which provides a smooth sequence of chapters that might otherwise apparently (but erroneously) seem unconnected, is found in the concepts of bonding force and temperature. An especially enjoyable description is given of superfluidity and of its particular case, superconductivity.

The book is profusely illustrated with excellent diagrams and pictures. The language is always simple, and the authors manage to give a fairly detailed, while qualitative, explanation of the phenomena. As a general rule, they try to make things plausible without recourse to mathematics. (The last chapter, on thermodynamics, is the only one in which equations are fairly numerous.) To be sure, they do not succed in providing a complete account of superfluidity, but, for that, I am not sure anyone could, so far, even with the help of quantum statistics. The main quality

of this book, which makes it outstanding in this reviewer's opinion, is that it presents a readable account of topics that are otherwise described only in advanced textbooks or even in technical journals.

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The reviewer, who formerly taught theoretical physics, is now a scientific adviser in applied mathematics and physics.

NEW BOOKS

ELEMENTARY PARTICLES & FIELDS

Introduction to the Unified Field Theory of Elementary Particles. By W. Heisenberg, 177 pp., Interscience, New York, 1967. \$7.00

Axiomatic Field Theory. (Vol. 1, Brandeis University Summer Institute, 1965) M. Chretien and S. Deser, eds., 516 pp., Gordon and Breach, New York, 1966. \$32.50

Particle Symmetries. (Vol. 2, Brandeis University Summer Institute, 1965) M. Chretien and S. Deser, eds. 691 pp. Gordon and Breach, New York, 1966. \$35.00

ATOMS & MOLECULES

Microwave Spectroscopy. By W. Gordy, W. V. Smith, R. F. Trambarulo, 446 pp., (Reprint of 1953 ed.) Dover, New York, 1966. Paper \$3.00

FLUIDS & PLASMAS

Surface Tension and Adsorption. By R. Defay, I. Prigogine, A. Bellemans. Trans. by D. H. Everett. 432 pp. Wiley, New York, 1966. \$16.00

Plasma Instabilities and Anomalous Transport. Conf. proc. William B. Pardo and Harry S. Robertson, eds. 286 pp. University of Miami Press, Coral Gables, Fla., 1966. Cloth \$8.00, paper \$4.00

Elements of Magnetogasdynamics. By L. E. Kalikhman. 366 pp. Trans. by Scripta Technica. W. B. Saunders, Philadelphia, 1967. \$8.75

Radiation Processes in Plasmas. By G. Bekefi. 377 pp. Wiley, New York, 1966. \$15.75

SOLIDS

Reaktionen in und an festen Stoffen. By K. Hauffe. 968 pp. Springer-Verlag, Berlin and New York, 1966. DM 148

Crystal Structures. (2nd ed.) Vol. 5, The Structures of Aliphatic Compounds. By W. G. Wyckoff. 785 pp. Wiley, New York, 1966. \$25.00

X-Rays and Their Applications. By J. G. Brown. 258 pp. Plenum Press, New York, 1966. \$12.00

X-Ray Determination of Electron Distributions. By R. J. Weiss, 196 pp. (North-Holland, Amsterdam) Wiley, New York, 1966. \$10.50

Electrical Conduction Mechanisms in Thin Insulating Films. By D. R. Lamb. 114 pp. Methuen, London, 1967. \$4.50

CLASSICAL PHYSICS

Thermodynamics of Steady States. By Ralph J. Tykodi. 217 pp. Macmillan, New York, 1967. \$10.95

Acoustics. By Alexander Wood. 594 pp. (Reprint of 1960 ed.) Dover, New York, 1966. \$3.50

Electrodynamics and Classical Theory of Fields and Particles. By A. O. Barut, 235 pp. Macmillan, New York, 1965.

Critical Phenomena. Conf. proc. (Washington, D. C., April 1965) M. S. Green and J. V. Sengers, eds. 242 pp. National Bureau of Standards, Washington, D.C., 1966. \$2.50

Nonlinear System Analysis. By Austin Blaquière. 392 pp. Academic Press, New York, 1966. \$14.50

MATHEMATICS & MATHEMATICAL PHYSICS

The Variational Theory of Geodesics. By M. M. Postnikov. 200 pp. W. B. Saunders, Philadelphia, 1967. \$6.00

Formulas and Theorems for the Special Functions of Mathematical Physics. (3rd ed.) By W. Magnus, F. Oberhettinger, R. P. Soni. 508 pp. Springer-Verlag, New York, 1966. \$16.50

Mixed Boundary Value Problems in Potential Theory. By I. N. Sneddon. 282 pp. (North-Holland, Amsterdam) Wiley, New York, 1967. \$12.75

Boundary Value Problems of Mathematical Physics. Vol. 1. By Ivar Stakgold,

340 pp., Macmillan, New York, 1967. \$12.95

INSTRUMENTATION & TECHNIQUES

Elementary Reactor Physics. By P. J. Grant. 196 pp. Pergamon Press, New York, 1966. Paper \$5.00

Elements of Pulse Circuits. By F. J. M. Farley. 159 pp. Methuen, London, 1967. Cloth \$3.75, paper \$1.95

COMPILATIONS

Dictionary of Inventions and Discoveries. E. F. Carter, ed., 193 pp. Philosophical Library, New York, 1967. \$6.00

HISTORY & PHILOSOPHY

An Anthology of Philips Research. H. B. G. Casimir and S. Gradstein, eds. 469 pp. Centrex Publishing Co., Eindhoven, Netherlands, 1966. \$5.00

Sir Arthur Eddington. By C. W. Kilmister, 279 pp. Pergamon Press, Oxford, 1966. \$5.95

Scientists in Organizations. By Donald C. Pelz and Frank M. Andrews. 318 pp. Wiley, New York, 1966. \$10.00

Biographical Memoirs of Fellows of the Royal Society. Vol. 12, 1966. 264 pp. The Royal Society, London, 1966. \$15.00 The Relevance of Physics. By Stanley L. Jaki. 604 pp. University of Chicago Press, Chicago, 1966. \$12.50

Nobel Lectures in Physics. Vol. 1: 1901–1921. 498 pp. American Elsevier, New York, 1967, \$85.00 for 3 volume set This New Ocean. A History of Project Mercury. By L. S. Swenson, Jr., J. M. Grimwood, C. C. Alexander, 681 pp., NASA, Washington, D.C. \$5.50

BIOPHYSICS

Aspects of Medical Physics. Conf. proc. (Harrogate, England Sept. 1965.) J. Rotblat, ed. Taylor and Francis, London, 1966. \$6.50