

groups to the Hermann-Mauguin or international notation preferred by crystallographers. Simple group theory ideas are used but no mention of sub-groups is made.

Most of the diagrams are simple and good, but some are obscure. Thus cubic close packing is well illustrated but hexagonal close packing is shown with the unit-cell origin wrongly placed on an atom. The early diagrams showing mirror planes in molecules are not clear. The least satisfactory diagrams occur in the table of Bravais lattices, where almost identical cells are drawn for triclinic and trigonal and the same cell is used for orthorhombic, tetragonal and hexagonal. By no stretch of perspective imagination can the hexagonal cell be made to look hexagonal. Similarly, the monoclinic unit cell looks like an Escher trick, with back lines longer than front lines.

Most of the criticisms would not have mattered in a more comprehensive text, and in spite of them the book has many good features. It can be recommended to chemistry students as planned, provided the mistakes are also pointed out.

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Inorganic crystal chemistry. By I. NÁRAY-SZABÓ. Pp. 480. Budapest: Akadémiai Kiadó, 1969. Distributors: Collet's, London. Price £ 8.40.

There are not too many monographs devoted to crystal chemistry and the appearance of a new text in this field should be met with considerable interest. The present book is an enlarged English version of the Hungarian original. As pointed out in the preface it is not intended as a textbook. It is purely descriptive and includes very few theoretical aspects such as discussions of chemical bonds or the physical chemistry of the crystalline state.

Following a short introduction, the crystal chemistry of the elements, alloys and compounds between non-metals is treated. The compounds between metals and non-metals are discussed systematically according to the anions in the largest section of the book and the structural chemistry of the cations is briefly reviewed in the concluding chapter.

The limited space devoted to each compound, mostly highlighting the symmetry, some coordination feature and one or two interatomic distances, with little discussion of the structure, makes the account somewhat monotonous. Despite the artistic efforts put into the drawing of spheres,

most of the Figures are not very enlightening; this, in combination with the very brief descriptions in the text, often leaves the reader without much idea of what the atomic arrangement actually is.

The large number of references and the valuable information collected in the tables make the book useful as a reference. However, it requires critical reading since it contains numerous errors and is not always up to date.

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Contemporary crystallography. By MARTIN J. BUERGER. Pp. xi. + 364. New York: McGraw-Hill, 1970. Price £6.00.

It is impossible not to be impressed by the writings of Professor Buerger on the geometries of real and reciprocal spaces and much of this book is concerned with the introductory theoretical and experimental aspects of these geometries. Here clarity is the keynote and careful study will reward the reader although he may find himself frustrated by the lack of examples for him to test his knowledge. A book such as this should teach as well as test. However it is more with the title of the book that many will take issue. For example a book on contemporary crystallography cannot dismiss the implications of the dynamic theory in a few scattered sentences and yet claim to act as a background for study of the bonding of atoms in crystals. Indeed an unwillingness to argue the physics of diffraction prevents this book from discussing the contemporary scene in crystallography. The structural crystallographer will no doubt look for more detail on direct methods of structure determination and will be surprised to find little on the accuracy of results. But one must come back to the beauty of the writing on the geometrical aspects and for this alone the book will be found on many shelves.

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