

The

TarHelium



A Publication of the North Carolina Section of the American Chemical Society

Vol. 16, No. 2

October, 1985

Tuesday, October 15, 1985

IDLE MUSINGS ON WHAT THE HISTORY OF SCIENCE
TELLS US ABOUT THE PHILOSOPHY OF SCIENCE

by

Dr. George M. Bodner
Purdue University

Social: 5:30 p.m.
NCSU Faculty Club

Dinner: 6:30 p.m.
NCSU Faculty Club
\$11.00 for full members
\$ 5.50 for students

Lecture: 8:00 p.m.
NCSU Faculty Club

* * *

For reservations, please call one of the following by Friday, October 11: Jeannie Neighorn at 248-4320 or Eric Bigham at 248-4338. For more information on the speaker and topics, please see page 2.

* * *

Also to be discussed at the October meeting will be the question of instituting Section dues.

DR. GEORGE M. BODNER grew up near Kodak Park in Rochester, New York. Although he entered SUNY Buffalo as a history/philosophy major, he discovered chemistry and changed his major. Following his B.S. in 1969, Dr. Bodner earned a Ph.D. from Indiana Univ. in 1972, with a double major in inorganic and organic chemistry. Subsequently, from 1972 to 1975 he worked as a visiting assistant professor at the University of Illinois at which he studied the ^{13}C -NMR of organometallic complexes and taught biochemistry. In 1975 he became 2/3 of the chemistry department at Stephens College in Columbia, Missouri, at which he taught general, organic, inorganic, and biochemistry. Finally in 1977, Dr. Bodner joined the faculty of chemical education at Purdue Univ. and has remained there since. He is the author of over 50 papers and 10 laboratory manuals, and his interests include the development of materials to assist undergraduate instruction, with particular emphasis on ways of introducing visual imagery, and research on the impact of cognitive styles on the teaching of chemistry.

Dr. Bodner's topic, IDLE MUSINGS ON WHAT THE HISTORY OF SCIENCE TELLS US ABOUT THE PHILOSOPHY OF SCIENCE, promises to be informative and entertaining for general audiences with interests in science and science education. His lecture will examine several topics to understand better concepts including: (1) the role of serendipity and the prepared mind, (2) the interaction between the scientist and his/her experimental results, (3) how to ripen time, (4) the factors that give rise to scientific controversy, (5) the myth of the dispassionate scientist, and (6) the question of the proper role in science of facts versus theories.

MICROANALYSES

Analysis for all elements

Trace analyses and molecular weights

GALBRAITH LABORATORIES, INC.

P.O. Box 4187 • Knoxville, TN 37921

(615) 546-1335

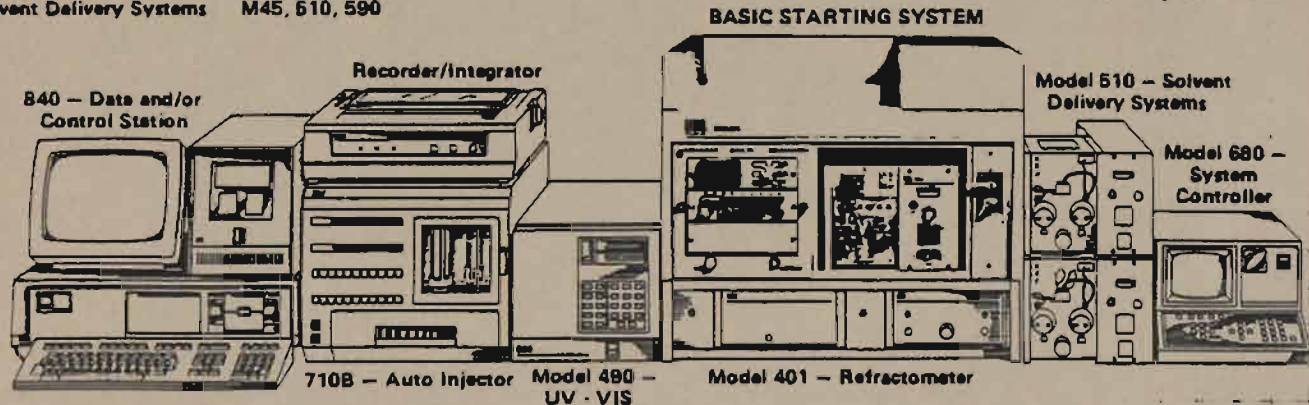
Since 1950

**Begin with your basic starting system
then add capability as your needs change.**

Component	Model No.
UV-VIS	440, 441, 481, 490
Fluorescence	420
Differential R. I.	401, 410
Conductivity	430
Data Systems	840
Control Systems	680, 720, 721, 840
Injectors	U6K, 710B (WISP)
Solvent Delivery Systems	M45, 610, 590

Featuring

- Efficiency
- Sensitivity
- Speed
- Capacity
- Resolution
- Training
- Service
- Application Support
- Columns
- Accessories
- Mobile Phase Modifiers
- Sample Prep Materials
- Quality Parts
and
- ***The best value
for your dollar***



Waters provides a complete line of systems over the price range you can afford.

MILLIPORE Waters Chromatography Division

Southeastern Regional Sales Office

For information or assistance, please call
800/334-5167 (outside N.C.) or 919/469-2501 (inside N.C.)

117 Edinburgh South, Suite 206 Cary, NC. 27511

LOCAL SECTION DUES TO BE VOTED ON

Appearing on the ballot of our annual election of NC Section officers, which appears on the next page of this issue, is the question of Instituting local section dues of \$3.00, commencing in 1987. The mechanism for instituting local section dues is given in Section 1 of Bylaw X of the North Carolina Section - ACS Bylaws, which states that the North Carolina Section can institute local section dues if they are set by the Executive Committee and approved by Section members by mail ballot with approval of the majority of the voting members constituting adoption of the dues. At the January 17, 1985, meeting of the Executive Committee local section dues in the amount of \$3.00 annually were set and approved. The proposed dues will be discussed at the October meeting in Raleigh.

The justifications for instituting local section dues for our section were detailed in a message from our section's chairman which appeared in the February, 1985, issue of the TarHellum. The major points stated in that message centered around the fact that our section's proposed operating budget for 1985 shows a deficit of \$2,508.00. To my knowledge, this is the first time that a planned deficit has been built into the section's operating budget. The largest expense items in the budget are the costs of printing and mailing the TarHellum. These two costs total \$5,590.00 out of total proposed expenses of \$16,090.00, and despite our best efforts these costs exceed our estimates each year. The Executive Committee feels that the collection of section dues of \$3.00, with the proceeds used to help finance the publication of the TarHellum, will allow us to stabilize the financing of our newsletter and at the same time allow the section to continue to offer our educational, award, and service programs. Members of the North Carolina Section are now asked to vote on the question of dues on the officers ballot on the facing page (p. 5). Please note that the deadline for receipt of ballots is November 20. I urge your prompt approval of this important issue.

-Robert Izydore-

FUTURE MEETINGS PLANNED

Date:	November 13, 1985
Presentation:	Halley's Comet
Place:	Morehead Planetarium, UNC-Chapel Hill

Date:	December 10, 1985
Speaker:	Gertrude Eilon, Burroughs Wellcome NC Distinguished Chemist Lecture
Place:	Lecture & Dinner - Meredith College Social - To Be Announced

BALLOT

Election of Officers for 1986
 North Carolina Section - American Chemical Society

Please indicate your choice for each of the offices below and your approval or disapproval of instituting Section dues in the spaces provided and mail ballots to:

Dr. Lynn Wright
 Secretary, NC Section - ACS
 EMSL, Mail Drop 78
 U.S. Environmental Protection Agency
 Research Triangle Park, NC 27711

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 Wednesday, November 20, 1985.

Chairman Elect	_____	WILLIAM SWITZER NC State University
	_____	DAVID YEOWELL Burroughs Wellcome
Secretary	_____	CAROLYN FOUST Research Triangle Institute
	_____	IRENE UTTERBACK NC Science and Technology Research Center
Councillor	_____	MARCUS HOBBS Duke University
	_____	KATHRYN MACLEOD Mallinckrodt
Alternate Councillor	_____	HENRY BENT NC State University
	_____	TODD CRAIG Union Carbide
One-Year Councillor	_____	ROBERT LEWIS US Environmental Protection Agency
	_____	IVY CARROLL Research Triangle Institute

_____ APPROVE institution of \$3.00 annual NC Section dues
 _____ DISAPPROVE institution of \$3.00 annual NC Section
 dues

Brief biographies of candidates follow.

BIOGRAPHICAL SKETCHES
CANDIDATES FOR 1986 ELECTION

FOR CHAIRMAN ELECT:

WILLIAM SWITZER received his B.S. degree in chemistry from Louisiana State University and both his M.S. and Ph.D. degrees from the University of Illinois, Urbana. After working for three years at Beckman Instruments in California, he joined the faculty at North Carolina State University, at which he now is an Associate Professor of Chemistry. He has been active with the American Chemical Society, starting in California where he was a member and later the chairman of their standing Committee on Chemical Education. After moving to North Carolina, he worked for several years with the Hospitality Committee, assisting the program chairman with local arrangements and later with the Education Committee. He was editor of the *TarHellum* from 1976 through 1982 and Local Section Secretary from 1982 to 1983. He was a member of the steering committee for the 1984 Southeastern Regional Meeting, serving as Chairman for Publicity and Printing. Currently he is completing a portion of an unexpired term as Local Section Councilor to the National Organization.

DAVID YEOWELL obtained his B.Sc. and Ph.D. degrees from Bristol University in England and has been a chemist for 30 years. Dr. Yeowell joined Burroughs Wellcome Company in 1964 as an organic research chemist and has progressed in the more practically-oriented side of drug development to Director, Development Laboratories. This involves the chemistry-related areas of synthesis, analysis, chemical engineering and pharmacy. He has been a member of the local section since 1970 and has been a member and Chairman of the Centennial Scholarship and member of the Nominating Committees.



FOR SECRETARY:

CAROLYN FOUST received her associate degree in medical research technology at Duke University Medical School in 1968. From 1966 to 1968, Ms. Foust was a medical research technician at Duke University Medical School in the Department of Neurosurgery. Also, she has participated in numerous graduate level and continuing education courses. Since 1968, she has been employed at Research Triangle Institute in the Chemistry and Life Sciences Group, where she has been involved in various research programs including polymer membrane research in gas permeation and desalination, environmental pollution impact studies, drug metabolism, and radioimmunoassay of drugs of abuse. Ms. Foust is a member of the Medicinal Chemistry Section of the ACS and also the Environmental Chemistry Section. Ms. Foust has served the NC Section as Co-chairperson of the Safety Committee. She presently is a member of this committee.

IRENE 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.

FOR COUNCILOR:

MARCUS HOBBS received his A.B., A.M. and Ph.D. degrees from Duke University. He joined the Department of Chemistry faculty at Duke in 1935 and became a Professor in 1951, serving in that capacity until 1954. From 1954 to 1959 he was Dean of the Graduate School of Arts and Sciences; from 1958 to 1963, Dean of the University; from 1960 to 1962, Assistant Provost; from 1962 to 1963, Vice Provost; and from 1969 to 1970, Provost. He is currently a University Distinguished Service Professor Emeritus of Chemistry at Duke. He has published more than 50 professional articles and has received numerous awards. Dr. Hobbs has held many offices with the NC Section over the years, with his more recent activities

FOR COUNCILOR (continued):

Including tenure from 1970 to the present as a member of the NC Section-American Chemical Society Executive Committee and from 1973 to the present, as a Councilor. He has been a Congressional Science Counselor for the ACS for over five years and Membership Affairs-Committee Associate for more than 3 years. He chaired the Development Committee for the 36th Southeastern Regional Meeting, 1984, held in Raleigh.

KATHRYN MACLEOD received her B.S.Ch. degree in 1968 and M.S. degree in 1979 from the University of South Carolina. She worked for one and one-half years as a chemist with South Carolina Pollution Control Authority before moving to North Carolina. She was employed as a research chemist with the US Environmental Protection Agency for ten and one half years before joining Mallinckrodt in 1981. Ms. MacLeod has been active in the NC Section since 1971, serving on various committees and as Secretary from 1977 to 1979, Chairman-elect in 1981, Chairman in 1982 and as Special Programs Chairman for the 1984 Southeastern Regional Meeting. She is currently a member of the Executive Committee and High School Chemistry Committee.

FOR ALTERNATE COUNCILOR:

HENRY BENT received his A.B. from Oberlin College in 1946 and his Ph.D. from Berkeley in 1952. From 1952 to 1955 he taught physical chemistry at the University of Connecticut. From 1955 to 1969 he served as research fellow-professor in inorganic chemistry at the University of Minnesota. Since 1969 he has been a professor of physical chemistry at North Carolina State University. He is a member of the ACS, APS, Sigma Xi, and Phi Beta Kappa. His research interests, past and present, include kinetics of the thermal decomposition of molten ammonium nitrate, permeability of polyethylene to organic solvents; combustion of solid propellants, infrared spectroscopy of matrix-isolate species, hybridizations and bond properties, intermolecular interactions, and localized molecular orbitals. Dr. Bent is the author of "The Second Law" and an ACS audio course on "Thermodynamics." He is a past ACS chairman of the Division of Chemical Education and present Chairman of the Committee for Professional Training.

FOR ALTERNATE COUNCILOR (continued):

He is the recipient of a Manufacturing Chemists Award in College Chemistry Teaching, the ACS Union Carbide Award in Chemical Education, and the James Flack Norris Award.

TODD CRAIG received his B.S. degree in chemistry at SUNY Geneseo (1975). In 1980 he completed his Ph.D. degree in synthetic organic chemistry at Wesleyan University. After being awarded an NIH Postdoctoral Fellowship he continued his studies with Professor Samuel Danishefsky at Yale University. In October, 1981, he accepted a position with Union Carbide Agricultural Products Company located at RTP and was recently promoted to Project Scientist. Dr. Craig was president of the ACS student affiliate chapter at Geneseo in 1973 and 1974 and has been a member of ACS since 1972. He was Chairman of the local North Carolina Section Education Committee for the past two years and a member of the Awards Committee last year.

FOR ONE-YEAR COUNCILOR:

ROBERT LEWIS received his B. S. degree in chemistry in 1960 at the University of North Carolina at Chapel Hill and his Ph.D. in physical-organic chemistry in 1964 at the University of Wisconsin, Madison, Wisconsin. He was a National Science Fellow (1961) and a National Institutes of Health Fellow (1961-64). Dr. Lewis served as a senior research chemist at the Chemstrand Research Center in RTP from 1964 to 1967. He was a research specialist and group leader for Monsanto Company from 1967 to 1971. Since 1971, he has worked at the US Environmental Protection Agency, RTP, in several capacities and is currently Chief of the Methods Development Branch of the Environmental Monitoring Systems Laboratory. His research and professional interests include environmental monitoring and human exposure/risk assessment, trace organic analysis, air pollution, pesticides, polychlorinated biphenyls and dioxins, photochemistry, and spectroscopy. He is a member of the American Association for Advancement of Science, American Society of Testing and Materials, the North Carolina Academy of Science and Alpha Chi Sigma. He has served on numerous committees and work groups concerned with environmental health and monitoring and the chemical profession. He has authored or co-authored more than 75 journal articles, book chapters and other scientific articles.

FOR ONE-YEAR COUNCILOR (continued):

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 and has been Director of the Organic and Medicinal Chemistry Division of the Chemistry and Life Sciences Unit 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 from 1980 to 1981 and is presently a member of the Long Range Planning Committee of the Medicinal Chemistry Division of the ACS.

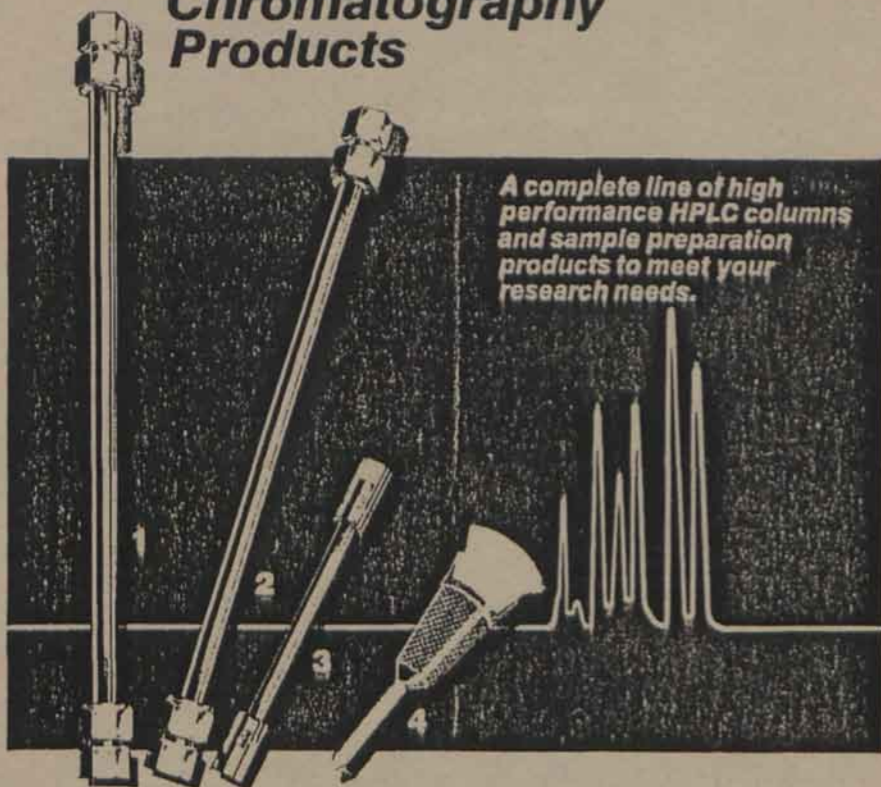
CALL FOR PAPERS
1986 SYMPOSIUM ON MEASUREMENT OF
TOXIC AIR POLLUTANTS

The next annual national Symposium on Measurement of Toxic Air Pollutants will be held April 27-30, 1986, in Raleigh, North Carolina. Co-sponsors are the U.S. Environmental Protection Agency/Environmental Monitoring Systems Laboratory and the Air Pollution Control Association. The technical program will emphasize emerging technology in the measurement of toxic air pollutants. Topic categories include the following: Acid Deposition, Hazardous Waste Emissions, Indoor Air Pollution, Source Measurements, Ambient Measurements, Quality Assurance, Exposure Assessment, Complex Chemical Data Analysis, and Wood Stove Emissions.

Persons interested in presenting a paper should send a two hundred word abstract by November 30, 1985, to either of the Technical Program Co-chairmen: Dr. R. K. M. Jayanty, Research Triangle Institute, Research Triangle Park, NC 27709, (919) 541-6483 or Seymour Hochheiser, Environmental Monitoring Systems Laboratory, U.S. EPA, Research Triangle Park, NC 27711, (919) 541-2106.

Completed manuscripts of accepted papers must be ready by March 31, 1986.

Du Pont Chromatography Products



1 ZORBAX® Bio Series Columns

- Separate Proteins by size
(Zorbax GF-250/
GF-450)
- Unique Isocratic
Analysis of PTH
Amino Acids
(Zorbax PTH)
- Wide pore column for
reversed phase of
proteins & peptides
(Zorbax PEP-RPI)

2 ZORBAX® Analytical Columns

- Complete family
offering wide range
of selectivities
- Highest resolution
- All packings manufac-
tured by Du Pont

3 ZORBAX® Cartridge Series Columns

- New! Du Pont intro-
duces a quality car-
tridge you can
rely on
- Wide range of
selectivities
- Routine separations
for less than \$100!
- Same packings as
analytical column

4 NENSORB™ 20 Nucleic Acid Purification Cartridge

- New, salt-free method
of purifying RNA/DNA
- Fast purification,
< 15 minutes
- Purifies from 1 µg -
20 ng single or double
strands

Call 1-800-237-8400
For free product literature



Alan R. Hovis
Chromatography Specialist

E. I. du Pont de Nemours & Co.
Biomedical Products Department
Bioscience Systems
5040 Six Forks Rd., Suite 410
Raleigh, NC 27603

(919) 848-1746

The Tarhelium is a publication of the North Carolina Section of the American Chemical Society. The views expressed herein are not necessarily those of the Section.

William Gutknecht, *Editor*
Carolyn Bilbro, *Editorial Assistant*

PRE-SORTED
FIRST CLASS MAIL
U.S. POSTAGE PAID
RALEIGH, NC

PERMIT NO. 491

Please direct correspondence to the attention of the editor:

William Gutknecht
Environmental Chemistry Department
Research Triangle Institute
P.O. Box 12194
Research Triangle Park, NC 27709

If you wish to change your Tarhelium mailing address, please submit your old address, your new address and a recent C&EN or Tarhelium address label to:

Manager, Membership and Subscription Services
American Chemical Society
P.O. Box 3337
Columbus, Ohio 43210

Changes in membership status also should be submitted to the above address.

Executive Committee:

Robert Izydore, NCCU, Chairman
Eric Bigham, BW, Chairman-Elect
Lynn Wright, EPA, Secretary
William Hatfield, UNC, Treasurer
William Gutknecht, RTI, Tarhelium Editor
Marcus Hobbs, Duke, Councilor
William Switzer, NCSU, Councilor
Maurice Bursey, UNC, Councilor
Peter Smith, Duke, Alternate Councilor
William Gutknecht, RTI, Alternate Councilor
Halbert Carmichael, NCSU, Alternate Councilor
Kathryn Macleod, Mallinckrodt, Past Chairman
Louis Quin, Duke, Past Chairman
Bernard Spielvogel, ARO, Past Chairman

Cover design by Carolyn Bilbro

FIRST CLASS MAIL

0137835L 09/85 ZM 426 1
DR ROBERT GEORGE GHIRARDELLI
US ARMY RES OFFICE
POB 12211
RES TRIANGLE PARK NC 27709