

BOOK REVIEWS

Ho (C. S.) and LEE (Chin-Nan). *Economic minerals of Taiwan*. Geol. Surv. Taiwan, Taipei, China. 1963. xvi+495 pp., 6 pls. (maps), 32 text-figs., 127 tables.

This book supersedes C. S. Ho's *Mineral Resources of Taiwan*, which appeared in 1953 (M.A. 12-366), and is a comprehensive account of the geology and mineral deposits of the island of Taiwan (Formosa) based on the work of the geological survey and of prospecting and mining companies. The country is not rich in minerals, but has a considerable variety of deposits. Coal, gold, and sulphur are mined on a moderate scale, and there is, or has been, production of petroleum, magnetite sand, ores of manganese, copper, and mercury, and of asbestos, talc, mica, graphite, gypsum, limestone, dolomite, and glass sand. After outlining the geography and geology of the island (60 pages), coal, petroleum, and natural gas are treated at length (130 pages), the metaliferous deposits in 73 pages, and other industrial rocks and minerals occupy the remaining 200 pages. Naturally economic rather than mineralogical aspects are stressed, but several chemical analyses of minerals are given (including complete analyses of anglesobarite, monazite, and zircon), and sources of detailed information are indicated. The book is well produced and easy to use, and forms a very useful guide to the minerals of the country, especially as many minor occurrences are described as well as the important economic deposits. T. DEANS

RANKAMA (K.). *Progress in Isotope Geology*. London (Interscience Publishers), 1963. xvii+705 pp. Price: 150s.

This book, a sequel to the author's *Isotope Geology* published in 1956, is a progress report and incorporates relevant literature up to September 1959.

Part I of the book, which includes chapters on Principles, Isotopy, Geological Applications of radioactivity, is essentially the same as in the previous book, although there are several additions including a section on thermoluminescence. The chapter on Mass Analysis has been considerably shortened and the section on mass spectrometers omitted. Part II deals with the abundance and abundance relationships of the nuclides in nature. The arrangement and general treatment of each nuclide follows the author's first book, but the data presented are almost

entirely new. Workers in the field of nuclear geology will find this part of the book an extremely valuable source of information and reference, while the book as a whole represents a standard text on isotope geology.

T. W. B.

TAYLOR (H. F. W.), Editor. *The Chemistry of Cements. Vol. I.* London and New York (Academic Press), 460 pp. Price: 100s.

Cement production is a major branch of chemical industry and as such has been the subject of scientific study for many years in most countries of the world. Nevertheless much still needs to be done and the field of research is broad and rapidly changing. The present volume satisfies a need for a contemporary review of the position, sifting and condensing the views put forward at the periodic Symposia on the Chemistry of Cement, the last of which took place in Washington in 1960. Existing textbooks, excellent though they are, are addressed more to the practitioner and of necessity have to put forward an authoritative view, glossing over the more controversial topics. This volume will appeal not only to the practical man who wants to know why his material behaves as it does, but also to the research worker and to chemists and mineralogists generally.

Edited books are rarely easy to read because of the varying styles and viewpoints of the different contributors; this volume undoubtedly owes much to the personal influence of the editor, who has succeeded in welding it together into a coherent and easily digested whole. It deals with the general chemistry of calcium silicates and aluminates and its application to the manufacture and utilization of Portland cements. Other industrial cements and experimental methods are to be dealt with in a second volume.

The subject is approached from the viewpoints of crystal structure and solid-state chemistry and although many phase diagrams will be found in the book, it is recognized that equilibrium will rarely be obtained and that many of the important phase changes are governed by topochemical processes.

The book is well produced and indexed.

R. W. NURSE

VAN OLPHEN (H.). *An Introduction to Clay Colloid Chemistry.* New York and London (Wiley), 1963. 301 pp. Price: 75s.

This book is addressed to clay technologists, geologists, and soil scientists, but in some respects is too specialized to appeal to so wide an audience. Nevertheless, the author begins with a fairly elementary