Halides of the First Row Transition Metals; by R. COLTON AND J. H. CANTERFORD. Wiley Interscience, New York, 1969, 579 pp., $25.00

This book forms part of a three volume series, the others being *Halides of the Lanthanides and Actinides*, by D. Brown and *Halides of the Second and Third Row Transition Metals*, by J. H. Canterford and R. Colton.

This volume deals with the chemistry of the first row transition metal halides and their adducts with other ligands. The first chapter presents a general survey of the chemistry of halides, oxyhalides and complex halides dealing, in particular, with methods for their preparation contrasted with corresponding methods for the heavier halides. A broad discussion of the types of structure encountered is also presented.

There follows eight chapters dealing in turn with each of the transition elements from titanium to copper inclusive. Each is subdivided according to oxidation state, halides and complex halides The main text includes the majority of papers available prior to 1968. Each Chapter includes an Addenda which brings the material up to January 1969.

The Authors have written a fully comprehensive treatment with extensive use of Tables of information. A wealth of physical data appertaining to these halides is presented. These include X-ray structures, vibrational and electronic spectroscopic data, various thermodynamic properties (*e.g.* dissociation pressures, heats and entropies of sublimation, formation, fusion, *etc.*), stereochemistry, magnetic properties and magnetic structures, melting and boiling points, decomposition temperatures, *etc.* Each Chapter is individually and extensively referenced which, whilst convenient, does unfortunately lead to rather unnecessary repetition of many references

The book is fairly free of typographical errors except for a disturbing (to this Reviewer!) number of errors in the spectroscopic notations used in the first half of the book. The symbol E_{1g} occurs frequently but is erroneous for the octahedral point group utilised.

The data have been reported with very little criticism by the Authors. This is unfortunate, but perhaps not unreasonable in the light of the mammoth task which the Authors set for themselves.

All in all the Authors are to be congratulated on the production of this book which is a mine of information for the practising synthetic inorganic chemist. At $25.00 it is expensive but well worth the investment.

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