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Book review

Gmelin Handbook of Inorganic Chemistry. 8th Edition, *Ti — Organotitanium Compounds, Part 4. Mononuclear Compounds 4, Cumulative Index for Parts 1 to 4.* By U. Thewalt; A. Slawisch, editor. Gmelin Institut für Anorganische Chemie der Max-Planck-Gesellschaft zur Förderung der Wissenschaften and Springer-Verlag, Berlin/Heidelberg/New York, 1984, ix + 242 pages, DM 851. ISBN 3-540-93502-9.

This is the fourth in a series of volumes on organotitanium compounds. It continues the treatment of such complexes having two ^{5}L ligands and concludes the description of mononuclear organotitanium compounds by considering complexes having ^{n}L ligands, where $n > 5$. The section headings are as follows: Organotitanium Compounds Part 4 (Concluded from Vols. 1 to 3) (60 pages); Compounds with Ligands Bound by Six C Atoms (22 pages); Compounds with Ligands Bound via Seven C Atoms (7 pages); Compounds with Ligands Bound via Eight C Atoms (13 pages); and Compounds with an Additional Ligand Bound via Six to Eight C Atoms (14 pages).

Representative compounds discussed include the following: $(\pi\text{-}C_5H_5)_2Ti(CO)_2$, $(\pi\text{-}C_5H_5)_2Ti([CH_2]_4)$, $(\pi\text{-}C_5H_5)_2TiC_3H_5\text{-}\pi$, $\pi\text{-}C_7H_7TiC_5H_5\text{-}\pi$, $\pi\text{-}C_8H_8TiC_5H_5\text{-}\pi$, and $(\pi\text{-}C_5H_4(CH_2)_2C_5H_4\text{-}\pi)TiCl_2$, using the nomenclature of the volume. As to the latter point, it will be noted that IUPAC rules are not followed, e.g., square brackets are not found, the metal is not listed first, followed by the ligands in alphabetical order, and the hapticity of the ligand is not indicated directly, although the symbol π is used to denote the general mode of bonding. Another aspect, which deals with nomenclature, is the use of the word 'valency', where actually 'oxidation state' is meant. The reviewer is aware that the description of various complexes of metal oxidation state 0 as being those of the 0-valent metal is commonly used; nevertheless, he finds this usage deplorable.

There are numerous clearly drawn formulae, as well as tables of data, and, all in all, this is undoubtedly a very valuable contribution, with the literature being covered to the end of 1979. However, the corresponding section in 'Comprehensive Chemistry' is just about as complete.

A major part of the book (123 pages) is taken up by indexes. The first of these is an Empirical Formula Index (37 pages), and the second a Ligand Formula Index, which provide information on location of the appropriate compound in the text, as well as in the tables.

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