

ments of scalar, vector, and tensor operators are computed in Chapter IV and applied in Chapter V to derive several useful relations in the theory of magnetic moments, electric quadrupole moments, and dipole transition probabilities.

NSF Translations of Russian Reports

The National Science Foundation has made available further translations of Russian reports in physics from *Doklady Akademii Nauk SSSR*. The following list is a continuation of the one appearing on page 23 of the September issue of *Physics Today*. Copies of the reports can be obtained through the Office of Technical Services, Department of Commerce, Washington 25, D. C., for ten cents each.

Demkov, Yu. N., "Variational Principles and the Virial Theorem in Problems of Continuous Spectra in Quantum Mechanics", **89**, 249 (1953) (NSF-tr-21, July 1953)

Khusid, S. D., "A Study of Reduction by Roller Mills", **88**, 449 (1953) (NSF-tr-22, July 1953)

Anikina, L. I., "The Effect of the Stimulating Action of the Exciting Light on Phosphorescence", **88**, 41 (1953) (NSF-tr-23, June 1953)

Salli, I. V., "On the Theory of Decomposition of Super-saturated Solutions", **89**, 61 (1953) (NSF-tr-24, June 1953)

Dekhtyar, I. Ya., "The Dependence of the Diffusion Coefficient on Atomic Interaction in Metals and Alloys", **89**, 49 (1953) (NSF-tr-25, June 1953)

Ingarden, R. S., "Equations of Motion and Field Equations in the Five-Dimensional Unitary Theory of Relativity", **88**, 773 (1953) (NSF-tr-26, July 1953)

Tsvetkov, V. N. and Klenin, S. I., "The Diffusion of Polystyrene Fractions in Dichlorethane", **88**, 49 (1953) (NSF-tr-27, July 1953)

Karasev, V. V., Krotova, N. A., and Deryagin, B. V., "A Study of Electron Emission During the Stripping of a Layer of a High Polymer from Glass in a Vacuum", **88**, 777 (1953) (NSF-tr-28, July 1953)

Korolev, "On the Hyperfine Structure of the Green Line of Mercury", **88**, 965 (1953) (NSF-tr-29, July 1953)

Florinskaya, V. A. and Pechenikina, R. S., "Transmission Spectra of Thin Silicate Glass Films in the Infrared", **89**, 37 (1953) (NSF-tr-30, July 1953)

Sizov, V. P., "An Acoustic Study of the ΔE -Effect and the Damping of the Elastic Waves in Polycrystalline Nickel", **89**, 427 (1953) (NSF-tr-31, July 1953)

Skornyakov, G. V., "Emission of Gamma-Rays During Disintegration of μ -Mesons", **89**, 431 (1953) (NSF-tr-32, July 1953)

Vasilyev, L. I., "Some Data on the Relation of Relaxation and Rate Characteristics in Plastic Deformation", **89**, 451 (1953) (NSF-tr-33, July 1953)

Sobelman, I. I., "Line-Width of Rayleigh Scattering in Gases", **88**, 653 (1953) (NSF-tr-34, July 1953)

Andrievsky, A. I. and Ryachyov, A. L., "On the Infrared Sensitivity of Copper-Oxide Photocells Prepared under Reduced Pressure in the Field of a High-Frequency Induction Heater", **89**, 245 (1953) (NSF-tr-35, July 1953)

Galperin, F., Larin, S., and Shishkov, A., "A Study of the Effect of Pressure on Magnetic Saturation of Iron at the Temperature of Liquid Nitrogen", **89**, 419 (1953) (NSF-tr-36, July 1953)

Books Received

ALGAL CULTURE FROM LABORATORY TO PILOT PLANT. Edited by John S. Burlew. 357 pp. Carnegie Institution of Washington Publication 600, Washington, D. C., 1953. Paperbound. \$1.25.

SCHWEFEL. System-Nummer 9, Gmelins Handbuch der Anorganischen Chemie (8th Edition). Section A2; 450 pp.; paperbound, \$35.30. Section B1; 372 pp.; paperbound, \$29.40. Edited by Verlag Chemie, GmbH, Weinheim/Bergstrasse, Germany, 1952. Stechert-Hafner, Inc., New York.

FATIGUE OF METALS. By R. Cazaud. Translated by A. J. Fenner, 334 pp. Philosophical Library, New York, 1953. \$12.50.

INTRODUCTION TO ELECTRON MICROSCOPY. By Cecil E. Hall. 451 pp. McGraw-Hill Book Co., Inc., New York, 1953. \$9.00.

MATHEMATICAL ASPECTS OF THE QUANTUM THEORY OF FIELDS. By K. O. Friedrichs. 272 pp. Interscience Publishers, Inc., New York, 1953. Paperbound. \$5.00.

SOUND. A PHYSICAL TEXTBOOK (Fifth Revised Edition). By E. G. Richardson, 352 pp. Edward Arnold & Co., London, England, 1953. St. Martin's Press, New York. \$5.00.

FIELDS AND WAVES IN MODERN RADIO (Second Edition). By Simon Ramo and John R. Whinnery. 576 pp. John Wiley and Sons, Inc., New York, 1953. Chapman & Hall, Ltd., London, England. \$8.75.

DIELECTRIC AERIALS. By D. G. Kiely. 132 pp. Methuen & Co., Ltd., London, England, 1953. John Wiley and Sons, Inc., New York. \$2.00.

ELEMENTARY MATHEMATICS FROM AN ADVANCED STANDPOINT. ARITHMETIC, ALGEBRA, ANALYSIS. Volume I. By Felix Klein. Translated by E. R. Hedrick and C. A. Noble. 274 pp. Dover Publications, Inc., New York, 1953. Clothbound \$3.25, paperbound \$1.50.

PROBLEM BOOK IN THE THEORY OF FUNCTIONS. PROBLEMS IN THE ELEMENTARY THEORY OF FUNCTIONS. Volume I. By Konrad Knopp. Translated by Lipman Bers. 134 pp. Dover Publications, Inc., New York, 1953. Clothbound \$2.25, paperbound \$1.25.

PROBLEM BOOK IN THE THEORY OF FUNCTIONS. PROBLEMS IN THE ADVANCED THEORY OF FUNCTIONS. Volume II. By Konrad Knopp. Translated by Frederick Bagemihl. 144 pp. Dover Publications, Inc., New York, 1953. Clothbound \$2.25, paperbound \$1.25.

SUBSTANCE AND FUNCTION AND EINSTEIN'S THEORY OF RELATIVITY. By Ernst Cassirer. Translated by William Curtis Swabey and Marie Collins Swabey. 465 pp. Dover Publications, Inc., New York, 1953. Clothbound \$3.95, paperbound \$1.95.

TABLE OF DIELECTRIC CONSTANTS AND ELECTRIC DIPOLE MOMENTS OF SUBSTANCES IN THE GASEOUS STATE. NBS Circular 537. By Arthur A. Maryott and Floyd Buckley. 29 pp. U. S. Government Printing Office, Washington 25, D. C., 1953. \$0.20.

REFERENCE DATA FOR ORIENTED QUARTZ PLATES BY X-RAY DIFFRACTION. NBS Circular 543. By Catherine Barclay and Leland T. Sogn. 7 pp. U. S. Government Printing Office, Washington 25, D. C., 1953. \$0.15.

ATOMIC WEAPONS IN LAND COMBAT. By Colonel G. C. Reinhardt and Lieutenant Colonel W. R. Kintner. 182 pp. The Military Service Publishing Company, Harrisburg, Pennsylvania, 1953. \$3.95.