

### Books Received

*The following books have been received by the Editor. Brief and generally uncritical notices are given of works of marginal crystallographic interest; occasionally a book of fundamental interest is included under this heading because of difficulty in finding a suitable reviewer without great delay. Mention here does not necessarily preclude a full review at a later date.*

**Rocks and minerals.** By BRIAN SIMPSON. Pp. vi + 302. Oxford: Pergamon Press, 1966. Price 25s.

This comparatively inexpensive paperback is intended as an introduction to crystallography, mineralogy, and petrology for pupils in their last year in school and for university students during their first year. With its sixteen plates, numerous figures, and descriptive tables of the more common minerals, it seems well adapted to its purpose.

**Principles of defect chemistry of crystalline solids.** BY W. VAN GOOL. Pp. xii + 148. New York: Academic Press, 1966. Price \$7.00.

Interactions between defects, and the relations between defects and the surrounding atmosphere are discussed in detail. Subjects such as stoichiometric composition, vapour pressure of binary solids, Fermi levels, and redistribution of electrons during cooling are treated. The book is intended for graduate students and chemists dealing with research and applications of inorganic chemistry, ceramics, semiconductors, fluorescence, and heterogeneous catalysis.

The treatment is thermodynamic and phenomenological, and is largely limited to binary compounds. In view of the title it is curious that crystal structure plays no part in the treatment.

**X-ray diffraction tables.** BY J. H. FANG and F. D. BLOSS. Not paginated. Carbondale, Illinois: Southern Illinois Univ. Press, 1966. Price \$12.75.

These tables, reproduced from computer output, are designed to minimize the time required to convert  $2\theta$  to spacing values. Each page has nineteen columns. The first gives  $2\theta$  to two decimal places, the second  $\sin^2 \theta$  to five decimal places, and the third to the sixth give the corresponding spacings for copper radiation ( $K\alpha_1$ ,  $K\alpha_2$ , the weighted average, and  $K\beta$ ) to five significant figures. Columns seven to eighteen give the corresponding spacings for iron, molybdenum, and chromium radiations, and column nineteen gives the spacing, to four significant figures, for tungsten  $L\alpha_1$ .

These tables will certainly reduce the labour of converting angle values to spacing values, but most users would find it more convenient to have separate tables for the different radiations. More angles could then be placed on a page, and the number of pages to be turned in interpreting a pattern greatly reduced.

**Physical science.** By WILLIAM A. RENSE. Pp. x + [438]. Waltham, Massachusetts: Blaisdell, 1966.

A non-mathematical approach to the physical sciences, with emphasis on the development of physics and its application to natural phenomena. The evolution of various theories in physics is used to correlate developments in astronomy, chemistry, and geology. The book seems well adapted to students who do not intend to specialize in science, but wish to obtain a general survey.

**Kristallchemie.** By JOSEF ZEMANN. Pp. 144. Berlin: Walter de Gruyter and Co., 1966. Price DM 5.80.

This little book is a double volume of the 'Sammlung Götschen'. It contains eight chapters, dealing with the Description of crystal structures, Atomic radii, Use of electrostatics in crystal chemistry, Covalent binding, Metallic binding, two chapters on certain general and special problems of crystal chemistry, and finally a chapter on the Real structure of crystals. It should be of very great use to German-speaking students requiring a general introduction to crystal chemistry. Others may find it useful as an introduction to the German technical vocabulary of the field.

**Research on the nature of mineral-forming solutions with special reference to data from fluid inclusions.** BY N. P. YERMAKOV AND OTHERS. Translated by V. P. Sokoloff. Pp. iv + 743. Oxford: Pergamon Press, 1965. Price £8.

Professor Yermakov is well known for his work in the field of fluid inclusions. The book is divided into three parts; the first, by Professor Yermakov alone, gives a general description of his work, and particularly of observations on the behaviour of inclusions in the region of the critical temperature, indicating the existence of highly concentrated fluids in nature. The phenomena include the re-solution, on heating, of large amounts of minerals precipitated from the inclusion fluids after trapping, and the formation of two immiscible liquids just before the critical temperature is reached. Parts 2 and 3 of the book consist of a wide range of articles by many investigators on a range of inclusion studies. There are many photographic illustrations, and the extensive bibliographies will be useful to those working in the fields of mineralogy, geochemistry, petrology and economic geology.