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## Book Review Comprehensive Coordination Chemistry

G. Wilkinson; R. D. Gillard; J. A. McCleverty

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## BOOK REVIEW

# COMPREHENSIVE COORDINATION CHEMISTRY

G. WILKINSON, R. D. GILLARD and J. A. McCLEVERTY (eds)

*Oxford: Pergamon Press 1987 7 volumes*

*Series: ISBN 0-08-026232-5 £1600 US\$2450*

Vol. 1:	ISBN 0-08-035944-2	£130	US\$195
Vol. 2:	ISBN 0-08-035945-0	£240	US\$395
Vol. 3:	ISBN 0-08-035946-9	£330	US\$495
Vol. 4:	ISBN 0-08-035947-7	£290	US\$445
Vol. 5:	ISBN 0-08-035948-5	£260	US\$395
Vol. 6:	ISBN 0-08-035949-3	£230	US\$345
Vol. 7:	ISBN 0-08-035950-7	£130	US\$195

Comprehensive Coordination Chemistry, in seven volumes, is a long-awaited set which aims to provide in a series of review articles an exhaustive coverage of this important field of inorganic chemistry. The task is tackled in a classical fashion beginning with general background topics, then moving on to considerations of various classes of ligands. Complexes (main group and early transition elements, middle, and then late transition elements) are covered by three volumes (3 to 5), element by element. Volume 6 covers applications of coordination chemistry over a wide-ranging field of topics. A volume of indexes completes the set.

As might be expected, the coverage from chapter to chapter is variable. This is inevitable in a work of this scope. However, the standard is always high and the authors have striven for as complete an overview and summary as is possible given (even in a series of this size) the lengths of the individual articles. It is not reasonable to single out particular chapters for special comment. The reviewer, however, has picked, at random, some areas of coordination chemistry and attempted to discern just how comprehensive the work is. It fails in few cases.

Nevertheless, it must be said that the winking out of particular aspects of coordination chemistry, or classes of complexes, can sometimes be a time-consuming task. This is because the index volume is not of quite the same high standard as is the material covered in the various chapters. A little imagination is frequently needed to select key words that enable the appropriate sections of the series to be assessed. Separate entries for chemical formulae are extensive. Also useful in volume 7 is an index of review articles and books covering specialist topics. An index is also provided in each of the first six volumes.

Another unfortunate aspect concerns, as is stated by the editors, the omission of chapters on phosphorus ligands and technetium, due to unforeseen circumstances. It is pleasing to note that these will be dealt with in special Polyhedron Reports.

Aside from these points, it must be said that the production is of a very high quality and the editors and contributors are to be complimented. The series is bound to become an indispensable classic. I should add that as a general reference work it will find as much use for coordination chemists as Mellor's Comprehensive Treatise does with respect to the older inorganic literature. No doubt the series will become dated, especially as coordination chemistry is again a mainstream area of current inorganic research. Some kinds of update volumes may prove to be desirable over the next few years.

Cost considerations will prevent the purchase of the series by most individuals. Practising chemists who can stretch to the costs will however be delighted by the investment, I am sure. It is possible to purchase individual volumes. Researchers will certainly wish to take advantage of this with respect to their own particular area of interest. For any library serving a science faculty or the chemical industry with any interests in coordination chemistry, the complete Comprehensive Coordination Chemistry will have to be high on the list of acquisition priorities.

Inorganic chemists have been done a service by the publication of the series. By its nature it will, and deserves to, enjoy great success as the touchstone reference for the subject for many years to come.

P.A. Williams

The following complete lists of contents are included so that contents of individual volumes can be selected for viewing or purchase.

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- 1.1 General Historical Survey to 1930
- 1.2 Development of Coordination Chemistry Since 1930
- 2 Coordination Numbers and Geometries
- 3 Nomenclature of Coordination Compounds
- 4 Cages and Clusters
- 5 Isomerism in Coordination Chemistry
- 6 Ligand Field Theory
- Reaction Mechanisms*
- 7.1 Substitution Reactions
- 7.2 Electron Transfer Reactions
- 7.3 Photochemical Processes
- 7.4 Reactions of Coordinated Ligands
- 7.5 Reactions in the Solid State
- Complexes in Aqueous and Non-aqueous Media*
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