is no access to the localities from which they were reported.' It is a great pity that specimens with 3 cm × 1 cm dufrenoysite crystals, from North-East Dundas, seem to have disappeared.

A serious shortcoming of the present work is that previously unpublished results are not attributed specifically as private communications, although an acknowledgement is made in the introduction to X-ray work by R. J. Ford and D. I. Groves. Thus, a new analysis of bellite (establishing it as a 10:1 mixture of cerussite and crocoite) is given without the name of the analyst or of the institution in which he or she works. Of the other minerals originally described from Tasmanian localities, achlusite is a mixture of paragonite and muscovite (X-ray); batchelorite is a chromian muscovite (M.M. **31**–700; Hale, G. E. A., Papers and Proc. Roy. Soc. Tasmania, 1958, **92**, 147); dundasite has been reanalysed [M.A. **69**–1520; but see M.M. **38**–564]; histrixite remains doubtful 'No specimen of the mineral is now available but it appears likely that it was an antimony bearing bismuthinite similar to stibiobismuthinite associated with chalcopyrite' [but see M.A. **11**–296]; johnstonotite is now a variety of spessartine rather than of andradite [M.A. **69**–616]; petterdite, previously thought to be mimetite, is adamite (X-ray, on a specimen from the Petterd Coll.); sclerospathite remains as a doubtful member of the halotrichite group [? chromian bilinite] since 'specimens are not available for study'; and weldite is declared invalid without further study [it was previously doubtful]. Stichtite and heazlewoodite remain unchanged as valid species.

Many Tasmanian occurrences are invalidated because the species in question is now shown to have been wrongly identified. In three cases, however, including weldite, the species itself has been declared invalid without re-examination: niccochromite (Shepard, 1877; type locality Texas, Pennsylvania), and steinmannite (Zippe, 1833; type locality Přibram, Bohemia). They are certainly doubtful, but invalidity should be proved rather than assumed.

In some respects the 1910 edition is preferable to the present one, mainly because details of associated minerals tend to have been omitted in several places. On the other hand, mis-spellings such as excherite (escherite) and kilmarcooite (kilmacooite) have been perpetuated without need.

Errors are few, but two require comment: apatite is referred to as a chlorophosphate (not fluorophosphate) of calcium, and halotrichite is mis-spelled 'hallotrichite' on pp. 54, 61, and 89. Regrettably, the variety chromiferous cerussite of 1910 is given a new name, chrome-cerussite.

P. G. EMBREY

THOOR (T. J. W. VAN), general editor. *Materials and Technology*: volume II. *Non-metallic ores, silicate industries, and solid mineral fuels.* London (Longman) and Amsterdam (de Bussy), 1971. xxviii+828 pp., 300 figs. Price £14·70.

This is the second volume of an eight-volume encyclopaedia on materials and their technology written for the non-expert in the particular subject. The twelve chapters and their authors have been listed elsewhere (M.A. **71**–834). Although the subject

matter of the chapter on rock-forming minerals and rocks, by T. J. W. van Thoor, may be deemed to be familiar to most mineralogists and petrologists, it contains much useful information on the uses of various materials such as perlite, pumice, bentonite, talc, mica, and asbestos. There is a separate chapter (124 pp.) by F. H. Clews on clays and ceramic products, a third of which is devoted to building, facing, and paving bricks, with other sections on refractories, whiteware, and porcelain. The related topic of adsorptive materials, including bleaching earths, molecular sieves, and chromatography is dealt with by A. J. B. Spaull, and there is a chapter on lime, cement, and concrete by S. Marks. Abrasives are dealt with by G. Spence and S. H. Manning, who cover manufactured, metallic, bonded, and coated abrasives as well as diamond and corundum; the principles of the abrasive process are also discussed. Glass and raw materials for glass-making, etc., are described by S. M. Budd and the mining, beneficiation, synthesis, properties, and uses of graphite are summarized by M. Smith. One of the largest chapters (104 pp.) is that on diamond and other precious stones by B. W. Anderson: two-thirds of this chapter is devoted to diamond, not unnaturally, in view of its commercial and technological importance, and in the rest of the chapter the more important other gemstones are discussed briefly. There are also notes on synthetic gemstones. The remaining chapters of this volume deal with solid mineral fuels, the carbonization of coal, and alternative sources of energy. The book opens with some useful tables, including conversion factors between imperial and metric or SI units, and ends with a very full index. Other volumes in the series will cover such items as air, water, and inorganic chemicals; metals and ores; vegetable food products; wood, paper, textiles, and photographic materials; and petroleum, organic chemicals, and plastics. The scope of this truly encyclopaedic work is wide, but at a total cost of apparently well over £100 one cannot help wondering as to its market. However, anyone concerned with non-metallic minerals will undoubtedly benefit from having the present volume on their shelves.

R. A. HOWIE

BLOSS (F. D.). *Crystallography and Crystal Chemistry*. New York and London (Holt, Rinehart and Winston Inc.), 1971. xiv+543 pp., 302 figs. Price £4·90.

This book is intended for undergraduates and aims to give them a grasp of crystallography and crystal chemistry in a way that is easily understood. The text is clearly written, and the book provides the basis for a sound understanding of crystalline materials.

The policy throughout has been to take little or nothing for granted, but to show the derivation of concepts from first principles. Thus, at the outset, when dealing with the external symmetry of crystals, the author is careful to show the derivation of point groups and the permissible combinations of symmetry elements. Crystallographic projections, crystal morphology, and appropriate calculations are clearly explained, and the names of crystal forms are those which emphasise the relationship of faces to symmetry elements, and which are becoming increasingly accepted (with minor variants) by teachers of crystal morphology.