

superficial: if there is a fuller account in Volume 6 a simple cross reference would have been helpful to the reader. Quibbles about content are, however, minor. All in all, this book will be a major reference for all working in the field of coordination chemistry and stimulating reading also for organometallic chemists, even though compounds with metal-carbon bonds have been largely excluded. Several of the contributors have completed truly herculean tasks and written chapters of outstanding quality.

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Comprehensive Coordination Chemistry, Volume 4, Middle Transition Elements. xxii + 1405 pages, ISBN 0-08-035947-7.

This volume surveys the coordination chemistry of the metals Mn to Ir inclusive, with the exception of Tc, a review of which should appear later elsewhere.

The high standards of content and presentation achieved on the companion series "Comprehensive Organometallic Chemistry" have been maintained in this series and the chapters, although multi-authored, are uniformly readable, comprehensive and clearly arranged.

The organometallic content of the various chapters is, by definition, relatively small, although there are some exceptions. For example the alkyls and aryls of manganese receive detailed coverage and the general chemistry of cyanide and isocyanide complexes of all of the metals in question is thoroughly reviewed and referenced. This volume is, nevertheless, recommended general reading for the organometallic chemist, both because of the thorough referencing to organometallic areas, and because of the wealth of chemistry contained in this volume which has close organometallic interest.

The editors and publishers are to be congratulated on their production of a very valuable reference series.

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Comprehensive Coordination Chemistry, Volume 5, Late Transition Elements, xiv + 1258 pages, ISBN 0-08-035948-5

This is the fifth volume of the seven volume series of Comprehensive Coordination Chemistry, dealing with the elements nickel, palladium and platinum, copper, silver and gold, and zinc, cadmium and mercury. This series represents a worthy addition to the growing family of Pergamon reference works.

The volume opens with an extensive chapter on the coordination chemistry of nickel. This is organised primarily according to the oxidation state of the metal, and secondly according to the ligand type. The second chapter, on platinum, divides the

material according to the ligand type and it seems a pity that some generalised style could not have been agreed, since the variations make the comparisons rather difficult. Some readers will be disappointed with the lack of coverage of the medical applications of platinum(II) complexes and the almost complete absence of discussion of platinum nucleotide complexes, since these areas now represent a very significant proportion of the papers on platinum chemistry which are being published. Whilst I assume that these are dealt with in some detail in Volume 6, some cross-referencing would have been useful. The chapter on palladium is at the end of the volume (since it contains references running into 1986, unlike the other chapters, I deduce that it arrived late!) and is curiously divided, with two pseudo new chapters dealing respectively with palladium complexes of sulphur and phosphine ligands. I could not really see the justification for this. The treatment is relatively brief, and I found it a little disappointing when compared with the comprehensive accounts of nickel and platinum chemistry.

The chapters on copper, silver and gold were rather more successfully organised, with the material in each case classified first according to the oxidation state of the metal and afterwards by the type of ligand. Zinc and cadmium are treated together, with a separate chapter on mercury.

As is inevitable with a multi-author work there is considerable inconsistency in deciding which compounds should be considered to be coordination compounds. Roundhill, in particular, takes a generous view and many compounds which I would have classified as organometallic (including metal alkyls, alkene, alkyne, ylide and carbene complexes) appear in the chapter on platinum. The organometallic chemistry of nickel also rates significant space, but there is little or no mention of organometallic complexes of palladium. The omission of any consideration of cyclometallation reactions from this section is unexpected, even when considered from the standpoint of a purist coordination chemist. Most of the authors regard complexes of carbon monoxide and isonitriles to be within their remit.

Overall this volume is well produced, and the references to each chapter are particularly extensive and useful, though covering material only up to 1984 in most cases. The subject and compound indexes are clear, comprehensive and well presented. Readers might have wished for a firmer editorial hand in determining coverage and organisation of the chapters, and there have clearly been some production problems in relation to the palladium sections. The cost of such sets of volumes has long passed the amount which individuals could consider for personal purchase, but this series will clearly take its place as an indispensable reference book for all serious chemists, whatever their speciality.

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Comprehensive Coordination Chemistry, Volume 6, Applications, xiv + 1102 pages, ISBN 0-08-035949-3.

This volume covers an enormous amount of material. There are fifteen sections, starting with electrochemical applications, proceeding through uses in synthesis and