

*Organometallic Compounds: Methods of Synthesis, Physical Constants, and Chemical Reactions*; Springer Verlag, Berlin.

Volume I. *Compounds of Transition Metals*; Edited by M. DUB, Second Edition, 1966, xviii + 828 pages, DM 98.

Volume II. *Compounds of Germanium, Tin and Lead, including Biological Activity and Commercial Application*; Edited by R. W. WEISS, Second Edition, 1967, xx + 697 pages, DM 98 (\$24.50).

Volume III. *Compounds of Arsenic, Antimony, and Bismuth*; Edited by M. DUB, Second Edition, 1968, xx + 925 pages, DM 98 (\$24.50).

These volumes provide a comprehensive source of information on the methods of preparation, physical properties, chemical reactions and applications of organometallic compounds of the metals indicated in the titles, and are based on searches through *Chemical Abstracts* covering the period 1937–1964. They will be of considerable value to organometallic chemists for day-to-day consultation, and with the increasing importance of organometallic chemistry they will be needed for occasional reference in many advanced chemical laboratories not specializing in this field. It is important for users to realize that the accounts are entirely non-critical, and that the original references will often have to be examined and assessed.

A disadvantage of the volumes is that the compounds are listed by structural class rather than, for example, in an order based on empirical formulae, and it sometimes takes a while to decide which class is likely to contain the compound one is interested in. The publishers intend to bring out a comprehensive formula index for all three volumes if there is sufficient interest on the part of users, and it is to be hoped that they will indeed go ahead with this, although a separate index incorporated into each volume would have been more helpful.

C. EABORN

*Transition Metal Chemistry; a Series of Advances, Vol. 4*; Edited by RICHARD L. CARLIN, Marcel Dekker Inc., New York, 1968, 10 + 353 pages, \$ 16.75.

This volume of transition metal chemistry does not contain any articles directly concerned with organometallic chemistry, but there are three chapters which will be of considerable interest to the reader with a bias towards organo-transition metal chemistry. R. L. Martin and A. H. White give a thorough account of "The Nature of the Transition between High-Spin and Low-Spin Octahedral Complexes of the Transition Metals", L. Sacconi surveys the "Electronic Structure and Stereochemistry of Nickel(II)", and G. N. Schrauzer gives a very readable account of the "Coordination compounds of unsaturated 1,2-Dithiols and 1,2-Dithioketones".

The remaining articles are "Paramagnetic Relaxation in Solutions" by W. B. Lewis and L. O. Morgan, and "The Spectra of  $\text{Re}^{4+}$  in Cubic Crystal Fields" by P. B. Dorain. This latter article seems to be excessively specialised for a volume of this sort.

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