

visor with offices in Washington, D. C. The publication will abstract the world's literature in meteorology, climatology, hydrology, oceanography, upper atmospheric and ionospheric physics, radio astronomy, geomagnetism, planetary atmospheres, and solar physics.

Functions

Graphic representations of a number of functions which frequently occur in scientific and technical calculations are contained in a 118-page paperbound volume entitled *Graphiques des Fonctions usuelles pour Calculs numeriques rapides*. Compiled by Camille Meynart and published by Editions Eyrolles of Paris, it costs 19.20 NF. Beginning with various powers and roots and proceeding through trigonometric and exponential functions, its contents include elliptic integrals, Bessel functions, Legendre polynomials, Fresnel integrals, Hermite and Tschebysheff polynomials, and a number of others. The text gives short descriptions and symbolical formulations of the various functions.

In general, a group of related functions is displayed on each of the 41 full-page graphs. The drawings are generally clear, although there are a few instances of blurred notations.

Nonmetallic Crystals

Forty-eight papers presented last summer at the 1961 International Symposium on the Chemical Physics of Nonmetallic Crystals have been included in a special supplement to the January issue of the *Journal of Applied Physics*. The collection will also be published commercially in book form.

Sponsored by the Divisions of Chemical Physics and Solid-State Physics of the American Physical Society, together with the Division of Physical Chemistry of the American Chemical Society, the symposium was held August 28-31 at Northwestern University. The purpose of the meeting was to survey the current knowledge of binding in nonmetallic crystals and of the equilibrium properties of point defects (both chemical and structural) in such crystals. The published papers are grouped under the following main subject categories: (1) quantum theory of nonmetallic crystals, (2) characterization of point defects in crystals, (3) equilibrium properties of dilute solid solutions, and (4) kinetic methods characterizing point defects.

The 250-page clothbound edition of *Chemical Physics of Nonmetallic Crystals* is scheduled to appear next month. It is priced at \$10 and can be ordered directly from the publisher, W. A. Benjamin, Inc., 2465 Broadway, New York 25, N. Y.

Information Services

A directory describing 427 organizations that provide continuing information services in various fields of the physical and biological sciences and technology

has recently been issued by the National Science Foundation. Compiled as a result of a survey undertaken by the Battelle Memorial Institute, the volume is entitled *Specialized Science Information Services in the United States*.

For each information center, the directory gives a description of the area of specialization, the types of information services provided, and the publications issued. It also notes any restrictions on availability of information, such as security, proprietary considerations, and society membership. The 530-page directory can be purchased from the Superintendent of Documents, US Government Printing Office, Washington 25, D. C., for \$1.75.

Apparatus

Central Scientific Company of Chicago has published a 20-page booklet describing its kinetic theory apparatus which employs small plastic balls to represent gas molecules in instructional demonstrations of such principles of gas mechanics as Boyle's Law, Avogadro's Law, and Van der Waals' corrections. Copies of Booklet 312 are available without charge from Central Scientific Company, 1700 West Irving Park Road, Chicago 13, Ill.

Air Force Reports

A bibliography of abstracts of reports on basic-research projects supported by the US Air Force and carried out between 1950 and 1956 has recently been issued by the Air Force Office of Scientific Research. The bibliography was compiled by a group in the Library of Congress Technology Division, and is part of a continuing program to study the handling of scientific and technical information.

The 4000 abstracts included in the work are the result of a manual search of technical libraries, government repositories, and 45 domestic and foreign journals. Three thousand papers were found by the searchers in out-of-the-way locations and publications, and the bibliography is said to have made them readily available for the first time. The summaries are indexed by subject, author, contractor, and AFOSR control number. In addition, an accession code has been assigned to each entry to indicate the original source as well as the source from which it may currently be obtained. All of the index entries are coded for direct input into an automatic information storage and retrieval system.

Air Force Scientific Research Bibliography, Volume 1, has 1150 pages and can be ordered from the Superintendent of Documents, US Government Printing Office, Washington 25, D. C., for \$6.75. Volume 2 will appear sometime this year and will cover 1957 and 1958. Volumes covering research after 1960 will be compiled by the Armed Services Technical Information Agency.