

the biochemist. The author of this book has tried to correct this situation by reviewing known methods of radioactive gas analysis that are of interest to biochemists. The major subjects covered include vacuum techniques, gas-phase assay of carbon-14, combustion of labeled compounds, and assay procedures for deuterium and tritium. A short section on the synthesis of tritium-labeled compounds is interesting, but it is not indicated by the title.

In several respects the title of this book is misleading. Generalized isotopic gas-analysis methods are not discussed in detail but rather the preparation of samples for isotopic gas analysis. The gas-analysis methods that are described are mostly for radioactive isotopes. No discussion is presented on mass spectrometer or infrared isotopic gas analysis. The book is primarily a laboratory manual devoted to the gas-handling techniques in use in the author's laboratory, and no effort has been made to give a systematic review of the literature on vacuum and gas-handling techniques or on isotopic analysis methods.

The radioactive gas-assay procedures for carbon-14 that are discussed in some detail include Geiger counting of CO_2 using CS_2 , proportional counting of CO_2 and acetylene, and ionization chamber assay. The section on the Brown-Miller method for Geiger counting of CO_2 - CS_2 mixtures is very interesting. This excellent procedure is not as widely used in the United States as it might be, and perhaps this book may help.

A considerable section of the book is used to describe procedures for the combustion of labeled compounds either by the Van Slyke oxidation mixture or by using various dry combustion methods. This is a very critical part of isotopic gas analysis, and such a review is needed.

This book is carefully written and well constructed and contains very few errors. It is a useful laboratory reference for the biochemist working with isotopes, particularly if he uses gas-assay procedures for carbon-14 or tritium.

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Transactions of the Symposium on Fluid Mechanics and Computing. Sponsored by the American Mathematical Society and Office of Ordnance Research, U.S. Army. Garrett Birkhoff, K. O. Friedrichs, and T. E. Sterne, Eds. Interscience, New York-London, 1954. 243 pp. Illus. \$5.

This book, a reprint of 14 papers published in *Communications on Pure and Applied Mathematics*, volume VII (1954), constitutes the proceedings of the first Symposium on Applied Mathematics. The papers are concerned with modern problems of fluid mechanics (shock waves, turbulence, boundary layers, transonic flow, compressible fluid flow), and the associated mathematical problems. These last include not only analytic treatments of the complicated partial differential equations encountered in treatments of the fore-

going subjects and related matters but also discussions of numerical methods of solution, including the use of large-scale computers. One paper is experimental (measurement of spherical shock waves). The contributors include many outstanding names in the fields mentioned. The treatments are authoritative and advanced, and they will interest specialists in fluid mechanics and applied mathematics.

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New Books

Marine Shells of the Western Coast of Florida. With revisions and additions to Louise M. Perry's *Marine Shells of the Southwest Coast of Florida*. Louise M. Perry and Jeanne S. Schwengel. Paleontological Res. Institution, Ithaca, N. Y., 1955. 318 pp. Paper, \$6; cloth, \$7.

Practical Horticulture. James S. Shoemaker and Benjamin J. E. Teskey. Wiley, New York; Chapman & Hall, London, 1955. 374 pp. \$4.20.

Management of Addictions. Edward Podolsky, Ed. Philosophical Library, New York, 1955. 413 pp. \$7.50.

Physical Chemistry. Farrington Daniels and Robert A. Alberty. Wiley, New York; Chapman & Hall, London, 1955. 671 pp. \$6.50.

The Biology of the Amphibia (unabridged republication of ed. 1). G. Kingsley Noble. Dover, New York, 1955. 577 pp. \$4.95.

Optical Properties of Thin Solid Films. O. S. Heavens. Academic Press, New York; Butterworths, London, 1955. 261 pp. \$6.80.

A Manual of Medical Virology. S. S. Kalter and J. E. Prier. Burgess, Minneapolis, 1955. 127 pp. \$3.50.

Astronomy. A textbook for university and college students. Robert H. Baker. Van Nostrand, New York-London, ed. 6, 1955. 528 pp. \$5.50.

Neutron Diffraction. G. E. Bacon. Oxford Univ. Press, New York-London, 1955. 299 pp. \$5.60.

Organic Solvents: Physical Properties and Methods of Purification. vol. VII, *Technique of Organic Chemistry*. Arnold Weissberger, Ed. Interscience, New York-London, ed. 2, 1955. 552 pp. \$8.50.

Baba of Karo. A woman of the Moslem Hausa. Mary Smith. Philosophical Library, New York, 1955. 299 pp. \$7.50.

American Agriculture: Its Structure and Place in the Economy. Ronald L. Mighell. Wiley, New York; Chapman & Hall, London, 1955. 187 pp. \$5.

Target: Earth. The role of large meteors in earth science. Allan O. Kelly and Frank Datchile. Target Earth, Box 335, Carlsbad, Calif., 1953. 263 pp. \$5.

Bacterial Toxins. W. E. Van Heyningen. Blackwell, Oxford, Eng.; Charles C. Thomas, Springfield, Ill., 1955. 133 pp. \$3.50.

Methods of Quantitative Micro-Analysis. R. F. Milton and W. A. Waters, Eds. St Martin's Press, New York and Arnold, London, ed. 2, 1955. 742 pp. \$15.

Quantitative Methods in Histology and Microscopic Histochemistry. Olavi Eranko, Karger, Basel, Switzerland; Little, Brown, Boston, 1955. 160 pp. F. 19.75.

Household Physics. A textbook for college students in home economics. Madalyn Avery. Macmillan, New York, ed. 3, 1955. 472 pp. \$5.50.

The Uranium Prospector's Guide. Thomas J. Ballard and Quentin E. Conklin. Harper, New York, 1955. 251 pp. \$3.50.

Aluminum Paint and Powder. Junius David Edwards and Robert I. Wray. Reinhold, New York, ed. 3, 1955. 219 pp. \$4.50.

Progress in Low Temperature Physics. vol. I. C. J. Gorter, Ed. Interscience, New York; North-Holland, Amsterdam, 1955. 418 pp. \$8.75.

Cycles and Performance Estimation. Gas Turbine Ser. vol. I. James Hodge. Academic Press, New York; Butterworths, London, 1955. 329 pp. \$9.

Schizophrener Prozess und Schizophrene Symptomgesetze. Eine Prognostisch-statistische grundlagenstudie. O. H. Arnold. Wilhelm Maudrich, Wien-Bonn, 1955. 86 pp. Paper, \$3.76.

Frontier to Space. Eric Burgess. Macmillan, New York, 1955. 174 pp. \$4.50.

Ionography. Electrophoresis in stabilized media. Hugh J. McDonald. Year Book, Chicago, 1955. 268 pp. \$6.50.

Hatchery Operation and Management. Ernest M. Funk and M. Richard Irwin. Wiley, New York; Chapman & Hall, London, 1955. 349 pp. \$6.50.

Methods in Enzymology. vol. I. Preparation and assay of enzymes. Sidney P. Colowick and Nathan O. Kaplan, Eds. Academic Press, New York, 1955. 835 pp. \$18.

Ovide moralise en prose. Texte du quinzieme siecle. Edition critique avec introduction. C. De Boer. North-Holland, Amsterdam, 1954. 407 pp.

Vitamins in Theory and Practice. Leslie J. Harris. Cambridge Univ. Press, New York-London, ed. 4, 1955. 366 pp. \$6.50.

Should the Patient Know the Truth? A response of physicians, nurses, clergymen, and lawyers. Samuel Standard and Helmuth Nathan, Eds. Springer, New York, 1955. 160 pp. \$3.

The Proceedings of the 1954 Glasgow Conference on Nuclear and Meson Physics. Sponsored by the International Union of Pure and Applied Physics. E. H. Bellamy and R. G. Moorhouse, Eds. Pergamon Press, New York-London, 1955. 352 pp. \$9.50.

The Bird Book. A picture album of American birds. Leon Augustus Hausman. Arco, New York, 1955. 159 pp. Illus. \$2.50.

The Role of Humoral Agents in Nervous Activity. Bruno Minz. Thomas, Springfield, Ill., 1955. 230 pp. \$7.75.

Inorganic Reactions and Structure. Edwin S. Gould. Holt, New York, 1955. 470 pp. \$6.50.

Plants without Flowers. Harold Bastin. Philosophical Library, New York, 1955. xi+146 pp. \$6.

The Creation Story and Modern Man. Duval T. McCutchen. The author, Arlington, Va., 1954. 56 pp. \$1.

Transactions of the Symposium on Computing, Mechanics, Statistics and Partial Differential Equations. Vol. II. Symposium on Applied Mathematics. F. E. Grubbs, F. J. Murray, and J. J. Stoker, Eds. Interscience, New York-London, 1955. 216 pp. \$5.

Borderland of the Unknown. The life story of Gilbert Newton Lewis. Arthur Lachman. Pageant Press, New York, 1955. 184 pp. \$3.

Sex and the Nature of Things. N. J. Berrill. Pocket Books, New York, 1955 (Published by Dodd, Mead, 1953). 222 pp. 35¢.

Fishing Boats of the World. Jan-Olof Traung, Ed. Heighway, London, 1955. 579 pp. Cloth, \$12.50.

Psychotherapeutic Intervention in Schizophrenia. Lewis B. Hill. Univ. of Chicago Press, Chicago; Cambridge Univ. Press, London, 1955. 215 pp. \$5.

Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to *Science*, but to the publisher or agency sponsoring the publication.)

The Weather Bureau at Work. The Bureau, U.S. Dept. of Commerce, Washington 25, 1954 (Order from Supt. of Documents, GPO, Washington 25). 12 pp. 10¢.

Grain Research Laboratory 1954 Report. J. Ansel Anderson. Bd. of Grain Commissioners, Winnipeg, Manitoba, 1955. 78 pp.

Parking Requirements in Zoning Ordinances. Highway Research Bd. Bull. 99. Natl. Acad. of Sciences-Natl. Research Council, Washington 25, 1955. 56 pp. 75¢.

Castor Bean Varietal Trials in Arkansas. Rpt. Ser. 47. R. L. Thurman. Agr. Expt. Sta., Univ. of Arkansas, Fayetteville, 1955. 11 pp.

Biology as a Career. The Inst. of Biology, London W.C.1, ed. 2, 1954. 40 pp. 2s. 6d.

Tercera Conferencia sobre Los Problemas de Nutricion en la America Latina. Caracas, Venezuela, 19-28 Oct. 1953. Publicaciones Cientificas No. 12. Oficina Sanitaria Panamericana, Washington 6, 1954. 54 pp.

The Horse in Blackfoot Indian Culture with Comparative Material from Other Western Tribes. Smithsonian Institution Bur. of American Ethnology Bull. 159 (Order from Supt. of Documents, GPO, Washington 25). 1955. 374 pp. \$2.75.

Computer Development (SEAC and DYSEAC) at the National Bureau of Standards. NBS Circular 551. Natl. Bur. of Standards, Washington 25, 1955 (Order from the Supt. of Documents, GPO, Washington 25). 146 pp. \$2.

Social and Psychological Factors Affecting Fertility. vol. 4, *Further Reports on Hypotheses and Other Data from the Indianapolis Study.* P. K. Whelpton and Clyde V. Kiser, Eds. Milbank Memorial Fund, New York, 1954. 285 pp. \$1.

The Production and Use of Technical Reports. Bernard M. Fry and James J. Kortendick, Eds. Catholic Univ. of America Press, Washington 17, 1955. 175 pp. \$1.75.

Assaying Effect of Growth Regulators upon Plant Tumors. Bull. 587. Paul E. Waggoner and A. E. Dimond. Connecticut Agr. Expt. Sta., New Haven, 1955. 14 pp.

New Zealand Ecological Society, 2nd annual meeting. 21-22 May 1953. 3s. **New Zealand Ecological Society, 3rd annual meeting.** 19-21 May 1954. The Society, Wellington, New Zealand.

Symposium on the Protection and Conservation of Nature in the Near East. UNESCO, Middle East Science Cooperation Office, Cairo, Egypt, 1954. 171 pp.

The Fund for Adult Education. Annual rpt., 1953-1954. The Fund, Pasadena, Calif., 1955. 39 pp.

Science Reports of the Tokyo Kyoiku Daigaku. Section C. vol. 3, Nos. 17-24. Geological & Mineralogical Inst., Tokyo Univ. of Education, 1954. 257 pp.

Hawthorns of Wisconsin. Publ. in Botany, No. 2. Emil P. Kruschke. Milwaukee Public Museum, Milwaukee, 1955. 124 pp. Illus. \$2.50.

The Work of WHO 1954. Official records of the World Health Organization, No. 59. Annual rpt. WHO, Geneva, 1955. 209 pp. \$2.

Proceedings of the Summer Conference on College Biology. 15-19 June, 1953. Univ. of Oklahoma, Norman, 1955. 144 pp.

Dry Heat Sterilization. Bull. 337. Precision Scientific Co., Chicago 47, 1955. 14 pp.