electron Transfer Reactions Using Photoexcited Ru(II) and Eu(III) Chelates as Perturbations. R. C. Young, C. R. Bock, D. G. Whitten, and T. J. Meyer, University of North Carolina at Chapel Hill.
10. 8:40 A.M. Metal-metal Interactions in a Polymeric Ruthenium Cluster System. J. A. Baumann, S. Wilson, T. J. Meyer, W. E. Hatfield, and D. J. Salmon, University of North Carolina at Chapel Hill.
11. 9:00 A.M. The Structural Chemistry of Copper(II) Complexes of Aminoethylpyridines. R. A. Bream and D. J. Hodgson, University of North Carolina at Chapel Hill.
12. 9:20 A.M. Crystal and Molecular Structures of Dinitrato(1,10-phenanthroline)copper(II) and Diaquonitrato(1,10-phenanthroline)copper(II) Nitrate. D. L. McFadden and A. T. McPhail, Duke University.
13. 9:40 A.M. Linkage Isomerism of Thiocyanato and Selenocyanato Bridged Cobalt Complexes. A. L. Crumbliss and J. M. Ciskowski, Duke University.

ORGANIC CHEMISTRY

Section A

104 Paul M. Gross Laboratory
S. W. Baldwin, Presiding

1. 8:00 A.M. On the Road to Gelsemicene. R. J. Doll and S. W. Baldwin, Duke University.
2. 8:20 A.M. Photoannulations with α -Formyl Ketones. Enol Specificity in the Reaction with Alkenes. R. E. Gawley, K. H. Leung, and S. W. Baldwin, Duke University.
3. 8:40 A.M. Biosynthesis of Ophiocarpine. A Transannular Cyclization Procedure for Stereospecific Labeling. P. W. Jeffs and J. D. Scharver, Duke University.
4. 9:00 A.M. Aza- and Oxa-Ring Expansions of Cyclobutanones. Dichloro-ketone Cycloadditions to Olefins. P. W. Jeffs and N. Cortese, Duke University.
5. 9:20 A.M. Reduction of Cyclopropanes Using Diimide or Wilkinson's Catalyst. J. L. Coke, J. Scott, and M. P. Cooke, University of North Carolina at Chapel Hill.
6. 9:40 A.M. Structure of the Adipoin-ortho-Aminophenol Condensation Product. S. G. Levine, C. E. Gragt, and J. Bordner, North Carolina State University.

ADJOURNMENT FOR
PLENARY AND BUSINESS SESSIONS
10:00 to 11:20 A.M.

7. 11:20 A.M. Conformational Aspects of 1,4-Oxathiane S-oxide. D. M. Frieze and S. A. Evans, University of North Carolina at Chapel Hill.
8. 11:40 A.M. Stereochemistry and Conformational Analysis of 2-Methoxy-trans-tetrahydro-1,4-benzoxathianes. R. E. Williams, J. Keifer, and S. A. Evans, University of North Carolina at Chapel Hill.
9. 12:00 P.M. Anisochronism of Geminal Groups by Proton and Carbon Magnetic Resonance Spectroscopy. S. S. McCachren and S. A. Evans, University of North Carolina at Chapel Hill.
10. 12:20 P.M. Selective Trapping of Dienes by Iron Carbonyl Reagents. C. R. Graham and M. S. Brookhart, University of North Carolina at Chapel Hill.

ORGANIC CHEMISTRY

Section B-

105 Paul M. Gross Laboratory
P. Wilder, Presiding

11. 11:20 A.M. Mechanism of Hydrogen Chloride Elimination in Cyclic Compounds and Synthesis of Specifically Labeled Deuteriochlorides. J. L. Coke and F. M. Hauser, University of North Carolina at Chapel Hill.
12. 11:40 A.M. Synthetic Chemistry Using Enones. H. J. Williams, S. Natarajan, and J. L. Coke, University of North Carolina at Chapel Hill.
13. 12:00 P.M. Synthesis of Indoles Using a Modified Mohlau-Bischler Reaction. P. W. Powell, J. J. Krutak, and J. L. Coke, University of North Carolina at Chapel Hill.
14. 12:20 P.M. Tetrahydrophosphindole Derivatives. C. Symmes, Jr. and L. D. Quin, Duke University.

CALENDAR OF COMING EVENTS

Local Section Meetings

- Apr. 5 Meeting-in-Miniature at Duke
 Apr. 23 John F. Endicott, Wayne State Univ.

North Carolina State Univ. (Rm. 124, Dabney, 4:10)

- Mar. 31 M.A. McKerverey, The University, Belfast, Ireland; "Synthetic and Thermodynamic Aspects of Diamondiod Molecules"

- Apr. 14 Philip W. West, LSU; "Toxins and Carcinogens in the Environment"

UNC-Chapel Hill (Rm. 207, Venable, 8:00 pm)

- Apr. 16 R.N. Porter; State Univ. of New York at Stony Brook; "The Challenge of Molecular Dynamics"

POSITIONS WANTED

1. Research technician with 14 years experience in mass spec analysis, g.c.-mass spec computer systems, metal and glass column fabrication. Contact- Gerald L. Peele; 2302 Barrymore Ave.; Durham, N.C.; Phone: 477-1356 (home); 683-5521, Ext. 439 (office).
2. Biochemist with experience in isolation and identification of flavorants from tobacco and other natural products. In addition, he has skill in g.c., l.c., TLC, gel permeation, radioactive tracing, etc. Contact- Robert Kenneth Williams; 417 Overland Dr.; Chapel Hill, N.C.; Phone: 683-5521, Ext 442 (days); 967-4404 (evenings).

TECHNICIAN SYMPOSIUM

As announced in the February issue of *Tarhelium* the ACS Committee on Technician Activities is sponsoring a symposium for chemical technicians at the 170th National ACS Meeting on August 24-29, 1975 in Chicago. The deadline for submission of 200-word abstracts in triplicate is May 5, 1975. Contact Dr. Philip M. Jaffe, Oakton Community College, 7900 N. Nagle, Morton Grove, Ill., 60053, Phone: (312) 967-5120, Ext. 302, 303, for more information and forms.

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