

BOOKS RECEIVED

ASTRONOMY & ASTROPHYSICS

Les Hypothèses cosmogoniques. Théories des Cycles cosmiques et des Planètes jumelles. By A. Dauvillier. 258 pp. Masson et Cie, Paris, 1963. 29 F.

Advances In Astronomy and Astrophysics, Volume 2. Zdeněk Kopal, ed. 314 pp. Academic Press, New York, 1963. \$11.50.

Radio Exploration of the Planetary System. By Alex. G. Smith and T. D. Carr. 148 pp. Van Nostrand, Princeton, N.J., 1964. Paper \$1.50.

ATOMIC & MOLECULAR PHYSICS

The Discovery of the Electron. The Development of the Atomic Concept of Electricity. By David L. Anderson. 138 pp. Van Nostrand, Princeton, N.J., 1964. Paper \$1.50.

BIOPHYSICS & MEDICAL PHYSICS

Bio-Telemetry. The Use of Telemetry in Animal Behavior and Physiology in Relation to Ecological Problems. (Interdisciplinary Conference, New York, 1962). Lloyd E. Slater, ed. 372 pp. (Pergamon, Oxford), Macmillan, New York, 1963. \$18.50.

Progress in Brain Research, Volume 2. Nerve, Brain and Memory Models. N. Wiener and J. P. Schädé, eds. 280 pp. Elsevier, New York, 1963. \$15.00.

Biomedical Sciences Instrumentation, Volume 1. Symp. Proc. (Los Angeles, June 1963). Fred Alt, ed. 475 pp. Plenum Press, New York, 1963. \$17.50.

Modern Developments In Audiology. James Jerger, ed. 446 pp. Academic, New York, 1963. \$12.00.

Physics Of Plant Environment. W. R. Van Wijk, ed. 382 pp. (North-Holland, Amsterdam) Interscience, New York, 1963. \$12.50.

The Brain as a Computer. By F. H. George. 413 pp. (Pergamon, Oxford) Addison-Wesley, Reading, Mass., 1962. \$9.00.

CHEMISTRY & CHEMICAL PHYSICS

The Application of Mathematical Statistics to Chemical Analysis. By V. V. Nalimov. Transl. from Russian by Prasennjit Basu. Transl. edited by M. Williams. 294 pp. (Pergamon, Oxford), Addison-Wesley, Reading, Mass., 1963. \$12.00.

Electrochemistry of Germanium and Silicon. By E. A. Efimov and I. G. Erusalimchik. Transl. from Russian by Adam Peiperl. 199 pp. The Sigma Press, Washington, D.C., 1963. \$11.00.

Contributions to the Theory of Chemical Kinetics. A Study Of The Connection Between Thermodynamics And Chemical Rate Processes. By Thor A. Bak. 101 pp. Benjamin, New York, 1963. Paper \$5.50.

Noble-Gas Compounds. Herbert H. Hyman, ed. 404 pp. Univ. of Chicago Press, Chicago, 1963. \$12.50.

Technique Of Inorganic Chemistry, Volume 1. Hans B. Jonassen and Arnold Weissberger, eds. 268 pp. Interscience, New York, 1963. \$9.50.

Catalysis and Inhibition of Chemical Reactions. By P. G. Ashmore. 375 pp. Butterworths, Washington, D.C., 1963. \$14.95.

The Chemistry and Physics of Rubber-Like Substances. Studies of The Natural Rubber Producers' Research Association. L. Bateman, ed. 784 pp. Wiley, New York, 1963. \$25.00.

COMPUTATION & COMMUNICATION

Theory of Networks and Lines. By James L. Potter and Sylvan J. Fich. 436 pp. Prentice-Hall, Englewood Cliffs, N.J., 1963. \$16.00.

The Compatible Time-Sharing System. A Programmer's Guide. By F. J. Corbató, M. M. Daggett, R. C. Daley, R. J. Creasy, J. D. Hellwig, R. H. Orenstein, L. K. Korn. 96 pp. M. I. T. Press, Cambridge, Mass., 1963. Paper \$3.00.

Advanced Computer Programming. A Case Study of a Classroom Assembly Program. By F. J. Corbató, J. W. Poduska, J. H. Saltzer. 170 pp. M. I. T. Press, Cambridge, Mass., 1963. \$5.00.

Digital Computer Design. Logic, Circuitry, and Synthesis. By Edward L. Braun. 606 pp. Academic Press, New York, 1963. \$16.50.

Information Retrieval Management. Lowell H. Hattery and Edward M. McCormick, eds. 151 pp. American Data Processing, Inc., Detroit, Mich., 1963. \$15.00.

EDUCATION

Paperbacks in the Schools. Alexander Butman, Donald Reis, and David Sohn, eds. 152 pp. Bantam Books, New York, 1963. Paper \$9.95.

The Science-Engineering Secretary. A Guide to Procedure, Usage, and Style. By Allison R. Stafford and Billie Jean Culpepper. 338 pp. Prentice-Hall, Englewood Cliffs, N.J., 1963. \$8.65.

ELECTRICITY & MAGNETISM

Paramagnetic Resonance. Conf. Proc., (First International Conference, Jerusalem, July 1962). W. Low, ed. Vol. 1—386 pp, \$16.00. Vol. 2—525 pp, \$19.00. Academic, New York, 1963. \$30.00 per Set.

Analysis and Computation of Electric and Magnetic Field Problems. By K. J. Binns and P. J. Lawrenson. 333 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$12.50.

Magnetism, Volume 3. A Treatise on Modern Theory and Materials. George T. Rado and Harry Suhl, eds. 623 pp. Academic Press, New York, 1963. \$18.00.

Electromagnetic Scattering, Volume 5. Conf. Proc. (Potsdam, N.Y., 1962). Milton Kerker, ed. 592 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$19.75.

EXPERIMENTAL TECHNIQUES

Modern Electroplating (2nd ed.). Frederick A. Lowenheim, ed. 769 pp. Wiley, New York, 1963. \$16.00.

La Chromatographie. By L. Savidan. 115 pp. Dunod, Paris, 1963. 9,60 F.

Recent Progress in Microcalorimetry. By E. Calvet and H. Prat. Edited and Translated from French by H. A. Skinner. 177 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$8.50.

Explosive Working of Metals. By John S. Rinehart and John Pearson. 351 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$17.50.

An Introduction to Fluid Mechanics and Heat Transfer. With Applications in Chemical & Mechanical Process Engineering (2nd ed.). By J. M. Kay. 327 pp. Cambridge Univ. Press, New York, 1963. \$6.50.

High Temperature Heat Carriers. By A. V. Chechetkin. Transl. from Russian by Frank L. Sinclair. Transl. edited by H. G. Rhoden. 307 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$10.00.

GEOPHYSICS & EARTH SCIENCES

An Introduction to the Theory of Seismology (3rd ed.). By K. E. Bullen. 381 pp. Cambridge University Press, New York, 1963. \$9.50.

Thermodynamics of Clouds. By Louis Dufour and Raymond Defay. Transl. from French by M. Smyth and A. Beer. 255 pp. Academic, New York, 1963. \$10.00.

HANDBOOKS, TABLES, ETC.

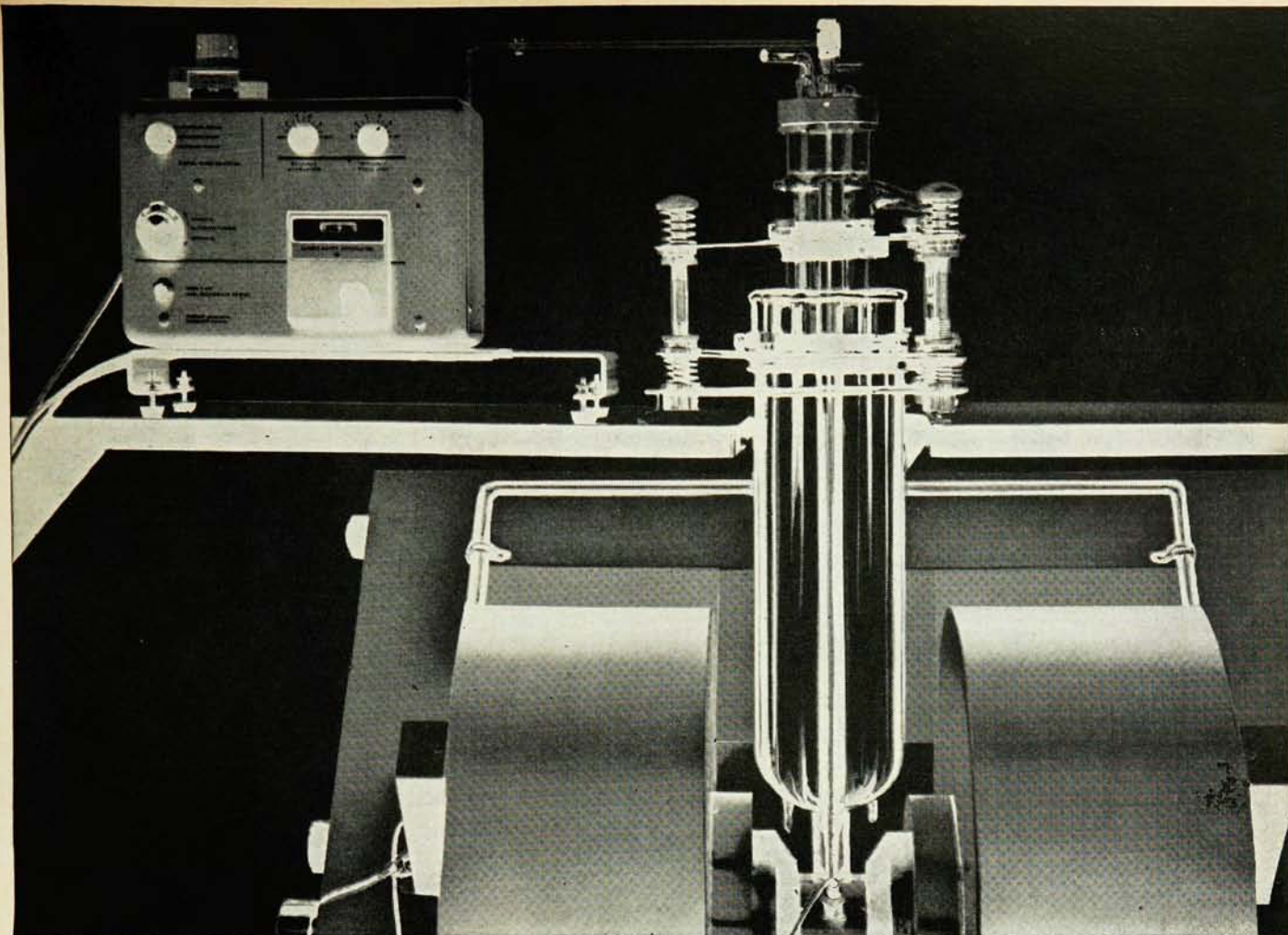
Tables Of Series, Products, and Integrals (2nd ed.). By I. M. Ryskik and I. S. Gradstein. 438 pp. VeB Deutscher Verlag der Wissenschaften, Berlin, 1963. Distr. in US by Pergamon, New York. \$15.00.

Lexicon of International and National Units. By W. E. Clason. 75 pp. Elsevier, New York, 1964. \$4.95.

Dictionary Of Pure And Applied Physics. Volume 1: German-English. Compiled by Louis de Vries and W. E. Clason. 367 pp. Elsevier. New York, 1963. \$9.95.

HISTORY & PHILOSOPHY OF SCIENCE

Josiah W. Gibbs. American Theoretical Physicist. By Benedict A. Leerburger, Jr. 118 pp. Franklin Watts, New York, 1963. \$2.95.



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The 1963 Les Houches Lectures edited by C. DEWITT and B. S. DEWITT. The Authors: J. L. SYNGE, F. GURSEY, R. H. DICKE, J. A. WHEELER, R. K. SACHS, R. PENROSE, B. S. DEWITT, A. LICHTNEROWICZ, J. WEBER, C. W. MISNER. 1000 pages paper: \$9.50; cloth: \$19.50

■ The Inverse Problem of Scattering Theory

by Z. S. AGRANOVICH and V. A. MARCHENKO. Translated by B. D. Seckler. A comprehensive and lucid solution of a variant of the inverse problem arising in the theory of the deuteron. The functional analytic and algebraic methods used are also of great mathematical interest. 302 pages \$14.50

■ Direct Interactions and Nuclear Reaction Mechanisms

edited by E. CLEMENTEL and C. VILLI. Complete proceedings of the conference held at the Institute of Physics, University of Padua, September 1962, under I.U.P.A.P. auspices. 177 papers and discussion. 1,230 pages \$39.50

■ Theoretical Physics

by A. KOMPANYETS. Translated from the Second Russian Edition. A rigorous and systematic treatment of the physics of elementary processes for the engineer-physicist. 592 pages \$9.50

■ Strength of Materials

by P. STEPIN. Translated from the Russian. In this engineering text the fundamentals of classic strength of materials are presented systematically and comprehensively. Many worked problems are included. 375 pages \$9.75

■ Topics in the Theory of Random Noise

by R. L. STRATONOVICH. Translated from the Russian and edited by Richard A. Silverman. Volume 1: General Theory of Random Processes — Nonlinear Transformations of Signals and Noise. (Volume 2: Fall 1964) Each vol.: \$12.50; Professional edition: \$8.50/vol.; The set: \$15.00

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John von Neumann Collected Works, Volume 6. Theory of Games, Astrophysics, Hydrodynamics and Meteorology. A. H. Taub, ed. 538 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$14.00.

Error and Eccentricity in Human Belief (1935 ed.). By Joseph Jastrow. 394 pp. Dover Publications, New York, 1962. Paper \$1.85.

Dialogues Concerning Two New Sciences (1914 ed.). By Galileo Galilei. Transl. from Italian and Latin by Henry Crew and Alfonso de Salvio. 288 pp. McGraw-Hill, New York, 1963. Paper \$2.95.

The Electron. Its Isolation and Measurement and the Determination of Some of Its Properties (1917 ed.). By Robert Andrews Millikan. Edited with an Introduction by Jesse W. M. DuMond. 268 pp. Univ. of Chicago Press, Chicago, 1963. Cloth \$6.00, Paper \$2.45.

Focus and Diversions. By Lancelot Law Whyte. 235 pp. George Braziller, New York, 1964. \$5.00.

MATHEMATICS

Introduction to the Constructive Theory of Functions. By John Todd. 127 pp. Academic Press, New York, 1963. \$6.00.

Espaces vectoriels topologiques et Distributions. By Julien Garsoux. 324 pp. Dunod, Paris, 1963. 48 F.

An Introduction to Numerical Mathematics. By Eduard L. Stiefel. Transl. from German by Werner C. Rheinboldt and Cornelia J. Rheinboldt. 286 pp. Academic, New York, 1963. \$6.75.

Teoria Calitativa A Ecuatiilor Diferentiale. By A. Halanay. 482 pp. Editura Academiei Republicii Populare Romine, Bucharest, 1963. Lei 21.50.

The Theory of Analytic Functions. By A. I. Markushevich. Transl. from Russian. 374 pp. Hindustan Publishing, Delhi, 1963. \$10.00.

MECHANICS

Elements of Mechanical Analysis. By Charles R. Mischke. 386 pp. Addison-Wesley, Reading, Mass., 1963. \$9.75.

Textbook of Dynamics. By F. Chorlton. 263 pp. Van Nostrand, Princeton, N.J., 1963. \$8.50.

NUCLEAR PHYSICS

The Two-Nucleon Interaction. By Michael J. Moravcsik. 154 pp. Clarendon Press, Oxford, 1963. Distr. by Oxford University Press, New York. Paper \$2.90.

Fundamental Particles. By K. Nishijima. 408 pp. W. A. Benjamin, New York, 1963. \$10.75.

Introduction to the Vigier Theory of Elementary Particles. By Louis de Broglie. 138 pp. Elsevier, New York, 1963. \$11.00.

The Many-Body Problem. Symp. Proc. (Stevens Inst. of Tech., January 1957). Jerome K. Percus, ed. 542 pp. Interscience, New York, 1963. \$30.00.

Progress in Fast Neutron Physics. Conf. Proc. (Rice U., Feb. 1963). G. C. Phillips, J. B. Marion, and J. R. Risser, eds. 397 pp. The University of Chicago Press, Chicago, 1963. \$8.50.

Complex Angular Momenta and Particle Physics. By E. J. Squires. 161 pp. Benjamin, New York, 1963. Cloth \$9.00, Paper \$5.95.

The Optical Model of Elastic Scattering. By P. E. Hodgson. 211 pp. Oxford Univ. Press, New York, 1963. \$4.80.

NUCLEAR POWER & TECHNOLOGY

Radioisotopes in Hydrology. Symp. Proc. (Tokyo, March 1963). International Atomic Energy Agency, Vienna, 1963. 459 pp. Distr. by Nat'l Agency for International Publications, Inc., New York, 1963. \$9.00.

OPTICS & SPECTROSCOPY

Experimental Spectroscopy (3rd ed.). By Ralph A. Sawyer. 358 pp. Dover, New York, 1963. Paper \$2.00.

Introduction to Statistical Optics. By Edward L. O'Neill. 179 pp. Addison-Wesley, Reading, Mass., 1963. \$6.95.

PLASMA PHYSICS

Propagation and Instabilities in Plasmas. Symp. Proc. (Palo Alto, Dec. 1962). Walter I. Fetterman, ed. 144 pp. Stanford Univ. Press, Stanford, Calif., 1963. \$4.50.

SOLID STATE PHYSICS

Materials Science Research, Volume I. Conf. Proc. (Raleigh, N.C., March 1962). H. H. Stadelmaier and W. W. Austin, eds. 335 pp. Plenum Press, New York, 1963. \$13.50.

Advances in Glass Technology, Part 2. Congress Proc. (Washington, D. C., July 1962). Frederick R. Matson and Guy E. Rindone, eds. 410 pp. Plenum Press, New York, 1963. \$15.00.

Crystal Structures, Volume I (2nd ed.). By Ralph W. G. Wyckoff. 467 pp. Interscience, New York, 1963. \$17.50.

Elements of Solid State Theory (1959 ed.). By Gregory H. Wannier. 270 pp. Cambridge Univ. Press, New York, 1963. Paper \$2.95.

Polarons and Excitons. Summer School Proc. (St. Andrews, 1962). C. G. Kuper and G. D. Whitfield, eds. 381 pp. Plenum Press, New York, 1963. \$15.50.

Fatigue Of Metals. By P. G. Forrest. 425 pp. (Pergamon, Oxford) Addison-Wesley, Reading, Mass., 1963. \$10.00.

Some Problems of Large Plastic Deformation of Metals at High Pressures. B. I. Beresnev, L. F. Vereshchagin, Yu. N. Ryabinin, and L. D. Livshits, eds. Transl. from Russian by V. M. Newton. Transl. edited by W. J. McG. Tegart. 79 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$5.00.

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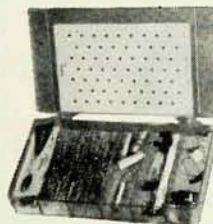
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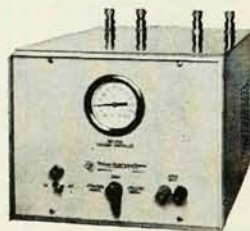
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Microwave Solid-state Masers. By A. E. Siegman. 583 pp. McGraw-Hill, New York, 1964. \$18.50.

TEXTBOOKS

Selected Problems in Physics with Answers. By M. P. Shaskol'skaya and I. A. El'tsin. Transl. from Russian by W. J. F. Reynolds. English Transl. Edited by F. Castle. 246 pp. (Pergamon, Oxford) Macmillan, New York, 1963. Paper \$3.75.

Kleines Lehrbuch der Physik (5th ed.). Ohne Anwendung höherer Mathematik. By Wilhelm H. Westphal. 265 pp. Springer-Verlag, Berlin, 1963. DM 18.

Waves and Oscillations. By R. A. Waldron. 135 pp. Van Nostrand, Princeton, N.J., 1964. Paper \$1.75.

The Feynman Lectures On Physics, Volume I. Richard P. Feynman, Robert B. Leighton, and Matthew Sands, eds. 52 Chapters. Addison-Wesley, Reading, Mass., 1963. \$8.75.

Fundamental Laws of Physics. By F. Woodbridge Constant. 403 pp. Addison-Wesley, Reading, Mass., 1963. \$8.75.

THEORETICAL PHYSICS

Modèles statistiques pour l'Etude de Phénomènes de Fluctuations. By A. Blanc-Lapierre. 148 pp. Masson, Paris, 1963. Paper 44 F.

Symmetry. An Introduction to Group Theory and Its Applications. By R. McWeeny. 248 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$7.50.

Variational Principles in the Theory of Collisions. By Yu N. Demkov. Transl. from Russian by N. Kemmer. 157 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$6.50.

Representations of the Rotation and Lorentz Groups and Their Applications. By I. M. Gel'fand, R. A. Minlos, and Z. Ya. Shapiro. Transl. from Russian by G. Cummins and T. Boddington. English Translation Editor, H. K. Farahat. 366 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$10.00.

THERMAL PHENOMENA

The Perfect Gas. By J. S. Rowlinson. 136 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$5.50.

Equilibrium Statistical Mechanics. By Frank C. Andrews. 206 pp. Wiley, New York, 1963. \$5.00.

Kinetics, Equilibria, and Performance of High-Temperature Systems. Conf. Proc. (Los Angeles, Calif., April 1962). Gilbert S. Bahn, ed. 394 pp. Gordon and Breach, New York, 1963. \$19.50.

Statistical Thermodynamics. By John F. Lee, Francis W. Sears and Donald L. Turcotte. 374 pp. Addison-Wesley, Reading, Mass., 1963. \$10.75.