

MEETINGS

Combined Physics and Chemistry Course

FIFTEEN college chemistry teachers and fifteen college physics teachers met at Beloit College December 27-30 to discuss teaching a course combining introductory chemistry and physics. Three observers with an interest in combining chemistry and physics in secondary-school teaching were also present at the conference, which was supported by the National Science Foundation. About half of the participants had already taught combined courses and the other half were planning to do so. An address, *The Meaning of "Interdisciplinary"*, was presented by Harold K. Schilling, dean of the Graduate School at Pennsylvania State University. The conference considered the advantages and disadvantages of combined courses, suitable subject matter, and the special problems of laboratory work in such courses. Attention was directed primarily to the development of combined courses for science majors, although some attention was given to the possibility of courses adapted to the needs of students having major interests in other fields. There was general agreement that further development of combined courses is desirable both in colleges and in secondary schools. A committee was appointed to carry on this work. A full report of the conference is available for free distribution and can be obtained by writing to either Edward C. Fuller, Professor of Chemistry, or to R. Ronald Palmer, Professor of Physics, Beloit College, Beloit, Wisc.

Electronic Systems

LEADING mathematicians and scientists from the United States and nine other countries will be among the speakers at the International Symposium on the Application of Switching Theory in Space Technology to be held February 27 to March 1, 1962, at the Lockheed Missiles & Space Company in Sunnyvale, Calif. Sponsored by Lockheed and the US Air Force Office of Aerospace Research and Air Systems Command, the meeting will explore the new applications of switching theory and digital electronics presented by the problems of space travel, and will offer sessions on systems, new switches and storage devices, circuit logic, and related topics.

For further information, write to J. P. Nach, Lockheed Aircraft Corporation, Sunnyvale, Calif.

Biophysics and Information Theory

BAYLOR University's College of Medicine and the Houston Neurological Society will hold an interdisciplinary symposium on Information Storage and

Neural Control at the Texas Medical Center in Houston from March 8 to 10. The program will deal with information theory, storage, and transfer in biological systems, as well as with the neurophysiological aspects of information storage and transfer and the information-processing functions of the human nervous system. For further details write to W. S. Fields, Houston Neurological Society, 1200 M.D. Anderson Boulevard, Houston 25, Tex.

NSTA Convention

MORE than 2500 science teachers are expected to attend the tenth annual convention of the National Science Teachers Association in San Francisco, which is to be held March 9-14. Five major areas of science education (curriculum, staffing, programming, evaluation, and instructional materials and facilities) will be examined critically by the delegates to provide a basis for the development of resolutions and recommendations for the improvement of science teaching at all levels. Additional activities will include a curriculum center for the display of recently developed courses of study and curriculum guides for all areas and levels, a display of demonstrations and experiments, a workshop conducted under the auspices of the Business-Industry Section of NSTA, a youth science congress organized by the Future Scientists of America, a "future science teachers" program for college and university students, a display of films and audio-visual materials, and an exposition of science teaching materials. In conjunction with NSTA, the National Science Supervisors Association and the Association for the Education of Teachers in Science will hold their annual meetings at the convention. Inquiries should be addressed to the Executive Secretary, National Science Teachers Association, 1201 Sixteenth Street, N.W., Washington 6, D. C.

Optical Society

THE 1962 spring meeting of the Optical Society of America will be held March 14-17 in Washington, D. C. The headquarters hotel is the Mayflower. A broad program is planned, including a two-day symposium on vision. Invited papers on optical masers and other subjects, and an exhibit stressing important developments in optical instrumentation. The symposium on vision will take place on March 14 and 15 under the joint sponsorship of the OSA, the Inter-Society Color Council, and the Armed Forces Committee on Vision of the National Academy of Sciences. Invited papers and special reviews will cover five major areas of physiological optics (microanatomy and biochem-

5,000,000 AMP
7,000,000 AMP
3,000,000 AMP
2,000,000 AMP

just a microsec, mister...

and you can have 2 million, 7 million...25 million peres. In about one millionth of a second. Name your ere, and it's yours, with multiple banks of Cornell-Dub N-R-G® low-inductance energy storage capacitors.

It by the industry's most experienced manufacturer energy storage capacitors, Cornell-Dubilier N-R-G's used wherever extremely high instantaneous power equired. Here are some typical applications:

nuclear research and related experiments. Cornell- ilier N-R-G capacitors supply power for thermonu- ir fusion experiments such as those now being con- ted at the Naval Research Laboratories. They are used in ballistic accelerators and in high-speed x generators.

studying missile and satellite reentry problems. N-R-G acitors power arc-heated hypersonic wind tunnels, erating velocities up to 20,000 fps and stagnation peratures up to 10,000° K.

he most advanced metalworking processes. Cornell- ilier has developed N-R-G capacitors for precision ning and shaping of difficult metals through elec-

trical discharge machining, magnetic field forming and high-energy forming by capacitor discharge under water.

In the exciting new field of magnetohydrodynamics (MHD). Cornell-Dubilier is sole source of the compact, lightweight, fast-discharge capacitors specified by a major west coast corporation for a prototype plasma engine to propel interstellar space ships.

In exploding wires, submicrosecond light sources and arc discharges, and numerous other applications.

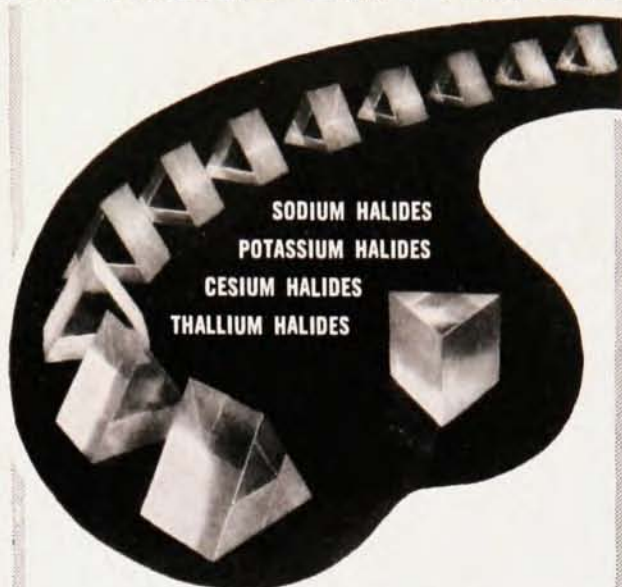
In addition to their tremendous versatility and reliability, Cornell-Dubilier N-R-G capacitors also have astonishing staying power. Now in final stages of development and soon to be available are energy storage capacitors with 500,000-discharge and higher life spans, affording the lowest cost per joule per discharge ever achieved!

Now is the time to ask your CDE representative how N-R-G capacitors can benefit you. Prove to yourself that in energy storage capacitors, as in hundreds of other electronic component and system categories, Cornell-Dubilier Can Do!

CDE CORNELL-DUBILIER

CORNELL-DUBILIER ELECTRONICS, DIV. OF FEDERAL PACIFIC ELECTRIC CO., 50 PARIS ST., NEWARK 1, N. J.

OPTICAL CRYSTALS



Special crystals grown to order, optical blanks cut to specifications, finish polishing as required.

123 WOODLAND
AVENUE
WESTWOOD
NEW JERSEY

CRYSTALS DIVISION
ISOTOPES, INC.

SEMICONDUCTOR MATERIALS SPECIALIST

MELPAR offers excellent opportunity for semiconductor materials physicist, physical chemist, or semiconductor metallurgist to take charge of programs on new semiconductor compound survey and epitaxial growth techniques. This is an excellent growth opportunity for creative work in this field, under ideal conditions. Publication is encouraged. Salary open and dependent upon prior experience.

Write in strictest confidence to:
John Haverfield, Employment Mgr.

MELPAR, INC.

3000 Arlington Boulevard Falls Church, Va.

An equal opportunity employer

istry of the visual system, electrophysiology of the visual system, retinal image formation, simple discriminatory functions, and contributions to color discrimination theory. For further information, write to Mary E. Warga, Executive Secretary, Optical Society of America, 1155 Sixteenth Street, N.W., Washington 6, D. C.

Engineering Aspects of MHD

FOUR nonconcurrent sessions of contributed and invited papers will make up the program of the Third Symposium on the Engineering Aspects of Magnetohydrodynamics, which is to be held at the University of Rochester on March 28 and 29. Sponsored by the University, together with the American Institute of Electrical Engineers, the Institute of Aerospace Sciences, and the Institute of Radio Engineers, the meeting is intended as an interdisciplinary experience designed to further the exchange of information among participants who are competent in one or more related fields. The following subjects will be covered:

1. Communications and Diagnostics—the transmission and receiving of information or energy from plasmas under varying conditions.
2. Flight Applications—the propulsion or control of aerodynamic or space vehicles by MHD interaction between the vehicle and its environment.
3. Fusion—the extraction of energy through controlled thermonuclear fusion of light nuclei.
4. Power Conversion—the direct extraction of electrical energy from hot flowing plasmas or conducting liquids.

Requests for further information should be addressed to the chairman of the steering committee, Norman W. Mather, Plasma Physics Laboratory, Princeton University, Princeton, N. J.

Data Handling

EMPHASIZING the application of mathematical techniques to information-handling systems, the twelfth annual Polytechnic Symposium of the Polytechnic Institute of Brooklyn will be devoted to the theme, "The Mathematical Theory of Automata". This year's international symposium will be held April 24-26 in the new United Engineering Center near United Nations Plaza in New York City. It is being organized by the Institute's Departments of Electrical Engineering and Electrophysics in cooperation with the Professional Groups on Electronic Computers and Information Theory of the Institute of Radio Engineers and the Division of Science and Electronics of the American Institute of Electrical Engineers; cosponsors will be the Air Force Office of Scientific Research, the Office of Naval Research, and the Army Signal Corps.

The objectives of the 1962 symposium, according to the organizers, are twofold: (1) to encourage the development and exposition of basic theories and mathematical tools which will be of help to the engineer in analyzing, designing, and using information-handling