

THE

TarHelium



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

Vol. 18, No. 3

November 1987

Photochemical Solar Energy Conversion

A Lecture by

Dr. Janos Fendler

Wednesday, November 18, 1987

Hubbard Chemistry Building

Auditorium (Room 112)

North Carolina Central University

Social Period

Eagles Nest, NCCU Student Union

5:30

Dinner

Eagles Nest, NCCU Student Union

6:00

Lecture

7:30

Reception to follow lecture

The dinner cost is \$10 for members and guests and \$5 for students. Please make dinner reservations by phoning one of the following people by Monday morning, November 16: in Chapel Hill, Debbie Edwards, 962-2172; in Durham, Carolyn Bean, 684-2414; in Raleigh, Joyce Dunn, 737-2545; in Fayetteville, Janet Davis, 486-1680. To cancel reservations for the meal, please call Debbie Edwards in Chapel Hill at 962-2172.

Janos H. Fendler—Dr. Fendler is professor of chemistry at Syracuse University, Syracuse, NY. Born in Budapest, he obtained a B.Sc. degree in chemistry from the University of Leicester, England, in 1960. He then earned a postgraduate diploma in radiochemistry from Leicester College of Technology and, in 1964, a Ph.D. in physical organic chemistry from the University of London. Dr. Fendler came to the U.S. in 1968 for a postdoctoral fellowship at the University of California—Santa Barbara. After working at Mellon Institute's Radiation Research Laboratories in Pittsburgh, he joined the chemistry faculty at Texas A & M University. In January 1982, Dr. Fendler went to Clarkson College of Technology in Potsdam, NY, as a professor of chemistry.

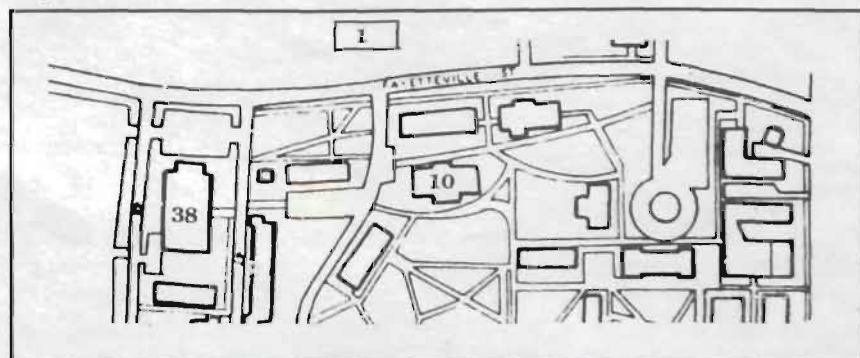
Dr. Fendler's major research interest are membrane mimetic chemistry and stereochemistry in the excited state. His many honors include a D.Sc. degree awarded by the University of London in 1978 and the ACS Award in Colloid or Surface Chemistry in 1983.

Photochemical Solar Energy Conversion

Advantage has been taken of the separate compartments provided by completely synthetic surfactant vesicles to organize the sensitizers, donors and acceptors needed for photochemical solar energy conversion. Chemically dissymmetrical polymerized surfactant vesicles proved to be particularly useful media for membrane-mimetic photochemistry. Efficient charge separation followed by electron transfer across the bilayer of the vesicle and hydrogen generation have been demonstrated. Details of these systems will be discussed.

DIRECTIONS—NCCU

Entrance road to campus nearest chemistry building is the fire station on Fayetteville St.



- 38—Student Union
- 10—Chemistry
- 1—Fire Station

CALL FOR PAPERS

1988 EPA/APCA Symposium on Measurement of Toxic and Related Air Pollutants May 2-4, 1988

The next annual national Symposium on Measurement of Toxic and Related Air Pollutants will be held May 2-4, 1988, in the Sheraton Imperial Hotel, Research Triangle Park, NC. The meeting is again cosponsored by the U.S. Environmental Protection Agency's Environmental Monitoring Systems Laboratory and The Air Pollution Control Association.

The technical program will include both invited and contributed papers emphasizing emerging technology in the measurement of toxic and related air pollutants (gases and particulates).

Topic categories include the following: acidic deposition, quality assurance, indoor air pollution, hazardous waste emissions, complex chemical data analysis, source measurements, ambient measurements, wood stove emissions, atmospheric chemistry, and measurement application of physiochemical properties of toxics.

Persons interested in presenting a paper should send a two hundred word proposal abstract (title, author(s), affiliation(s), and description) by December 15, 1987 to either of the technical program cochairmen listed below. Completed manuscripts (six pages maximum) of accepted papers must be ready by March 31, 1988.

Seymour Hochheiser
Environmental Monitoring
Systems Laboratory
U.S. Environmental Protection Agency
Research Triangle Park, N.C. 27711
(919) 541-2106

Dr. R.K.M. Jayanty
Research Triangle Institute
P.O. Box 12194
Research Triangle Park, N.C. 27709
(919) 541-6483

GRANT SOURCES AVAILABLE AT ACS

Are you looking for federal funding to explore a research idea? Do you need to know who funds research in your area of interest? ACS can help. The Department of Government Relations and Science Policy maintains an experimental electronic bulletin board guide to grants and contracts in the chemical sciences and engineering, for access by ACS members.

The bulletin board is called ChemREFS™, which stands for Chemical Research and Education Funding Sources. All you need to access ChemREFS™ is a computer, modem, and telephone — and best of all, access is free. You only pay for long distance charges you may incur.

Once online, you'll find over 250 files describing chemical research and education programs at a variety of federal agencies, each with its own directory. Among those represented are: Department of Agriculture, Environmental Protection Agency, National Institutes of Health, and National Science Foundation.

Area-specific and targeted programs, such as instrumentation funding, young investigator programs, and women and minority programs, are described in their own directories.

Two special feature of ChemREFSTTM are News and New Programs. The News category carries biweekly coverage of science policy issues, the federal budget, and changes in grant and contract procedures or guidelines. New Programs highlights the newest federal programs and selected RFP's with short submission deadlines.

All files can be downloaded to the user's system. Users can contact the ACS System Operator by electronic mail or by telephone. ACS members interested in obtaining a user manual should contact Ms. Mary L. Tichava, Office of Science Policy Analysis, Government Relations and Science Policy, American Chemical Society, 1155 Sixteenth Street, N.W., Washington, DC. 20036, (202) 872-4384.

POLYMER GROUP MEETING SET

The December meeting of the Polymer Group will be held Thursday the 10th at the North Carolina State University Faculty Club. The speaker is Dr. Gary Patterson. The title of his presentation is "Light Scattering from Semi-Dilute Polymer Solutions". The social hour begins at 5:30 p.m. followed by a buffet dinner at 6:30 p.m. The presentation begins at 7:30 p.m. Dinner reservations are required. Call Beverly Maxwell at 552-3811 by December 8. The Faculty Club is located on the north side of Hillsborough St. in Raleigh between the beltline and the State Fairgrounds.

FUTURE PROGRAMS

December 15 *Dr. Pedro Cuatrecasas*
Vice President, Glaxo Inc.
North Carolina Distinguished Speaker
Meredith College

EDUCATIONAL OPPORTUNITIES IN CHEMISTRY

Early Morning and Late Afternoon Chemistry Courses Offered by Area Colleges and Universities

SPRING SEMESTER 1988

The Academic/Industrial Interface Committee of the North Carolina Section of the American Chemical Society has identified an interest by area industrial chemist to pursue further course work at local universities while continuing to work full time. On the next 3 pages, the early morning, late afternoon and evening courses of UNC-CH, NCSU, NCCU, Duke and Meredith are provided. Information on registering for these courses is also provided.

**Duke University
Department of Chemistry
Early Morning Classes—Spring 1988**

Course No.	Course Title	Days	Time
CHM 12	Principles of Chemistry (2nd semester)	M,W,F	9:10-10:00
CHM 132	Analytical Chemistry (Intro.)	Tu,Th	9:00-10:15
CHM 151	Organic Chemistry (1st sem.)	Tu,Th	9:00-10:15
CHM 154	Organic Chemistry (3rd sem.)	Tu,Th	9:00-10:15
CHM 300	Basic Statistical Mechanics (Graduate)	Tu,Th	9:00-10:15
CHM 312	Inorganic Reactions and Mechanisms (Graduate)	M,W,F	9:10-10:00
CHM 320	Synthetic Organic Chemistry (Graduate)	M,W,F	9:10-10:00
CHM 330	Separation Science and Fundamental Electrochemistry (Graduate)	M,W,F	8:00-8:50

Persons interested in registering for the above courses should contact the Duke University Office of Continuing Education, 684-6259, before December 1, 1987.

**North Carolina Central University
Department of Chemistry
Early Morning and Late Afternoon Classes
Spring 1988**

Course No.	Course Title	Days	Time
CHEM 4600	Chemical Thermodynamics	M,W,F	9:00-9:50
CHEM 5000	Biochemistry	M,W,F	9:00-9:50
	Biochemistry Laboratory	To Be Arranged	
CHEM 1200	General Chemistry II	M,W	5:00-5:50
	General Chemistry Laboratory	Tu,Th	5:00-6:50
CHEM 1500	Chemistry and Human Life	Tu,Th	5:00-7:00
CHEM 4400	Instrumental Analysis	M,W	5:00-5:50
	Instrumental Analysis Laboratory	M,W	6:00-7:50

4000-level courses are for both undergraduate and graduate students.
5000-level courses are for graduate students only.

Contact the Office of Admissions or The Graduate School, College of Arts and Sciences, North Carolina Central University, Durham, N.C. 27707 for admission procedures. For further information contact Dr. James M. Schooler, Jr., Chairman, Department of Chemistry, NCCU, 683-6462.

**North Carolina State University
Department of Chemistry
Early Morning and Late Afternoon Classes
Spring 1988**

Course No.	Course Title	Days	Time
CH 101	General Chemistry I	Tu,Th	7:50-9:05
CH 107	Principles of Chemistry	M,W,F	7:50-9:05
CH 101	General Chemistry I	Tu,Th	5:45-7:00
CH 101	General Chemistry I	M,W,F	5:45-7:00
CH 103	General Chemistry II	Tu,Th	4:05-5:20
CH 111	Foundations of Chemistry	M,W	7:10-9:00
CH 223	Organic Chemistry II	M,W	5:45-7:00
CH 595B	Bioinorganic Chemistry	M,W	5:15-6:30

100- to 300-level courses are for undergraduates only; 400- to 500-level courses are for advanced undergraduate and graduate students; 600-level courses are for graduate students only.

For admissions procedures, contact NCSU, Division for Lifelong Education, McKimmon Center, Box 7401, Raleigh, N.C. 27695 or telephone 737-2265 for application forms. Deadline for late registration is January 8, 1988.

Students needing information on degree requirements in Chemistry should contact: Dr. William P. Tucker, 737-2546, for BA or BS degrees or Dr. Charles G. Moreland, 737-2548, for MC, MS, or Ph.D. degrees.

**Meredith College
Department of Chemistry and Physical Science
Early Morning and Late Afternoon Classes
Spring 1988**

Course No.	Course Title	Days	Time
CHE 350	Quantitative Analytical Chemistry	M,W,F	8:00-8:50
	Quantitative Analytical Chemistry	Th	2:00-5:00
	Laboratory		
CHE 222	Organic Chemistry II	M,W,F	9:00-9:50
	Organic Chemistry Laboratory	M	2:00-5:00
	Organic Chemistry Laboratory	T	2:00-5:00

Contact the Office of Admissions, Johnson Hall, 829-8581, for admission procedures. Persons age 23 or older who are interested in completing a Meredith College degree should contact the Office of Continuing Education, Jones Hall, 829-8353.

**UNC-Chapel Hill
Department of Chemistry
Early Morning Classes
Spring 1988**

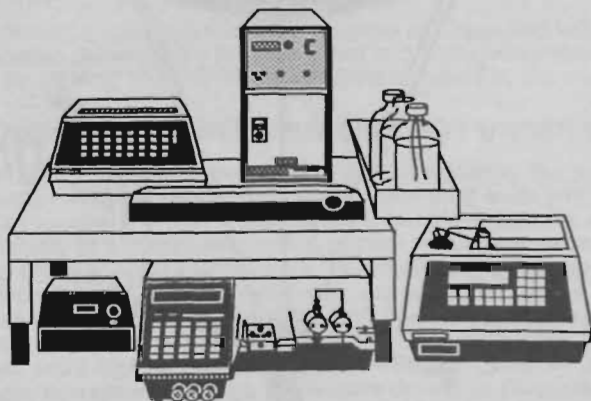
Course No.	Course Title	Days	Time
CHEM 11	General Descriptive Chemistry I	Tu,Th	*
CHEM 21	General Descriptive Chemistry II	Tu,Th	*
CHEM 21L	Quantitative Chemistry Laboratory II	Tu	8:00-11:00
CHEM 51	Introduction to Inorganic Chemistry	Tu,Th	*
CHEM 61	Introduction to Organic Chemistry I	Tu,Th	*
CHEM 62	Introduction to Organic Chemistry II	M,W,F	*
CHEM 122	Physical Chemistry of Polymers	M,W,F	*
CHEM 133	Enzyme Mechanisms and Kinetics	M,W,F	*
CHEM 144	Separations	M,W,F	*
CHEM 286	Special Topics in Physical Chemistry	M,W,F	*
CHEM 41	Modern Analytical Methods for Separation and Characterization	M,W,F	*
CHEM 188	Quantum Chemistry	M,W,F	*
CHEM 168	Synthetic Aspects of Organic Chemistry	M,W,F	*
CHEM 150	Intermediate Inorganic Chemistry	M,W,F	*
CHEM 192	Chemistry and Physics of Electronic Materials Processing	M,W,F	Televised by MCNC

*Courses are offered at 8:00 and 9:00 A.M. M,W,F classes run 50 min.; Tu,Th classes run 75 min.

Courses numbered below 100 are undergraduate only. Courses from 100-199 are for advanced undergraduate and graduate students, and courses numbered above 200 are for graduate students only.

For admissions, contact the Evening College, 214 Abernathy Hall, 962-1134, for application forms and counseling. Deadline for completed applications for spring semester is December 9. Inquiries concerning chemistry course content and degree requirements should be initiated, as appropriate, with the Director of Undergraduate Studies, Prof. Maurice M. Bursey (962-4403) or the Director of Graduate Studies, Prof. Tomas Baer (962-5433).

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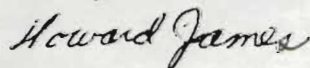
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