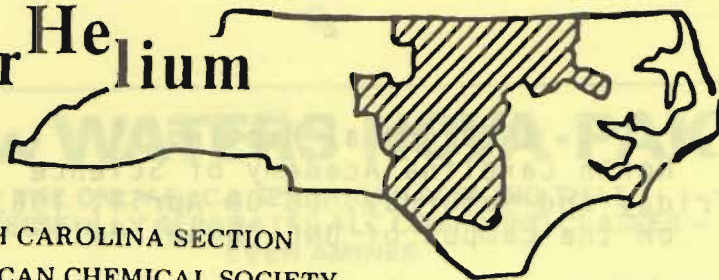


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NORTH CAROLINA SECTION  
AMERICAN CHEMICAL SOCIETY

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Vol. 13, No. 7

April, 1983

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1983  
MEETING-IN-MINIATURE

April 16, 1983

Approximately 50 Papers  
To Be Presented

Place: Venable Hall, University of North  
Carolina at Chapel Hill

Events: Registration, 8:15 am - 11:00 am,  
Entrance foyer, Venable Hall

Papers, 8:40 am - 12:00 noon,  
Venable Hall

Lunch, 12:30 pm, Jordan's Le  
Charolais, 157 E. Rosemary St.,  
No charge for speakers, presiding  
officers, and projectionists.  
All others - \$3.00 (\$1.50 for  
students).

For lunch reservations, please call one of the  
following by Monday, April 11: In Durham, call  
Ms. Nancy Kearns at 684-3010; in Chapel Hill,  
call Ms. Barbara Haddock at 966-1566; and in  
Raleigh, call Ms. Tana Taylor at 737-2548.

1983 Annual Meeting  
North Carolina Academy of Science  
Friday and Saturday, 08-09 April, 1983  
on the campus of UNC-Chapel Hill

## AGENDA

### Friday, April 08, 1983

9:00-on	Registration - Carolina Inn
9:00-11:00	Paper session, History of Science
11:00- 1:30	Lunch
1:30- 4:30	General paper sessions
5:00	Reception - Carolina Inn
6:00	Banquet or Buffet - Carolina Inn
7:30	Plenary Lecture - "Art and Alchemy"
	John Pavlik, Director, Fisher Science Art Collection
9:00	Big Band Dance - Carolina Inn
	Sam Kaiser Band

### Saturday, April 19, 1983

6:00	"Birdwalk" - UNC Biological Reserve
8:00-11:00	Concurrent Sectional paper sessions
8:30-11:00	Sectional business meetings
11:00	Keynote address - Carroll Hall
	Dr. Albert Harris, Biology Dept., UNC
12:00- 1:30	Lunch
1:30- 5:00	Concurrent sectional paper sessions
1:30-on	Simultaneous afternoon events:
	Tour of North Carolina Botanical Gardens
	Open house: UNC Herbarium
	Planetarium Exhibit: Satellite Siting
	Slide Show: North Carolina Natural History
	Movie: History of Science at UNC
	Field Trip: 1850 NC Geological Survey Facility(Raleigh)

All Scientific Exhibits open to the public both days.

### Costs:

Registration: \$5.00 members, \$7.00 non-members  
Reception and buffet: \$10.00  
Reception and Banquet: \$15.00  
Big Band Dance: \$5.00

For further information, call the Academy office: 942-2552 (mornings only)

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DISCUSSION GROUP SYMPOSIUM

Monday, May 16, 1983

9:00 AM - 5:00 PM

McKimmon Center

North Carolina State University

Twenty (20) minute presentations on the  
theory and/or application  
of chromatographic methodologies

Send a short (100 words or less)  
abstract to:

Prof. James Jorgensen

Dept. of Chemistry

University of North Carolina

at Chapel Hill

Chapel Hill, NC 27514

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MEETING - IN - MINIATURE

at the

University of North Carolina  
Chapel Hill, North Carolina

April 16, 1983



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American Chemical Society

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# Analytical Chemistry

James Jorgenson, Presiding  
Room 12-2, Venable

- 8:20 Registration, Entrance Foyer, Venable Hall
- 8:40 Collection and Ion Chromatographic Analysis of  $\text{NO}_2$  and  $\text{SO}_2$  under Ambient Conditions, Peter M. Grohse and Joseph E. Sickles, Research Triangle Institute
- 9:00 The Effects of Surfactants on Chromium Signals in Flame Atomic Spectrometry, Sador S. Black and Charles B. Boss, North Carolina State University
- 9:20 Graphite Fiber In-Column Microelectrochemical Detectors for Capillary LC, Larry Knecht, Ed Guthrie, and James Jorgenson, University of North Carolina at Chapel Hill
- 9:40 Liquid Chromatography in Open Tubular Columns, Ed Guthrie and James Jorgenson, University of North Carolina at Chapel Hill
- 10:00 Break
- 10:20 Aerosol Analysis Methods and Results from a Long Term Sampling Study in the Ohio River Valley, Robert W. Shaw, US Environmental Protection Agency
- 10:40 Aerosol-Electric Field Interactions in Premix Analytical Flames, Michael J. Pearce and Charles B. Boss, North Carolina State University
- 11:00 Evaluation of Mercury Vapor Collection Media, W. F. Gutknecht, A. Damle, and A. D. Shendrikar, Research Triangle Institute; Frank E. Briden, US Environmental Protection Agency

# Biochemical/Medicinal Chemistry

Steven D. Wyrick, Presiding  
Room 221, Venable

- 8:20 Registration, Entrance Foyer, Venable Hall
- 8:40 Protonation of Cytosine Derivatives in Chemically Modified DNA, Lawrence C. Sowers, David P. Sedwick, and Barbara Ramsay Shaw, Duke University
- 9:00 The Mechanism of DNA Modification by Eco RI Methylase, Diane D. Albergo and Paul L. Modrich, Duke University
- 9:20 Changes in Nuclease Accessibility during Development, Christopher Gene Paramore, Scott A. M. Chambers, and Barbara Ramsay Shaw, Duke University
- 9:40 Tritiated Guanethidine of High Specific Activity, Steven D. Wyrick, and Larry J. Loeffler, University of North Carolina at Chapel Hill
- 10:00 Break

- 10:20 The Shortest Nucleosomal Repeat Length in the Developing Embryo is Found in the 2-Cell Stage, James C. Vaughn, Scott A. M. Chambers, and Barbara Ramsay Shaw, Duke University
- 10:40 A Chromogenic Assay for Factor-VIII, William J. Leland, Herbert Cooper and Robert Wagner, University of North Carolina at Chapel Hill
- 11:00 Structure-Activity Relationship Study on Platelet-Activating Factor (1-O-Alkyl-2-Acetyl-SN-Glycero-3-Phosphocholine), J. R. Surles - University of North Carolina at Chapel Hill, R. L. Wykle - Bowman Gray School of Medicine, J. T. O'Flaherty - Bowman Gray School of Medicine, F. Snyder - Oak Ridge Associated Universities, and C. Piantadosi - University of North Carolina at Chapel Hill
- 11:20 Antitumor Anthraquinones from Morinda Parvifolia, P. Chang and K. H. Lee, University of North Carolina at Chapel Hill
- 11:40 Time and Cell Density Dependent Metabolism of Benzo(a)pyrene in C3H10T $\frac{1}{2}$ /CL8 Mouse Embryo Fibroblasts, Kenneth Rudo - Northrop Services, Inc. and Stephen Nesnow - US Environmental Protection Agency.

## Inorganic Chemistry

### Joseph Templeton, Presiding

### Room 222, Venable

- 8:20 Registration, Entrance Foyer, Venable Hall
- 8:40 Reaction of Lithium Dimethylcuprate with  $C_6H_5Mn(CO)_3^+$ . Observation of Methyl Group Migration from Manganese to the Arene Ring in  $C_6H_5(CO)_2Mn-CH_3$ , M. Brookhart, Allan R. Pinhas, and Alexander Lukacs, University of North Carolina at Chapel Hill
- 9:00 Tungsten(V) Olefin, Alkynes, and Vinylidenes, K. R. Birdwhistell and J. L. Templeton, University of North Carolina at Chapel Hill
- 9:20 Iron(III)-Hydroxamic Acid Chelation Kinetics, Lynne Fish and Alvin L. Crumbtiss, Duke University
- 9:40 Kinetics of Electron Transfer Reactions between a Polymeric Os Mediator and Fe, Ru, and Os Bipyridine and Phenanthroline Solution Complexes, Charles R. Leidner and Royce W. Murray, University of North Carolina at Chapel Hill
- 10:00 Break
- 10:20 Bimetallic Transition Metal Complexes, Michael G. Kinnaid and David G. Whitten, University of North Carolina at Chapel Hill
- 10:40 Structural Tailoring of 7-Coordinate  $d^4$  Complexes, Sharon Rieter Burgmayer and J. L. Templeton, University of North Carolina at Chapel Hill
- 11:00 Circular Dichroism Studies of Ion Pairing Effects in Crown Ether Complexes, Brian D. Dyer, Richard A. Palmer and Robert G. Ghirardelli, Duke University
- 11:20 Circularly Polarized Luminescence as a Probe of Lanthanide Binding by Crown Ethers, David W. Metcalf, Richard A. Palmer, and Robert G. Ghirardelli, Duke University



Inorganic/Physical Chemistry  
Graham Hills, Presiding  
Room 223, Venable

- 8:20 Registration, Entrance Foyer, Venable Hall
- 8:40 Observation of  $\nu_2$ FCO with CO<sub>2</sub> Laser Magnetic Resonance, W. J. McCoy, R. E. Muenchausen and G. W. Hills, University of North Carolina at Chapel Hill
- 9:00 Infra Red Optical Double Resonance Spectroscopy of ND<sub>2</sub><sup>\*</sup>, R. E. Muenchausen and G. W. Hills, University of North Carolina at Chapel Hill
- 9:20 A Comparison of Photoacoustic and Diffuse Reflectance Techniques in the NIR, Visible, and UV, Jeffrey W. Childers and Richard A. Palmer, Duke University
- 9:40 Optogalvanic Spectroscopy in Low Pressure Discharges with Color-Center and Dye Lasers, R. D. May, Z. Zhu, and G. W. Hills, University of North Carolina at Chapel Hill
- 10:00 Break
- 10:20 Thermometric Titrations of Substituted Pyridines with Various Halogenoacetic Acids in Nonaqueous Media, B. Chawla and S. K. Mehta, Indian Institute of Technology - New Delhi and Duke University
- 10:40 Intervalence Transfer in Mixed Valence Dimers of Ru and Os, K. A. Goldsby and T. J. Meyer, University of North Carolina at Chapel Hill
- 11:00 Antiferromagnetic Alternating Linear Chain Magnetism in the First  $\mu$ -oxo-Bridge Complex of Fe:Catena- $\mu$ -oxo hemiporphyrinatoiron (IV), Wolfgang Hiller, Jochim Strähle--Institut für Anorganische Chemie der Universität, Tübingen; Armin Datz, Michael Hanack--Institut für Organische Chemie der Universität, Tübingen; William E. Hatfield, Leonard W. Ter Harr--University of North Carolina at Chapel Hill; Philipp Gutlich--Institut für Anorganische and Analytische Chemie der Johannes Gutenberg-Universität

Organic Chemistry I  
Michael Crimmins, Presiding  
Room 224, Venable

- 8:20 Registration, Entrance Foyer, Venable Hall
- 8:40 Synthesis of Dihydropyrones from 1-Methoxy-1-Buten-3-yne, Michael T. Crimmins and Danute Bankaitis, University of North Carolina at Chapel Hill
- 9:00 A Photochemical Approach to Bifurcorenone, Steven W. Baldwin and George F. Martin, Duke University
- 9:20 Chemistry of Phenolic Lignin Structures in Alkaline Pulping Processes, R. G. Hise, C-L. Chen, and J. S. Gratzl, North Carolina State University
- 9:40 Reaction of Hydroxylamine O-Sulfonic Acid with Ketones, John A. Mitchell, Ronda G. Davis, and Robert A. Izydore, North Carolina Central University



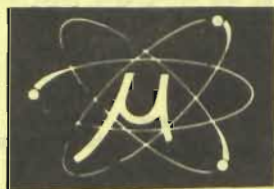
- 10:00 Break
- 10:20 Asymmetric Synthesis of  $\beta$ -lactams, S. W. Baldwin and Jeffrey Aube, Duke University
- 10:40 An Approach to Triquinone Natural Products through Intramolecular Photocycloadditions, Michael T. Crimmins, University of North Carolina at Chapel Hill
- 11:00 Ring Expansion of 9-Heterobicyclo(6.1.0)-nonatrienes to Heteronin Derivatives, N. S. Rao and L. D. Quin, Duke University
- 11:20 Carbon-13-Proton Long Range Couplings in Some Amaryllidaceae Alkaloids, Dale Campau and Peter Jeffs, Duke University
- Chemical Education Paper
- 11:40 A Coordinated Introduction of NMR in the Lecture and Laboratory of Undergraduate Organic Chemistry, Samuel G. Levine, Kathleen M. Doubek, and Wayne F. Beyer, Jr., North Carolina State University

Organic Chemistry II  
Slayton Evans, Jr., Presiding  
Room 207, Venable

- 8:20 Registration, Entrance Foyer, Venable Hall
- 8:40 S-33 and O-17 Nuclear Magnetic Resonance Spectral Investigation of Substituted Thiolane 1,1-dioxides, Slayton A. Evans and Tarek Sammakia, University of North Carolina at Chapel Hill
- 9:00 O-17 Spectra of Cyclohexanols, Hydroxydioxanes and their Methyl Ethers, Ernest L. Eliel, Subramanian Chandrasekaran, and Muthiah Manoharan, University of North Carolina at Chapel Hill
- 9:20 Phosphorane Activated Cyclodehydration of Diols. Stereochemistry of Cyclization, Philip L. Robinson and Slayton A. Evans, University of North Carolina at Chapel Hill
- 9:40 Diastereomeric Discrimination in Monolayers at the Air-Liquid Interface, E. M. Arnett, L. C. Collins, D. Mirejovsky, and R. J. Verbiar, Duke University
- 10:00 Break
- 10:20 Thermochemical Comparisons of Heterogeneous and Homogeneous Acid-Base Systems, E. M. Arnett, B. Chawia, R. A. Haaksma, and D. L. Hughes, Duke University
- 10:40 Boron Analogs of Amino Acids. Isolation and Characterization of a Novel Protonated N-Ethylamide Derivative, Fahim U. Ahmed, Andrew T. McPhail and Bernard F. Spielvogel, Duke University
- 11:00 Ion Pairing and Reactivity of  $\beta$ -Ketonenolates, Steven L. Schilling, E. B. Troughton, Bill Schriver and Edward M. Arnett, Duke University
- 11:20 Asymmetric Synthesis of Secondary  $\alpha$ -Hydroxyaldehydes,  $RCHOHCHO$ , -Acids,  $RCHOHCO_2H$  and Glycols,  $RCHOHCH_2OH$ , Ernest L. Eliel and Kwang-Youn Ko, University of North Carolina at Chapel Hill
- 11:40 Reactions of Bromofluoromethanes with Carbanions, C. L. Bumgardner, S. T. Purrington, and T. S. Everett, North Carolina State University

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# NC SECTION SPRING SHORT COURSE

## \*\* STATISTICS FOR SCIENTISTS \*\*

LECTURE DATES: Tuesday, April 26, 1983 8:30 - 12:30  
Thursday, April 28, 1983 8:30 - 12:30  
Monday, May 2, 1983 1:00 - 5:00  
Wednesday, May 4, 1983 1:00 - 5:00

PLACE: Burroughs Wellcome Co. Auditorium  
3030 Cornwallis Road  
Research Triangle Park, NC 27709

PREREQUISITE: None

APPLICATION  
DEADLINE: April 15, 1983

INSTRUCTORS: Gerald Hajian, Ph.D.  
Hale Sweeny, Ph.D.  
Department of Statistical Services  
Burroughs Wellcome Co.

COURSE CONTENT: This course is intended to introduce the basic concepts of statistics and the application of statistics to problems of data interpretation and experimental design facing scientists in their day-to-day work. The concepts of randomness, distribution, probability, and populations will be presented. Analysis of variance, experimental design, linear regression, and other topics will be presented. It should be emphasized that this will not be a theoretical course, but a course based on problems the scientist encounters when dealing with experimental data.

No prior knowledge of statistics or methods of statistical analysis is assumed.

.....  
Enclosed is a check (payable to the North Carolina Section, American Chemical Society), as registration fee for Statistics for Scientists. A check must accompany registration. Billing cannot be arranged, but receipts will be given to aid registrants in obtaining reimbursement.

\_\_\_\_ \$40.00 ACS member; \_\_\_\_ \$50.00 Non-ACS member; \_\_\_\_ \$20.00 Full Time Student

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- CALL FOR NOMINATIONS -

This lecture series, inaugurated last year, was enthusiastically received by the Local Section and its continuation is planned for the upcoming 1983-1984 speaker program. Members are encouraged to nominate candidates for this series. Please send your nomination to:

Dr. Bernard F. Spielvogel  
Chairman-Elect, NC Section, ACS  
Army Research Office  
P.O. Box 12211  
Research Triangle Park, NC 27709



NATIONAL SYMPOSIUM ON RECENT ADVANCES  
IN POLLUTANT MONITORING OF AMBIENT AIR  
AND STATIONARY SOURCES

May 3 - May 6, 1983

This is the third annual national symposium sponsored by EPA's Environmental Monitoring Systems Laboratory in Research Triangle Park. The symposium is in response to a need increasingly emphasized by the nation's regulatory programs to collect data on the concentration, distribution, and personal exposure to air pollutants. In seven sessions over four days, papers and discussions will focus on state-of-the-art systems for monitoring source emissions, ambient air, acid deposition, and hazardous emissions; personal monitoring will also be discussed.

There is no fee for this symposium. It will be held at the Raleigh Hilton Hotel in Raleigh. For additional information, call Ms. Virginia Hathaway, JACA Corp., Fort Washington, PA 19034, phone (215)643-5466.

Symposium Agenda

- May 3, Session I - Inorganic Pollutants
- May 3, Session II - Particulate Pollutants
- May 4, Session III - General Source-Oriented Monitoring
- May 4, Session IV - Personal Monitoring
- May 5, Session V - Acid Deposition
- May 5, Session VI - Organic Pollutants
- May 6, Session VI - Organic Pollutants
- May 6, Session VII - Panel Discussion

## PEMBROKE STATE MEETING COMPLETE SUCCESS

Approximately 20 chemists and others from the Research Triangle area traveled some 100 miles on Tuesday, March 15, to join some 20 other chemists for the March Section meeting. The meeting included wine and cheese provided by DuPont, an excellent steak dinner and a very enlightening presentation by Dr. Irving S. Goldstein entitled Industrial Organic Chemicals from Biomass. In addition, traveling to this distant corner of the NC Section provided an opportunity to make new acquaintances and learn of the chemistry being pursued by these individuals.

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