

Book reviews

Gmelin handbook of inorganic chemistry, 8th edition, *Fe – Organoiron Compounds, Part B9: Mononuclear Compounds 9*, Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, 1985, ix + 286 pages, DM 1064. ISBN 3-540-93522-3.

Organometallic chemists with a central interest in iron are extremely fortunate. They have a supreme advantage over all other organometallic chemists, since to date, including the volume under review, the Gmelin Institute has devoted twenty-six volumes to the organometallic chemistry of iron. Organotin chemistry comes a poor second with twelve volumes, organonickel chemistry trails in third position with six volumes, and for many elements (most notably molybdenum, tungsten and osmium) not a single organometallic volume has appeared.

The volume under review, Part B9, continues the invaluable treatment of mononuclear organoiron compounds: it deals exclusively with compounds of the general type $[(\eta^4\text{-L})\text{Fe}(\text{CO})_3]$, where L is a seven-, eight-, or nine-membered ring system (n.b. the three final pages of text describe the rare examples of ten-, eleven- or twelve-membered ring systems). In true Gmelin style, the volume eccentrically describes these ligands as ^4L ligands. The specific C_7 and C_8 ring systems described in this volume include azepine, diazepine, oxepine, Ph-1- BC_6H_{13} , cyclohepta-1,3-diene, cycloheptatriene, cyclohepta-1,4-diene, cyclooctadiene, cyclooctatriene, cyclooctatetraene, and the substituted derivatives of these ligands. Five hundred and forty-five complexes are described in welcome detail, the literature covered being complete to the end of 1983, with many 1984 references included. As well as the expected synthetic and structural information (and the skeletal and molecular structures illustrated are exceptionally clear), the volume contains a wealth of spectroscopic data (intelligent use of tables is made), and details of, inter alia, electrochemical, photochemical, thermodynamic and electronic structural studies are also included. Moreover, the reactions of the complexes are discussed at length. Remarkably, this volume is the work of a single author, Adolf Slawisch (who is also the chief editor of the series), and we owe him a debt of gratitude for producing this book in such a lucid and meticulous style. This volume, as with all other members of the series, is a must for all chemistry libraries, and (despite its high cost) should be on the private bookshelves of all workers in this fascinating area.