

pronounced stating that under certain conditions a once-irrotational motion stays irrotational.

The reviewer is inclined to believe that the fragmentary approach chosen by the author might be useful on a certain level of instruction. The obvious danger of the method, however, is that a student will be led by it to a kind of "speaking knowledge" of mathematical physics and might then believe that he has learned the essentials. On the other hand, a more mature reader, well grounded in the elements of physics, will enjoy the wealth of interesting examples, the great variety of problems discussed, and, above all, the skillfulness and many-sidedness of the author.

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Petroleum Geology. Kenneth K. Landes. New York: Wiley; London: Chapman & Hall, 1951. 660 pp. \$10.00.

Professor Landes, chairman of the Geology Department of the University of Michigan, has done an outstanding job in compiling the vast amount of information found in his book. The inclusion of many full-page maps (34) has enhanced its value, especially to the geologist.

The book is divided into three distinct parts. The first, "Techniques of the Petroleum Geologist," concerns itself primarily (76 pp.) with exploration methods and secondarily (24 pp.) with exploitation procedures. The information is of a broad general nature and merely acquaints the reader with or reminds him of the subject matter. The field is well covered, however, and with few exceptions emphasis is proportional to the method or the procedure.

Part 2, "Geologic Occurrence of Petroleum" (202 pp.), summarizes the more important theories concerning the origin and accumulation of oil, and is illustrated with many full-page maps drawn from authentic sources. The probable causes of migration are discussed, as well as the possible effects of migration on the physical and chemical properties of oil. The various types of traps are considered and are well illustrated by specific field examples. Adequate bibliography is included for reference work.

Part 3, "Present and Future Oil Supplies" (306 pp.), considers the domestic and foreign distribution of petroleum along with a modest concluding chapter on future oil supplies. Domestic occurrence is treated by individual states. Often three separate and identical-scale maps of each state are included, showing, respectively, structure and oil and gas fields, oil and gas fields, and index map of principal fields. In most cases the three maps could be condensed to one, or two at the most, without causing confusion or losing accuracy—thus the rather unusual criticism of superfluous or overillustration may apply here. If these excess illustrations had been replaced by selected maps of gravity, magnetic, and seismograph surveys, which play such an important part in petroleum exploration, the volume would have gained in balance.

All in all the book fills a much-needed void in its field. It is an important contribution, rivaled only by C. G. Lalicker's excellent *Principles of Petroleum Geology*, which, however, is more restricted in scope.

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Scientific Book Register

Einführung in das Studium de Physik. Wolfgang Finkelburg *et al.* Heidelberg, Germany: Carl Winter, Universitätsverlag, 1950. 119 pp. DM 4.95; bound DM 6.95.

Animal Evolution: A Study of Recent Views of its Causes. G. S. Carter. London: Sidgwick and Jackson; New York: Macmillan, 1951. 368 pp. \$4.50.

Encyclopedia of Chemical Reactions: Fe, La, Pb, Li, Mg, Mn, Hg, Mo, Nd. Vol. IV. C. A. Jacobson, Ed. New York: Reinhold, 1951. 790 pp. \$14.00.

Catalogue of the Fossil Cephalopoda: The Ammonoidea of the Trias (II), Part V. L. F. Spath. London: British Museum (Natural History), 1951. 228 pp. £1 15s.

Weed Seedlings. Anna P. Kummer. Chicago: Univ. Chicago Press, 1951. 435 pp. \$5.00.

The Chemistry of Heterocyclic Compounds: Six-Membered Heterocyclic Nitrogen Compounds with Four Condensed Rings. C. F. H. Allen *et al.* New York-London: Interscience, 1951. 345 pp. \$10.00.

Advanced Fluid Dynamics and Fluid Machinery. R. C. Binder. New York: Prentice-Hall, 1951. 426 pp. \$8.00.

Advances in Protein Chemistry, Vol. VI. M. L. Anson, John T. Edsall, and Kenneth Bailey, Eds. New York: Academic Press, 1951. 549 pp. inc. cumulative index to Vols. I-V. \$9.50.

The Fischer-Tropsch and Related Syntheses: Including a Summary of Theoretical and Applied Contact Catalysis. Henry H. Storch, Norma Golumbic, and Robert B. Anderson. New York: Wiley; London: Chapman & Hall, 1951. 610 pp. \$9.00.

Biological Actions of the Adenine Nucleotides. H. N. Green and H. B. Stoner. London: H. K. Lewis, 1950. 221 pp. 25 s. net.

Tecnología de los Aceites Vegetales: El Aceite de Oliva y su Industria, Vol. II. Pier Giovanni Garoglio. Mendoza, Argentina: Ministerio de Educacion, Universidad Nacional de Cuyo, 1950. 1,377 pp.

Electromagnetic Problems of Microwave Theory. H. Motz. London: Methuen; New York: Wiley, 1951. 184 pp. \$2.00.

Yuman Indian Agriculture: Primitive Subsistence on the Lower Colorado and Gila Rivers. Edward F. Castetter and Willis H. Bell. Albuquerque: Univ. New Mexico Press, 1951. 274 pp. \$6.00.

A Monograph of the Collembola or Springtail Insects of New York State. Elliott A. Maynard. Ithaca, N. Y.: Comstock, 1951. 339 pp. \$7.50.

Symposium on Cytology. William L. Doyle *et al.* East Lansing: Michigan State College Press, 1951. 69 pp. \$2.00.

The Fourier Integral and Certain of Its Applications. Reprint. Norbert Wiener. New York: Dover, 1951. 201 pp. \$3.95.

Immunology. 3rd ed. Noble Pierce Sherwood. St. Louis, Mo.: Mosby, 1951. 731 pp. \$8.00.