

Book reviews

Coordination Chemistry Reviews, Vol. 37; Ed. by C.D. Garner and K.R. Seddon, Elsevier Scientific Publishing Company, Amsterdam, 1981, 339 pages, Dfl. 223.00, approx. US\$89.20.

This is a companion volume (dedicated to J. Chatt) to that which formed Volume 35 of this series. The two together provide a survey of the coordination chemistry of the transition metals for 1979. The present volume deals with the following elements, and in brackets are shown the number of pages and references, respectively: Sc (6/30), Ti (24/159), Zr/Hf (17/105), V (13/56), Nb/Ta (11/53), Cr (21/118), Mo (32/226), W (7/67), Mn (22/289), Tc/Re (17/124), Ni (69/254), Zn/Cd (18/261), Hg (8/82). The authors are, for the most part, well-known (R.I. Crisp, R.C. Fay, C.D. Garner, M.N. Hughes, L.F. Larkworthy, F.E. Mabbs, D.A. Rice, K.R. Seddon and A.A.G. Tomlinson). As with the companion volume, organometallic chemistry is not specifically included, although compounds such as cyclopentadienylmetal alkoxides are described.

The combined work is obviously of considerable value to practitioners of transition metal chemistry and may be regarded as a successor to the Specialist Periodical Report on transition metals formerly published by the Royal Society of Chemistry. The typography is attractive and the venture is to be welcomed.

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Catalysis and Chemical Processes; ed. by R. Pearce and W.R. Patterson, Leonard Hill, London, 1981, xix + 348 pages, £25.

This is an interesting book to which eleven scientists contribute, only one of whom is an academic (J.M. Winterbottom, Chemical Engineering, Birmingham). The others are in industry, for the most part at I.C.I. (D.G. Bew, J.P. Candlin, C.R. Harrison, W.R. Patterson, R. Pearce, P.E. Starkey, D.J. Thompson, and M.V. Twigg), although there are also chapters by T. Edmonds (B.P.) and D.T. Thompson (Johnson Matthey).

The book is divided into three parts. The first (87 pages) is entitled "The Catalyst as Part of the Chemical Process" and deals with such topics as Catalysis (W.R. Patterson); "The Catalyst: Preparation, Properties, and Behaviour in Use" (M.V. Twigg); "Methods of Operating Catalytic Processes" (P.E. Starkey); "Economic Aspects of Catalytic Processes" (D.G. Bew). Part 2 (51 pages) deals with feed stocks for organic chemistry and comprises one chapter on "Oil-based Chemistry" (T. Edmonds) and the second on "Coal- and Natural Gas-Based Chemistry" (R. Pearce and M.V. Twigg). Part 3