

problems—to more modern aspects, such as the fundamentals of sintering and its application to a wide variety of materials, and the development of ceramic dielectrics and of fluoride ceramics. For the mineralogist, particular interest may lie in papers on the formation of cordierite from sepiolite and of mullite from sericite and in one on a controversial theory of clay mineralogy.

The illustrations are both plentiful and well-produced: for example, there are some most interesting and informative micrographs and electron micrographs showing dislocation and crystallization phenomena, particularly those associated with sintering processes.

It is anticipated that similar volumes will be published from time to time to cover the proceedings of other joint meetings in instances where the normal society transactions are unable to cope with the large influx of papers. Such volumes have the advantage of collecting together groups of papers on selected topics, an important aspect for scientists or technologists searching the literature.

In the present volume, a few minor errors have escaped the vigilance of the editor, who is to be congratulated on presenting so diverse a group of papers in so logical a manner.

D. A. HOLDRIDGE

MASON (Brian). *Meteorites*. New York and London (John Wiley & Sons Inc.), 1962. xii+274 pp., 67 text-figs., 22 tables, 2 appendices. Price 60s.

It is close on 50 years since O. C. Farrington published his classic textbook on meteorites, and in that time the literature has grown enormously, both in sheer bulk and in range of subject-matter; but apart from H. H. Nininger's semi-popular *Out of the Sky* (1952; M.A. 11-515) and an indifferently edited and poorly produced translation of E. L. Krinov's Основы метеоритики (1955; M.A. 13-42) under the title *Principles of Meteoritics* (1960; Min. Mag. 32-831) no textbook in English has appeared to supplement or replace Farrington's, until now. Dr. Mason's book fills this gap admirably: his description of Farrington fits the present volume—'a definitive account of meteorites, clear, concise, and comprehensive'—and the volume is remarkably up-to-date for a book on a subject in which progress is currently particularly rapid.

After a short introductory chapter, 11 chapters deal with: Phenomena of Fall, Morphology, Classification, the Minerals of Meteorites, Chondrites, Achondrites, Stony-Irons, Irons, the Elemental Composition of Meteoritic Matter, Meteorite Ages, and the Origin of Meteorites;

chapter 13 deals with the tektites, which 'may well be of extra-terrestrial origin, i.e., meteorites, but absolute proof is still lacking'; Appendix I is a very useful summary of methods for the chemical analysis of meteorites, and for the interpretation of such analyses; Appendix II is a list of meteorites of the U.S.A., arranged under states; the 'Bibliography', however, is really no more than a list of references.

Particularly valuable are: the inclusion of a series of tables showing the meteorites definitely identified as belonging to each class; and the excellent balance in the presentation of rival theories—Mason succeeds in avoiding advocacy without falling into indecision. The classification adopted is that of Prior with a few minor modifications: the attempt to distinguish between hexahedrites and nickel-poor ataxites is dropped; a class of olivine-pigeonite chondrites is divided off from the hypersthene chondrites; the amphoterites are seen to contain chondrules and are included with the chondrites, while the rodites do not differ essentially from the diogenites; Wiik's Type I and Type II carbonaceous chondrites form a separate class, while his Type III are essentially olivine-pigeonite chondrites.

M. H. HEY

BARTH (Tom F. W.). *Theoretical petrology*. 2nd edn. New York and London (John Wiley & Sons), 1962. xi+416 pp., 154 figs. Price 96s.

This standard textbook has been thoroughly brought up to date and many of the sections have been rewritten. It is now divided into five parts, the first four being identical with those of the first edition [M.A. 11-514], i.e. Physics and chemistry of the earth, Sedimentary rocks, and Metamorphic rocks, while Part V is a new addition on Geochemical cycles. The only other change is that the thermodynamics, which was scattered throughout the book in the first edition, has now been brought together in an appendix. This is much more satisfactory.

There are unfortunately too few modern textbooks on this subject available in English, and it seems a pity that the usefulness of this book to the advanced student and research worker is marred by a bad reference system peculiar to this edition. Not only is it difficult to find the lists of references (they are at the end of each part), but one can never be sure that any reference, given in the text by author and date, will be listed, as only selected references are collected in each list. In Part III alone there are 28 diagrams with only author and date as reference. Surely if a reference is worth quoting in the text it must be given in full, or why quote it at all?

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