Dr Suchet reviews the literature on the structures and physical properties of binary transition metal compounds since 1950 during which period the most active research in this field was carried out. In the first 50 pages he attempts to introduce the subject of crystal chemistry in a way which is hardly attractive to an inorganic chemist who has been through a normal university course. Not only does this section contain a large number of translational idiosyncrasies ('a bachelor electron' for an unpaired electron) but the author seems unconvinced of the value of band theory of solid state structures (p. 33); consequently this section lacks balance. The following 225 pages of the text contain a very tersely written account of various binary phases (mainly oxides but some chalcogenides and metalloid compounds) but there is a tendency to degenerate into a list of references (which are only up-to-date to June 1969). The last 70 pages of the book contain a detailed discussion of a number of magneto-optical properties of these binary compounds, and is more worthwhile reading for solid-state chemists, in view of their possible interest in solid-state devices.

B. J. HATHAWAY

Department of Chemistry
University College
Cork
Ireland

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.

Point group character tables and related data. By J. A. SALTHOUSE and M. J. WARE. Pp.v+88, Cambridge Univ. Press, 1972. Price £1.00

This small book is intended for the use of chemical spectroscopists. The contents are 1. Numerical data; 2. Geometrical data; 3. Principles of symmetry; 4. Crystallographic aspects of point symmetry; 5. Some aids to the use of character tables; 6. Point group character tables; 7. Group correlations; 8. Spectroscopic aspects of group theory; 9. Group and molecular properties at equilibrium; 10. Bibliography and references.

The bond to halogens and halogenoids. Part 2 (Organometallic compounds of the group IV elements, Vol. 2). Edited by ALAN G. MACDIARMID. Pp.viii+234. New York: Marcel Dekker, 1972. Price $ 19.75

The main body of the book is in three sections devoted to: Synthesis and properties of the germanium–halogen and germanium–halogenoid bond; Synthesis and properties of the tin–halogen and tin–halogenoid bond; Synthesis and properties of the lead–halogen and lead-halogenoid bond.