Book Reviews

Gmelin Handbuch der Anorganischen Chemie (Gmelin Manual of Inorganic Chemistry) Supplement to the 8th edition. Vol. 14. Organo-iron Compounds Part A. Ferrocene 1. Springer-Verlag, Berlin-Heidelberg-New York, 1974. 395 pp. (in German).

This volume of the well-known compendium covers the literature through mid-1973 and even includes a number of 1974 references. It covers ferrocene and all those monosubstituted derivatives 'fcR' (why fc in place of the more commonly used 'Fc'?) in which the substituent R contains only the elements C, H and/or halogen. Its place as the best secondary source in the field will be ensured for a long time by its completeness which is well up to the high standard expected of this series. This reviewer found very few, largely trivial errors, most notably the omission of reference to J. Chem. Soc. C, 1966, 251 leading to the assertion (p. 167) that disubstitution products have not been found in aminomethylation of ferrocene - though that of alkylferrocenes is referred to in the next paragraph. This is followed by an account of a reaction of CH₂O and HCOOH with $fcCH_2CH_2N(CH_3)_2$ – a process which is unknown and unlikely to occur; the actual references relate to fcCH₂CH₂NH₂ and the reaction is also known for fcCH₂CH₂NHCH₃ [Chem. and Ind., 1958, 1144; J. Chem. Soc., 1961, 4600]. Presumably both these errors will be corrected in the next volume which should include the products of the reaction referred to.

The more serious criticisms are really comments on the system. Gmelin used to treat elements separately in an order which followed a firm, albeit somewhat obscure classification. The new supplement already includes a volume on Cr and V and on checking whether the present volume had been received in the University library the reviewer was not surprised that it had been placed amid those of 'System – No, 14' (Carbon!). Also, completeness is surely taken to extremes when all references to Russian papers list both the original and the English translation and when a table of nmr data lists both $\delta_{\rm H}$ and τ values with an explanation of the relation between the two. At a time when libraries find the cost of such publications increasingly burdensome, more attention might be paid to avoiding unnecessary duplication. The practice of listing references after each sub-section is the most striking example — many must appear twenty times in the present volume. Other examples arise through discussion of general reactions in one section and the formation of individual products in another: *e.g.* the arylation (pp. 133 - 142) of ferrocene and the arylferrocenes (pp. 320 - 331).

It must be stressed, however, that these are minor criticisms of an otherwise wholly admirable summary which includes discussion of structural problems and of such theoretical points as reasons for the stability of ferrocenylcarbenium ions as well as full coverage of all the physical and chemical properties of the compounds.

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Erratum to Volume 14

Catalysis of the sulfur dioxide insertion by boron(III) fluoride

(Inorg. Chim. Acta, 14 (1975) L7 - L8)

On page L7, 3rd paragraph, line 5 should read: "... react with η^4 -C₄H₆Fe-"