

tors of this series are producing (and intend to continue to produce) two such review volumes a year.

There are five articles in the present volume, two of them being of considerably greater length than the others. In the first of these, Werner Känzig treats the subject of "Ferroelectrics and Antiferroelectrics". This is a field in which the accumulation of experimental data has kept well ahead of virtually any theoretical attempts at the construction of an over-all view. Dr. Känzig has assembled this experimental information in systematic fashion, and introduces theoretical analyses wherever possible. At the same time, he has not hesitated to point out—at nearly every turn of the page—the avenues along which fruitful research is possible. The result should be a continued growth of the field.

The article "Theory of Mobility of Electrons in Solids" by Frank J. Blatt, the second of the long papers, is a truly excellent account of electronic motions in both metals and semiconductors. The mathematical details of many standard calculations are given, and the results compared with experiment. The article is well worth a careful study by any physicist interested in the solid state.

In "The Orthogonalized Plane Wave Method", Truman O. Woodruff outlines the basic procedures involved in this method, working out a series of problems in numerical detail for the silicon crystal.

"Bibliography of Atomic Wave Functions", by Robert S. Knox is just what it claims to be, the completest possible bibliography of atomic and ionic wave functions. In each case, the character of the calculations (relativistic, with exchange, etc.) is specified.

The final article in the volume, "Techniques of Zone Melting and Crystal Growing", by W. G. Pfann is an elaborate account of what appears to the reviewer to be a much narrower field than those touched on earlier in the volume. Nevertheless, the problem of controlled crystal growing is of such fundamental importance to experimental solid-state work that a study of the techniques involved deserves a place in a review volume of this sort.

While these five articles do not themselves cover the entire range of solid-state physics, so that the review volume (like all such today) cannot claim completeness, they do form a part of the larger whole that is the review series, so that, over a period of several years, all pertinent topics will be treated.

Correction:

In B. T. Feld's review of *Elementary Theory of Angular Momentum* by M. E. Rose (*Physics Today*, Nov. 1957, p. 30) the next to last sentence should have read: "Indeed, a thorough treatment of what, adopting the standards of this text, might be called 'Elementary Elementary Theory of Angular Momentum' would still be a useful addition to the literature." The second "Elementary" in the above was inadvertently omitted in printing the review.

Books Received

ATOMIC ENERGY IN AGRICULTURE. By William E. Dick. 150 pp. Philosophical Library, Inc., New York, 1957. \$6.00.

ROCKET. By Sir Philip Joubert de la Ferté. 190 pp. Philosophical Library, Inc., New York, 1957. \$6.00.

THE FUNDAMENTAL CONSTANTS OF PHYSICS. Vol. 1 of Interscience Monographs in Physics & Astronomy. By E. Richard Cohen, Kenneth M. Crowe, Jesse W. M. DuMond. 287 pp. Interscience Publishers, Inc., New York, 1957. \$7.50.

THE ELEMENTS OF PHYSICS (6th Revised Edition). By Alpheus W. Smith and John N. Cooper. 671 pp. McGraw-Hill Book Co., Inc., New York, 1957. \$7.50.

TABLES DE CONSTANTES ET DONNÉES NUMÉRIQUES (IUPAC). *Diamagnétisme et Paramagnétisme* by G. Foëx and *Relaxation Paramagnétique* by C. J. Gorter and L. J. Smits. 317 pp. Masson et Cie, Paris, France, 1957. Clothbound 9.700 fr.; paperbound 8.800 fr.

THÉORIE SYNTHÉTIQUE DE LA RELATIVITÉ RESTREINTE ET DES QUANTA. By O. Costa de Beauregard. 200 pp. Gauthier-Villars, Paris, France, 1957. Paperbound \$9.30.

X-RAY CRYSTAL STRUCTURE. By Dan McLachlan, Jr. 416 pp. McGraw-Hill Book Co., Inc., New York, 1957. \$15.00.

STATISTISCHE MECHANIK. Vol. 5 of Einführung in die Theoretische Physik. By Werner Döring. 114 pp. Walter de Gruyter & Co., Berlin, Germany, 1957. Paperbound DM 2.40.

ABHANDLUNGEN AUS DEM FRITZ-HABER-INSTITUT. Vol. 33, 1956. 384 pp. Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin-Dahlem, Germany, 1957. Paperbound.

INDUSTRIAL ELECTRONICS HANDBOOK. By R. Kretzmann. 298 pp. (Philips Technical Library, Holland) Philosophical Library, Inc., New York, 1957. \$12.00.

INDUSTRIAL ELECTRONICS CIRCUITS. By R. Kretzmann. 194 pp. (Philips Technical Library, Holland) Philosophical Library, Inc., New York, 1957. \$10.00.

WATER WAVES: The Mathematical Theory with Applications. By J. J. Stoker. 567 pp. Interscience Publishers, Inc., New York, 1957. \$12.00.

RECEIVING AERIAL SYSTEMS: For Broadcast and Television. By I. A. Davidson. 152 pp. Philosophical Library, Inc., New York, 1957. \$4.75.

TECHNICAL REPORT WRITING. By James W. Souther. 70 pp. John Wiley & Sons, Inc., New York, 1957. Paperbound \$2.95.

A HISTORY OF TECHNOLOGY. Vol. 3, From the Renaissance to the Industrial Revolution. Edited by C. Singer, E. J. Holmyard, A. R. Hall, T. I. Williams. 766 pp. Oxford U. Press, New York, 1957. \$26.90.

HANDBOOK OF NOISE CONTROL. Edited by Cyril M. Harris. 40 sections. McGraw-Hill Book Co., Inc., New York, 1957. \$16.50.

THE TAO OF SCIENCE: An Essay on Western Knowledge and Eastern Wisdom. By R. G. H. Siu. 180 pp. The Technology Press of Mass. Inst. of Technology and John Wiley & Sons, Inc., New York, 1958. \$4.25.

ELECTROSTATIQUE, COURANTS CONTINUS, MAGNÉTISME. By P. Fleury and J.-P. Mathieu. 552 pp. Editions Eyrolles, Paris, France, 1957. 6.225 fr.

HEAT TRANSFER, Vol. 2. By Max Jakob and Stothe Peter Kezios. 652 pp. John Wiley & Sons, Inc., New York, 1957. \$15.00.

NUCLEAR RADIATION IN FOOD AND AGRICULTURE (Geneva Series on the Peaceful Uses of Atomic Energy). Edited by W. Ralph Singleton. 379 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1958. \$8.50.

THERMODYNAMICS OF ONE-COMPONENT SYSTEMS. By William N. Lacey and Bruce H. Sage. 376 pp. Academic Press Inc., New York, 1957. \$8.00.

X-RAY MICROSCOPY AND MICRORADIOGRAPHY: Proceedings of Symp. (Cavendish Lab., Cambridge, England, Aug. 1956). Edited by V. E. Cosslett, Arne Engström, H. H. Pattee, Jr. 645 pp. Academic Press Inc., New York, 1957. \$16.50.

NUCLEAR POWER AND ITALY'S ENERGY POSITION. By I. M. D. Little and P. N. Rosenstein-Rodan. 79 pp. Nat'l Planning Assoc., Washington, D. C., 1957. Paperbound \$1.25.

ANNUAL REVIEW OF NUCLEAR SCIENCE, Vol 7. Edited by James G. Beckerley, Robert Hofstadter, Leonard I. Schiff. 496 pp. Annual Reviews, Inc., Palo Alto, Calif., 1957. \$7.00 in US; \$7.50 elsewhere.

UNESCO: Purpose, Progress, Prospects. By Walter H. C. Laves and Charles A. Thomson. 469 pp. Indiana U. Press, Bloomington, Inc., 1957. \$7.50.

BOUNDARY LAYER EFFECTS IN AERODYNAMICS. Symp. Proceedings (Nat'l Physical Lab, Engld, Mar. 1955). 9 papers with discussions. Philosophical Library, Inc., New York, 1957. \$12.00.

CAVITATION IN HYDRODYNAMICS: 1st Internat'l Symp. Proceedings (Nat'l Physical Lab, England, Sept. 1955). 22 papers with discussions. Philosophical Library, Inc., New York, 1957. \$15.00.

PROGRESS IN NUCLEAR PHYSICS, Vol. 6. Edited by O. R. Frisch. 297 pp. Pergamon Press, London and New York, 1957. \$14.00.

SOLID STATE PHYSICS: Advances in Research and Applications, Vol. 5. Edited by Frederick Seitz and David Turnbull. 455 pp. Academic Press Inc., New York, 1957. \$11.00.

VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA (3rd Revised Edition). 1839 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1958. \$30.00.

FLUID MECHANICS: Proceedings of 5th Midwestern Conf. (U. of Michigan, Apr. 1957). Edited by A. M. Kuethe. 388 pp. U. of Michigan Press, Ann Arbor, Mich., 1957. \$8.00.

SOLID MECHANICS: Proceedings of 3rd Midwestern Conf. (U. of Michigan, Apr. 1957). Edited by A. M. Kuethe. 250 pp. U. of Michigan Press, Ann Arbor, Mich., 1957. \$5.50.

L'AUTOMATIQUE DES INFORMATIONS. Vol. 9 of Evolution des Sciences. By F.-H. Raymond. 187 pp. Masson et Cie, Paris, France, 1957. Paperbound 1.600 fr.

SERVOMÉCANISMES: Théorie et Technologie. By M. Bonamy. 284 pp. Masson et Cie, Paris, France, 1957. Clothbound 4.200 fr.; paperbound 3.500 fr.

PROCEEDINGS OF THE 6TH JAPAN NATIONAL CONGRESS FOR APPLIED MECHANICS (U. of Kyoto, Oct. 1956). Edited by Japan Nat'l Comm. for Theoretical & Applied Mechanics. 566 pp. Science Council of Japan, Tokyo, Japan, 1957. Paperbound.

DESIGN OF FREE-AIR IONIZATION CHAMBERS. By H. O. Wyckoff and F. H. Attix. NBS Handbook 64. 16 pp. US Govt. Printing Office, Washington, D. C., 1957. Paperbound \$20.

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