

Book reviews

Inorganic Syntheses, Volume XXI; edited by J.P. Fackler, Jr., Wiley-Interscience, New York, 1982, xvii + 215 pages, £29.25.

The success of *Inorganic Syntheses* as a series is undeniable. Its aim, "to provide sufficient detail for each preparation so that a chemist of ordinary experience may duplicate the results on first trial", has remained unchanged over forty-three years, and the dogeared and stained volumes to be found in most libraries testify to its usefulness. However, Volume XXI represents its "coming of age", and some general points might now be considered. The selection of chapters is described by the editor as "arbitrary", and this is undeniable: the titles of the seven chapters are (1) Metal chalcogenide compounds, (2) Dinuclear and polynuclear compounds, (3) Organometallic compounds, (4) Coordination compounds, (5) Solid state, (6) Stoichiometrically uncomplicated compounds, and (7) Ligands and reagents. As chapter six includes the preparations of both $\text{Na}[\text{UF}_6]$ and S_8O , and chapter seven includes the preparation of UCl_4 and of 2-(diphenylphosphino)benzoic acid, it is of considerable doubt if this type of artificial categorisation has any merit at all. Given the reputation of this series, a little more editorial direction in the selection of topics would not go amiss. This aside, most experimental inorganic chemists will welcome the publication of reliable preparations of the pentasulphido complexes of platinum(II), platinum(IV), palladium(II) and rhodium(III), of $[\text{Fe}_4\text{S}_4(\text{SR})_4]^{2-}$ salts, of mixed-metal tetranuclear carbonyl clusters (e.g. $[\text{H}_2\text{FeRu}_3(\text{CO})_{13}]$), of C_6Me_6 complexes of ruthenium(0) and ruthenium(II), of $[\text{MCl}_4(\text{thf})_2]$ ($\text{M} = \text{Ti}, \text{Zr}, \text{Hf}$ or Nb) and $[\text{MCl}_3(\text{thf})_3]$ ($\text{M} = \text{Ti}, \text{V}$ or Sc), of one-dimensional mixed-valence tetracyanoplatinate complexes, and of the ligands Me_2PH and $\text{C}_5\text{Me}_5\text{H}$. It is unfortunate, however, that the selected preparation of $[\text{Ru}(\text{bipy})_3]\text{Cl}_2 \cdot 6\text{H}_2\text{O}$ leads to a product which contains significant levels of phosphate impurity, although this fact is documented neither by the authors nor the checker.

To summarise, this volume will become as well thumbed as its predecessors, but serious editorial thought is required if the standard is to be maintained.

School of Chemistry and Molecular Sciences
University of Sussex,
Falmer, Brighton BN1 9QJ (Great Briatin)

KENNETH R. SEDDON