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Book reviews

Gmelin Handbook of Inorganic Chemistry, 8th edition, Pt. Supplement Volume A2: Isotopes, Atoms, and Clusters, Springer-Verlag, Berlin, 1988, DM 1597. ISBN 3-540-935583-5.

This book presents an account of the properties of the atoms of the elements Ru, Rh, Pd, Os, Ir and Pt. It covers in comprehensive fashion the nuclear properties of the various isotopes, and their decay patterns. It then describes the production and separation of the various isotopes, and subsequently the physical properties (spectra, ionization energies etc.) of the atoms and ions. Much of this material is of only passing interest to chemists, though perhaps not to physicists.

The final section of the book is concerned with molecules and clusters, and is introduced by a discussion of what constitutes a cluster. However, all the species discussed are "naked" clusters without supporting ligands, though some are supported on surfaces. The best defined or understood are dinuclear species such as Ru_2.

This book continues the comprehensive survey of inorganic chemistry in the traditional Gmelin fashion. It is beautifully produced and the data are readily accessible. However, in view of its content this particular volume will not be greatly used by organometallic chemists.

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G.J. Leigh

Comprehensive Organic Transformations; by Richard C. Larock, Verlag Chemie, Weinheim, 1989, 1160 pages, DM 118. ISBN 0-89573-710-8.

There can be very few organometallic chemists who are not at some time, involved in organic transformations either to prepare the organic part of a compound or to test a new reagent. Numerous books and reviews exist to aid the chemist in searching the burgeoning synthetic literature. This particular volume, subtitled "A Guide to Functional Group Transformations" has a number of features which commend it. The book is a compilation of references to useful group transformations, mainly but by no means exclusively drawn from the literature of the last 25 years. The important role that organometallic chemistry has played in developing new synthetic methodology is clearly reflected on almost every page. The book is organized in terms of reactions leading to particular functional groups. Thus there are chapters on alkanes, arenes, alkenes, alkynes, halides, amines, ethers, alcohols and phenols, aldehydes and ketones, nitriles and carboxylic acids. Each chapter is subdivided into sections covering the standard routes that lead to the functional group, involving, for example, oxidation or reduction etc. Each section is

a listing of references to applications of these methods and includes pertinent reviews. There is relatively little coverage of heterocyclic chemistry. The effort that has gone into preparing this book is substantial. A typical page may include upwards of 50 references and there are over 1100 pages. The choice of references is obviously subjective, particularly where general methods that have been used many times are concerned. Nevertheless the criteria that the author has used to select the references seem on inspection to be sound. The topics cover a wide area of interest to the organometallic chemist including, for example, organoboron and organosilicon chemistry, π-allyl palladium chemistry, enantioselective catalysts and metal-promoted coupling reactions.

This is a very useful reference book and should appeal to all organometallic chemists who have to seek literature precedent for synthetic transformations.

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Erratum

Re: Zur Reaktion von Metall-koordiniertem Kohlenmonoxid mit Yliden. XXII. Bis(diphenylphosphino)methanid-Eisen-Komplexe Cp(L)Fe($Ph_2PCHPPh_2$) (L = CO, Me_3P); by Frank Scherhag, Harald Käb, Theresa A. Bright and Wolfgang Malisch
(*J. Organomet. Chem.*, 385 (1990) C27–C32)

Page C28, equation 1 should read as follows: