teristics of positive functions and distributions (Ch. 3), properties and representations of $\delta$-functions, both in general and in terms of the generalized power functions $x_+^n$ (Ch. 3 and 10), Fourier transforms of such functions (Ch. 10), and finite parts of integrals and sums (Ch. 3 and 10). The main point of the book is, of course, the characterization of the solutions of the partial differential equation $P(D)u = 0$ in terms of the algebraic and analytic properties of $P(s)$. Thus, while the exposition is directed mainly to the mathematician, its manner and content will repay study by a much wider class of readers.

**Fluid Mechanics.** By Walther Kaufmann. Transl. from German by Ernest G. Chilton. 432 pp. McGraw-Hill, New York, 1963. $12.75. *Reviewed by J. Gillis, Weizmann Institute of Science.*

THE original German title of this book, "Technische Hydro- und Aeromechanik", really describes the contents better than the English translation of the title. The reader will look in vain for those gloriously difficult and physically futile problems which have exercised British undergraduates for nearly a century. Instead, the emphasis throughout is on the simpler engineering applications, always well chosen, more to clarify the fundamental theory than to defeat the student. There is nothing here to help those who want to know about the Helmholtz-Kirchhoff theory of free stream-lines, but a great deal for those who want to know how to begin studying the flow of water in a pipe.

The general scope of the book is broad and includes the fundamentals of classical hydrodynamics as well as a substantial discussion of viscous fluids, turbulent flow, and gas dynamics. It is strongly recommended as a compact introduction to the whole range of the subject; those who wish to go further on any particular topic will have to continue with more specialized literature.

Every effort seems to have been made to render the book as readable as possible. The text is beautifully printed and elegantly produced and is generously illustrated with well-drawn diagrams.

# BOOKS RECEIVED

### ASTRONOMY & ASTROPHYSICS

**Introduction to the Utilization of Solar Energy.** A. M. Zarem and Duane D. Erway, eds. 398 pp. McGraw-Hill, New York, 1963. $13.50.

**Astrophysical Quantities** (2nd ed.). By C. W. Allen. 291 pp. Athlone, London, 1963. Distr. in US by Oxford Univ. Press, New York. $10.10.

**Interstellar Communication.** A Collection of Reprints and Original Contributions. A. G. W. Cameron, ed. 320 pp. Benjamin, New York, 1963. $8.50.

### BIOPHYSICS & MEDICAL PHYSICS

**Biotechnology: Concepts and Applications.** By Lawrence J. Fogel. 826 pp. Prentice-Hall, Englewood Cliffs, N. J., 1963. $22.00.

**Environmental Radioactivity.** By Merril Eisenbud. 430 pp. McGraw-Hill, New York, 1963. $12.50.

**Microbes and Men.** By Harold J. Simon. 160 pp. Nat'l Science Teachers Assoc., Washington, D. C., 1963. Paper $.50.

### CHEMISTRY & CHEMICAL PHYSICS

**Ionic Processes in Solution.** (1953 ed.). By Ronald W. Gurney. 275 pp. Dover, New York, 1962. Paper $1.75.

**Ions in Solution** (1936 ed.). By R. W. Gurney. 206 pp. Dover, New York, 1962. Paper $1.50.

**Catalysis and Catalysts.** By Marcel Prettre. Transl. from 1946 French edition by David Antin. 88 pp. Dover, New York, 1963. Paperbound $1.00.

**The Physics of Combustion and Explosion.** By L. N. Khitrin. Transl. from 1957 Russian edition by D. Shochet. 448 pp. Israel Program for Scientific Translations, Jerusalem, 1962. $12.00.

**Advances in Chemical Physics, Volume 5.** I. Prigogine, ed. 410 pp. Interscience, New York, 1963. $16.50.

**Iron and Its Dilute Solid Solutions.** C. W. Spencer and F. E. Werner, eds. Conf. Proc. (Detroit, Oct. 1961). 339 pp. Interscience, New York, 1963. $15.00.

**The Physics and Chemistry of High Pressures.** Symp. Papers (Olympia, London, June 1962). 247 pp. (Society of Chemical Industry) Gordon & Breach, New York, 1963. $19.50.

**Physical Adsorption of Gases.** By D. M. Young and A. D. Crowell. 426 pp. Butterworths, Washington, D. C., 1962. $13.00.

**Die Photochemie der organischen Farbstoffe.** By Hans Meier. Vol. 7, Organische Chemie in Einzeldarstellungen, edited by Hellmut Bredereck and Eugen Müller. 471 pp. Springer-Verlag, Berlin, 1963. DM 79.

**Pure and Applied Chemistry** (reprint of Pure & Applied Chemistry, Vol. 5, Nos. 3–4). 18th Internat'l Congress Lectures (Montreal, Aug. 1961). 758 pp. Butterworths, Washington, D. C., 1962. $11.50.

**Analytical Chemistry, Volume 3.** Carl E. Crouthamel, ed. 93 pp. Pergamon, Oxford, 1962. Distr. in US by Macmillan, New York. Paperbound $4.50.

### COMPUTATION & COMMUNICATION

**Advanced Servomechanism Design.** By Ira Ritow. 224 pp. Doubleday, Garden City, N. Y., 1963. Paper $1.95.

**Topics in the Theory of Random Noise.** Vol. 1, General Theory of Random Processes, Nonlinear Transformations of Signals and Noise. By R. L. Stratonovich. Transl. from Russian by Richard A. Silverman. 292 pp. Gordon & Breach, New York, 1963. $12.50.