

PUBLISHING NEWS

Mathematical functions

When Milton Abramowitz, head of the Computation Laboratory of the Applied Mathematics Division of the National Bureau of Standards, died suddenly in the summer of 1958, he was engaged in the monumental task of supervising the compilation of a definitive work on mathematical functions. That work has now been completed as Number 55 of the NBS Applied Mathematics Series, entitled, *The Handbook of Mathematical Functions—with Formulas, Graphs, and Tables*.

The seven-year project was carried out at the Bureau, with financial support from the National Science Foundation and technical guidance from a specially appointed ad hoc committee of the Mathematics Division of the National Research Council. Twenty-six authors are represented in the 1060-page volume. Dr. Abramowitz served as editor during the initial part of the project, assisted by Irene Stegun of the Bureau. After his death, Miss Stegun served as editor until the completion of the *Handbook* this year.

The new *Handbook* brings together, under one cover for the first time, text, tables, graphs, and bibliographies of a large number of functions (ranging, alphabetically, from Airy functions to Riemann zeta functions). Its 29 chapters include extensive numerical tables, large collections of mathematical properties of the tabulated functions, and simple methods for obtaining values of functions outside the tabulated range.

The *Handbook* can be purchased for \$6.50 per copy from the Superintendent of Documents, US Government Printing Office, Washington, D. C. 20402.

Meteorites

The Smithsonian Institution Astrophysical Laboratory has translated and published a softcover edition of *The Microscopic Properties of Meteorites* by Gustav Tschermak. Originally

published in three installments in 1884 and 1885, Tschermak's work, which has not been easily obtainable in recent years, remains a standard reference on the mineralogy and petrography of meteorites. The Smithsonian edition contains 100 micrographs of thin sections sliced from meteorites, plus the accompanying German text.

Issued as Volume 4, Number 6, of the *Smithsonian Contributions to Astrophysics*, it is available from the Superintendent of Documents, US Government Printing Office, Washington, D. C. 20402 at \$1.25 per copy.

Reprints

Academic Press has recently published the first paperback edition of Arnold Sommerfeld's *Lectures on Theoretical Physics*. Professor Sommerfeld, who was an important contributor to the early development of quantum mechanics, taught theoretical physics at the University of Munich for more than thirty years. The published *Lectures* are the fruit of this experience and have been widely used as textbooks. The work is divided into six volumes entitled: *Mechanics*, *Mechanics of Deformable Bodies*, *Electrodynamics*, *Optics*, *Thermodynamics and Statistical Mechanics*, and *Partial Differential Equations in Physics*. Each volume is priced at \$3.95.

Another recent publication of Academic Press is the series, "Solid State Reprints", six volumes containing selected articles from the "Solid State Physics" series, edited by Frederick Seitz and David Turnbull. Two articles entitled *The Theory of Order-Disorder Transition in Alloys* by Toshinosuke Muto and Yutaka Takagi and *Order-Disorder Phenomena in Metals* by Lester Guttman are in one volume. Each of the remaining five volumes contains one of the following articles: *The Elastic Constants of*

Crystals by H. B. Huntington, *Space Groups and Their Representations* by G. F. Koster, *Electron Energy Bands in Solids* by Joseph Callaway, *Ferroelectrics and Antiferroelectrics* by Werner Känzig, and *Electronic Spectra of Molecules and Ions in Crystals* by Donald S. McClure. Each volume costs \$3.95, except *Ferroelectrics and Antiferroelectrics* which is priced at \$4.95.

ASTM 1963 Proceedings

The American Society for Testing and Materials has recently published Volume 63 of its *Proceedings*. The 1400-page volume is the official record of the activities of the Society for the entire year 1963 and contains reports, papers, and discussions; summaries of the sessions of the ASTM 66th Annual Meeting; several symposia; a list of Special Technical Publications released during the year; and the annual report of the Society's Board of Directors. Copies may be obtained from ASTM, 1916 Race Street, Philadelphia, Pa. 19103. They are priced at \$12 each (\$8 to ASTM members).

Air Force research

Resumes of research supported by the Office of Aerospace Research have been prepared for the Air Force by the Science Information Exchange of the Smithsonian Institution. *Air Force Research Resumes 1963*, the fourth in a series, describes more than 2100 active in-house and contract research programs. The areas covered include organic, inorganic, and physical chemistry; chemical physics, physical and chemical methods of analysis and measurement, metallurgy, the solid state, theoretical physics, experimental nuclear and particle physics, cosmic radiation, electrical and magnetic properties, electrical devices and networks, electromagnetic radiation, optics, information and control systems, solid and fluid mechanics, earth and space physics, and the behavioral, biological, and medical sciences.

The book can be purchased for \$7 by ordering AD 431 950 from the Office of Technical Services, Department of Commerce, Washington, D. C. 20230.