Book Reviews

Cristallochimie des Structures Tétraédriques. Erwin Parthe, translated by J. Coing-Boyat. Pp. XV + 349. Paris, Gordon and Breach, 1972.

This book is the french translation of « Crystal Chemistry of Tetrahedral Structures » of the same author published in 1964, and is enlarged with new chapters and updating of old ones.

Professor Parthe is engaged in bringing some order into the crystal chemistry of tetrahedral structures on the basis of a minimum number of fundamental principles, which, albeit semi-empirical, have nevertheless the advantage of rapid application over *a priori* calculations.

Of course, a critical evaluation in terms of electronic structures of atoms and of theories of the chemical bond derived from quantunm mechanical considerations are beyond the aim expressed by the author.

The reader is thus led to a succession of semi-empirical and formal reasonings, the most frequent being the average valence electron concentration (VEC) and the total number of valence electrons per anions (N_E/N_A).

For example the permissible compositions in quaternary normal tetrahedral structures having zincblende and wurtzite related structures (VEC=4 and $N_E/N_A=8$) are:

$$12_236_1 \quad 1_2246_1 \quad 134_251_1 \quad 23_245_1$$

where large numerals indicate valence electrons and small numerals chemical composition.

Mineralogists, crystallographers, solid-state physicists will find a great number of tables and figures of crystal and molecular structures.

A comprehensive table of references and separate author. formula. and subject indexes are also included.

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