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## Book review

*Inorganic Syntheses, Volume XVIII*, B.E. Douglas, editor-in-chief. John Wiley & Sons. New York, 1978, xvii + 238 pages, \$ 21.50.

The transition metal coordination chemist's eyes should twinkle as he glances through Volume XVIII of *Inorganic Syntheses*. Of the 113 preparations described in this latest volume, approximately 60 are coordination compounds. Chapter 1 contains the preparation of 23 complexes of Ni, Co, Fe, Cu, and Zn with eleven different 13–16 member macrocycles with saturated, unsaturated, and conjugated ring systems. A large number of these syntheses have been submitted by Daryle Busch and involve both template and non-template reactions. Chapter 2 contains the preparation of 7 metal carbonyl complexes, including an excellent procedure for the preparation of  $\text{IrCl}(\text{CO})(\text{PMe}_3)_2$ .

Chapter 3, entitled "Other Coordination Compounds", is a potpourri of preparations of metal complexes. Included in this chapter is a large number of improved syntheses for amine and ethylenediamine complexes of cobalt(III) and chromium(III); the preparation of optically active  $\text{Co}(\text{C}_2\text{O}_4)(\text{en})_2^+$  and two illustrations of its use as a cationic resolving agent; Sc, Ti, V, Cr, and Fe complexes of bis(trimethylsilyl)amine;  $\text{Pt}(\text{PPh}_3)_2(\text{un})$  complexes where un = ethylene or acetylenes; sulfur nitride complexes of nickel; and  $\eta^5$ -cyclopentadienylnitrosyl complexes of Cr, Mo, and W. The final procedure in Chapter 3 describes the recovery of iridium from laboratory wastes, a procedure that should be of interest to a large number of organometallic chemists. Chapter 4 describes two preparations for the phosphorus ylide,  $\text{Me}_3\text{PCH}_2$ , and its reactions with Hg, Au, and Ag compounds. Also of interest to the organometallic chemist is Chapter 7 which describes the syntheses of numerous phosphorus compounds, including  $\text{PhPR}_2$ , *t*-butylfluorophosphines, (dialkylamino)fluorophosphoranes and some miscellaneous phosphorus compounds. The remainder of the procedures focus on preparations of a variety of non-metallic compounds. Included are the syntheses of halodiboranes,  $\text{Na}[\text{AlH}_2(\text{OCH}_2\text{CH}_2\text{OCH}_3)_2]$ , a number of germanium hydride derivatives, the soluble silver (I) salt, silver(I) sulfamate and four preparations of sulfur-nitrogen compounds.

As one can see, this volume is heavily slanted in the direction of the transition metal chemist. I hope that as in the past each of the forthcoming volumes will focus on different types of inorganic compounds, so that the series overall will benefit all inorganic areas. As usual each procedure is described in detail, was independently checked, and it clearly describes all safety precautions and hazards and various properties. A listing of the 1976 OSHA standards for a number of volatile substances found in the inorganic laboratory is tabulated in the beginning of this volume. This is a practice I hope that future editors will update and continue.

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