Book Reviews

Introduction to historical geology. Raymond Cecil Moore. New York-London: McGraw-Hill, 1949. Pp. ix + 582. (Illustrated.) $5.00.

This new book bids fair to become one of the leading textbooks in the country for beginning college courses. It is an authoritative treatment of historical geology by a leading student of stratigraphy and paleontology, and a teacher of more than thirty years' experience.

The facts of historical geology are presented concisely and clearly, by means of lucid text, large and beautiful illustrations, diagrams, correlation tables, areal and paleogeographic maps on facing pages, and many figures of fossils and restorations of landscapes and both vertebrate and invertebrate animals.

The book is well suited to beginning classes in geology, and the correlation tables and areal and paleogeographic maps make it useful for more advanced students of the stratigraphy of North America. Students use their texts in historical geology in identifying the fossils they collect on geological excursions. It would be better, the reviewer thinks, if the names of species had been given so that the figures could be used for specific as well as for generic identification.

Dr. Moore's book is fully equal, in the reviewer's estimation, to any textbook in historical geology now being used in this country. It is logically written, adequately illustrated, and is authoritative, accurate and up to date.

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Elastomers and plastomers: their chemistry, physics and technology. (Vol. III.) ***Testing and analysis; tabulation of properties.*** R. Houwink. (Ed.) New York: Elsevier Publ., 1948. Pp. 174. (Illustrated.) $4.50.

This third volume of the series edited by Hermans, Houwink, and Martin is essentially devoted to methods of analysis and testing and to a presentation of numerical data on the mechanical, electrical, optical, and thermal properties of high polymers. This is a very important subject and a book on it is a welcome addition to the scientific literature in this field.

J. H. Teeple describes in about sixty pages the modern methods of plastics and rubber testing in a comprehensive, clear, and up-to-date manner, using a large number of well-selected figures and tables. A. G. Epprecht follows with a chapter on chemical analysis, which will be particularly interesting for American readers because it contains many European methods which are not as yet too well known in this country. A chapter by B. B. S. T. Boonstra on properties of elastomers gives additional information on these important materials, and the fifth chapter of J. W. F. Van't Wout and R. Houwink completes the volume by discussing the properties of plastics.

It is evident that books of this character are very valuable and necessary for chemists and physicists interested in this rapidly expanding field, and Dr. Houwink's series is contributing a great deal to the dissemination of factual knowledge and current ideas.

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Foundations of nuclear physics: facsimiles of thirteen original studies. Robert T. Beyer. (Ed.) New York 19, N. Y.: Dover Publ., 1949. Pp. 272. (Illustrated.) $2.95.

The use of original papers as a teaching device has been recognized in the natural sciences ever since Wilhelm Ostwald first reprinted a series of classics in the natural sciences. However, most of these papers were concerned with developments in days gone by, and only a few volumes in this series (in German) are devoted to modern developments (such as the volume on Brownian motion, which contains the famous papers by Einstein and Smoluchowski). The present volume presents a particularly interesting collection of thirteen of the fundamental studies in nuclear physics as they were originally reported in scientific journals. Everybody will agree with Professor Beyer as to the importance of the various papers. All of them had a profound influence on the development of nuclear physics and they cover a wide range of interests, from simple experimental descriptions to some rather difficult theoretical developments such as, for instance, Fermi's theory of β-decay and the theory of the interaction of elementary particles by Yukawa.

Of the classical papers on radioactivity, Rutherford's papers on the scattering of alpha particles and on artificial nuclear disintegration are included. The other papers are of the period when modern techniques made the discovery of new particles possible and wave mechanics gave the interpretation of their interaction with matter.

One may regret that Fermi's detailed paper from the *Proceedings of the Royal Society* has not been reprinted; also that the paper of the Joliots in the *Journal de Physique* has not been given instead of the short note in *Comptes Rendus*. We hope that a future edition will contain the brief note by Frisch and Meitner on fission. For the sake of the student one might wish that papers were accompanied by a commentary, because the beginner will find it necessary to have proper guidance if he wants to study this material by himself.

The bibliography, which covers such chapters as isotopes and mass measurements, hyperfine structures, nuclear moments and spin, scattering and collision processes, disintegration processes, radioactivity, beta radiation, gamma radiation and neutrons, the theory of nuclear structure, theory of disintegration processes,