though the reviewer doubts that there have been many worldwide rises or falls of sea level. Kuenen concludes that the cause must be sought in changes in the cubic capacities of the basins, and he decides that deposition of sediments and diastrophism are inadequate to account for the movements that are known. He concludes that even the lesser eustatic movements "cannot be accounted for by processes operating in or at the surface of the crust," and that the principal cause must be found in internal factors acting below the crust.

The book is almost encyclopedic in character and illustrates the wide experience and thinking of the author, although it is difficult reading in places, partly because of deficiencies in the writing. Stratigraphy and sedimentary geology had their inception and early development through the work of students who had little knowledge of the sea, and many of them had never seen the sea. During the past three quarters of a century more and more scientists have seen the sea at work. To most students of earth science, for whom this has not been possible, Marine Geology will be a welcome volume. Many geologists will find sections to which they will wish to take exception, but to all the work should be of great service. The science of geology owes a debt of gratitude to Professor Kuenen for having brought the work to completion.

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W. H. TWENHOFEL

Lebrbuch der Theoretischen Physik: Struktur der Materie, Vol. II. Walter Weizel. West Berlin, Germany: Springer-Verlag, 1950. Pp. 772–1,540. DM 69.90 bound, DM 66 paper.

The art of Handlehrbuchwriting is a typical German one, of which this is a very fine example. Whereas many books slide easily over certain subjects, depending on the author's preferences and opinions, the presentation in Professor Weizel's book marches forward with calm, heavy steps, leaving no stone unturned. The student will not be annoyed by statements such as "it can be easily shown that," or "after some simple calculations we obtain," since every derivation is described in all its painful detail. On the other hand, the book lacks the individuality characterizing the writings of authors of great contributions to the subject-a quality that may be of some value to a student struggling through many compactly printed pages. The text really helps, however, to fill the vacuum that existed in the physical literature in this field.

The presentation begins with a discussion of the elements of atomic theory, including a treatment of hydrogen and more complex atoms, by means of simple wave equations. The next chapter is devoted to the detailed development of modern quantum theory, and includes discussions of matrix method, statistical interpretation of wave mechanics, and the relativistic theory of electron spin. This is followed by chapters on molecules and valency forces, quantum statistics, theory of gases, and the theory of solids. In every instance the subject is discussed in great detail, providing a complete picture of our present knowledge.

In contrast to the rest of the book the last chapter, devoted to the problems of elementary particles and nuclear physics, is extremely sketchy and incomplete. For example, it contains lengthy discussions of the mathematical formalism of the meson theory of nuclear forces and the structure of the deuteron, but completely omits such important topics as Fermi's theory of  $\beta$ -decay. The treatment of nuclear reactions occupies a scant four pages, and nuclear fission is mentioned only by name.

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## Scientific Book Register

GEORGE GAMOW

- Our Age of Unreason: A Study of the Irrational Forces in Social Life. Rev. ed. Franz Alexander. Philadelphia: Lippincott, 1951. 338 pp. \$4.50.
- Powell of the Colorado. William Culp Darrah. Princeton, N. J.: Princeton Univ. Press, 1951. 426 pp. \$6.00.
- Alkali Soils: Their Formation, Properties and Reclamation. W. P. Kelley. New York: Reinhold, 1951. 176 pp. \$5.00.
- Radiochemical Studies: The Fission Products, Books 1, 2, and 3. Charles D. Coryell and Nathan Sugarman, Eds. New York-London: McGraw-Hill, 1951. 2,086 pp. \$18.50 the set.
- Die Sonnenkorona: Beobachtungen der Korona 1939– 1949, Vol. I. M. Waldmeier. Basel: Verlag Birkhäuser, 1951. 270 pp. Sw. fr. 24.60; cloth, Sw. fr. 28.60.
- Thermodynamics of Fluid Flow. Newman A. Hall. New York: Prentice-Hall, 1951. 278 pp. \$5.50.
- Communication: The Social Matrix of Psychiatry. Jurgen Ruesch and Gregory Bateson. New York: Norton, 1951, 314 pp. \$4.50.
- Symposium on Steroids in Experimental and Clinical Practice. Abraham White, Ed. Philadelphia: Blakiston, 1951. 415 pp., \$7.50.
- An Introduction to Modern Psychology. O. L. Zangwill. New York: Philosophical Library, 1950. 227 pp. \$3.75.
- Medical Treatment: Principles and Their Application. Geoffrey Evans, Ed. London: Butterworth; St. Louis: Mosby, 1951. 1,398 pp. and 66 pp. index. \$20.00.
- A Selected Bibliography of the Insects of the World Associated with Sugar Cane, Their Predators and Parasites. J. S. Wade. Honolulu: International Society of Sugar Cane Technologists, 1951. 113 pp. Free to libraries.
- Geometrische Kristallographie und Kristalloptik und deren Arbeitsmethoden: Eine Einführung. Rev. 2nd ed. Franz Raaz and Hermann Tertsch. Vienna: Springer-Verlag, 1951. 215 pp. \$4.50.
- Growth and Development of Children. Ernest H. Watson and George H. Lowrey. Chicago: Year Book Pub., 1951. 260 pp. \$5.75.
- Instrumental Methods of Analysis. 2nd ed. Hobart H. Willard, Lynne L. Merritt, and John A. Dean. New York: Van Nostrand, 1951. 344 pp. \$5.50.
- Climate in Everyday Life. C. E. P. Brooks. New York: Philosophical Library, 1951. 314 pp. \$4.75.