

The author deviates somewhat from the title by including heterobimetallic derivatives such as the "ate" complexes derived, for the most part, from the alkali-metal ligand precursors. Brief commentaries on Schiff base ligands and on mixed ligand systems (i.e. cyclopentadienyls) are included. Finally the article ends with an excellently reviewed section dealing with the applications of the "LnOR" systems previously described.

Lanthanide Metallocenes in Homogeneous Catalysis

F.T. Edelmann

The final article is a review of recent developments in the use of lanthanide metallocenes in homogeneous catalysis and reports on olefin transformations such as hydrogenation, polymerisation, hydroamination, and hydroboration; diene and alkyne transformations such as cyclization, hydrosilylation and polymerisation; and finally polyester formation and some miscellaneous hydrogenation and isomerisation catalysts.

In conclusion this book is highly recommended for any serious researcher in the area of lanthanide chemistry.

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Handbook of Palladium-Catalysed Organic Reactions, Jean-Luc Malleron, Jean-Claude Fiaud and Jean-Yves Legros. Academic Press, 1997, 304 pages. £50, ISBN 0-12-466615-9.

Palladium has a long and distinguished history in homogeneous catalysis. The complexes used are simple, largely air- and water-stable and readily available. The mechanisms are often well-understood and organic chemists have a good "feel" for what can be done. The problem is that there is so much literature that finding the right references quickly can be quite difficult.

This handbook organises reaction types into 84 classes (e.g. "Cross-coupling of terminal alkynes with RX derivatives", and "Substitution, addition and elimination of on pro- π -allyl substrates"). Each of these 84 classes has a graphical abstract which aids enormously in finding the type of reaction one needs. The main body of the Handbook is taken up with an organisation of over 3000 reactions into the 84 classes. Of course, the population of each class varies enormously; "Cross-coupling of organometallics with RX deriva-

tives" has over 400 entries while, "Allylation of pronucleophiles with allylstannanes" has but one.

The Handbook is clearly laid out and is easy to use. Choose the reaction type, check out the mechanism, browse the entries and look up the references. There is also a CD-ROM, "Database of Palladium Chemistry: Reactions, Catalytic Cycles and Chemical Parameters on CD-Rom", (£545 + VAT) with which one can search for reagents, products, mechanism, author name, periodic structure, substructure, solvent, catalyst ligand and other parameters. See <http://www.hbuk.co.uk/ap/books/palladium> for details. I cannot tell you how the (PC-format only) CD performs because only a demonstration copy was provided.

At £50 the Handbook is a bargain. It is a shame that it is bound in spiral with a fragile cover since I imagine the Handbook being used in the lab environment. It is, after all, not the sort of book that one might take to bed of an evening. Then again, neither is the Yellow Pages.

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Synthetic Methods of Organometallic and Inorganic Chemistry (Herrmann/Brauer) Vol 6, F.T. Edelmann (ed.), Thieme, Stuttgart, 1997, x + 226 pages, DM124. ISBN 3 13-103071-2.

This is the sixth in a new series of eight volumes on *Synthetic Methods of Organometallic and Inorganic Chemistry* edited by W. Herrmann and intended as a successor to the *Handbuch der Präparativen Anorganischen Chemie* which inorganic chemists know simply as *Brauer*. The scope has been expanded to take account of the considerable growth of organometallic chemistry since the earlier volumes of Brauer were published. As organometallic, alkoxy, amido and coordination compounds are almost always synthesised from simple inorganic precursors such as halides or oxides it is appropriate that the syntheses of all these classes of compounds of a particular group of elements are brought together in a single volume.

The book has been edited by F.T. Edelmann and P. Poremba. Besides the sections they have written themselves there are extensive contributions from a wide range of experts who have been responsible for the development of the inorganic and organometallic chemistry of the *f*-block elements. The four chapters cover