

Action of Antibiotics Thereon" by E. F. Gale; and "Zone Electrophoresis" by A. Tiselius and P. Flodin.

It is probably unfair to pick out any of these as outstanding. However, this reviewer was especially delighted by Borsook's paper because of the firm thermodynamic foundation on which it is based. It is not often that one finds such unapproachable use of thermodynamics in the discussion of purely biochemical subjects. Also worthy of special mention is Putnam's review of the bacteriophages. The fascinating story of these viruses is one that every chemist should read.

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Nuclear Radiation Physics. By RALPH E. LAPP, Ph.D., Nuclear Science Service, Washington, D. C., and HOWARD L. ANDREWS, Ph.D., National Institutes of Health, Bethesda, Maryland. Prentice-Hall, Inc., Englewood Cliffs, New Jersey. 1954. x + 532 pp. 15.5 X 22 cm. \$6.75. Second Edition.

This work consists of 17 chapters (Particles and Waves, Atomic Structure, Isotopes and Nuclear Structure, Natural Radioactivity, X-Rays and γ -Rays, α -Particles, β -Particles, Ionization-Chamber Instruments, Pulse Counters, Particle Accelerators, Induced Nuclear Transformations, Neutron Physics, Nuclear Fission, Nuclear Power, Radiation-Measurement Technique, Radioactive Tracer Techniques, Radiation Health Protection) and a six part appendix (Physical Constants and Useful Data, Conversion Table for Units of Energy, Electron Velocities and Masses for Various Energies, Mass-Absorption Coefficients for Photons, Characteristics of Common Shielding Materials, A List of Radioisotopes). The title is thus no clue to the richness of the material between the covers, barely half the text being devoted to the physics of nuclear radiations.

The chapter organization is good. The text is interspersed with numerous graphs, tables and photographs, worked-out examples of calculations, and, happily, a considerable number of references to the original literature. Each chapter ends with a good sized set of problems, some with answers appended, and a list of collateral texts and references. From the breadth of the topics covered, it is obvious that no one receives exhaustive treatment. The presentation is well balanced, the exposition clear and generally free of gobbledygook.

The copy furnished the reviewer is well manufactured. The format is pleasant to the eye, though the hyper-gloss of the paper definitely is not, at least after reading 30 or 40 pages. There seem to be relatively few typographical errors.

This book will be of use to almost anyone interested in nuclear science, be he chemist, physicist, biologist or engineer. It could be employed with profit in a senior-graduate level course in which the instructor was prepared to present additional material on applications and methodology of interest to the particular group, provided only an introductory exposition of principles was desired.

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BOOKS RECEIVED

August 10, 1954–September 10, 1954

L. J. BELLAMY. "The Infra-red Spectra of Complex Molecules." John Wiley and Sons, Inc., 440 Fourth Avenue, New York 16, N. Y. 1954. 323 pp. \$7.00.

FRIEDRICH CRAMER. "Paper Chromatography." Second revised and enlarged edition. Translated by Leighton Richards. St. Martin's Press, Inc., 103 Park Avenue, New York 17, N. Y. 1954. 124 pp. \$5.00.

WOLFGANG FINKELNBURG. "Einführung in die Atomphysik." Springer-Verlag, Reichpietschufer 20, Berlin W 35, Germany. 1954. 543 pp. Ladenpreis: Ganzeleinen DM 44.—.

DAVID M. GREENBERG (edited by). "Chemical Pathways of Metabolism." Volume II. Academic Press, Inc., Publishers, 125 East 23rd Street, New York 10, N. Y. 1954. 383 pp. \$9.50.

EMIL J. GUMBEL. "Statistical Theory of Extreme Values and Some Practical Applications." National Bureau of Standards. For Sale by the Superintendent of Documents U. S. Government Printing Office, Washington 25, D. C. 1954. 51 pp. \$1.40.

J. A. RADLEY. "Starch and Its Derivatives." Volume I. Third Edition (revised). John Wiley and Sons, Inc., 44 Fourth Avenue, New York 16, N. Y. 1954. 510 pp. \$10.00.

J. A. RADLEY. "Starch and Its Derivatives." Volume II. Third Edition (revised). John Wiley and Sons, Inc., 44 Fourth Avenue, New York 16, N. Y. 1954. 465 pp. \$10.00.

A. J. RUTGERS. "Physical Chemistry." Interscience Publishers Inc., 250 Fifth Avenue, New York 1, N. Y. 1954. 804 pp. \$8.50.

W. H. SEBRELL, JR., AND ROBERT S. HARRIS (edited by); "The Vitamins. Chemistry, Physiology, Pathology." Volume II. Academic Press, Inc., Publishers, 125 East 23rd Street, New York 10, N. Y. 1954. 766 pp. \$16.50.

E. W. R. STEACIE. "Atomic and Free Radical Reactions." Second Edition. A. C. S. Monograph Series. Reinhold Publishing Corporation, 430 Park Avenue, New York 22, N. Y. 1954. Volume I, pp. 1-485; Volume II, pp. 487-901. \$28.00.

W. THEILHEIMER. "Synthetic Methods of Organic Chemistry." Volume 8. Interscience Publishers, Inc., 250 Fifth Avenue, New York 1, N. Y. 1954. 508 pp. \$18.90.

CLARK E. THORP. "Bibliography of Ozone Technology. Volume 1, Analytical Procedures and Patent Index." Armour Research Foundation, 10 West 35th Street, Chicago 16, Illinois. 1954. 209 pp. \$5.25.

A. J. C. WILSON, General Editor, N. C. BAENZIGER, J. M. BIJVOET, AND J. MONTEATH ROBERTSON, Section Editors. "Structure Reports for 1950." Volume 13. N. V. A. Oosthoek's Uitgevers Mij., Domstraat 1-3, Utrecht, Holland. 1954. 643 pp. 80.—Dutch florins.

R. W. G. WYCKOFF. "Crystal Structures, Index to Organic Compounds." Interscience Publishers, Inc., 250 Fifth Avenue, New York 1, N. Y. 1954. 33 pp.