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Book reviews

Landolt-Börnstein. Numerical Data and Functional Relationships in Science and Technology. New Series. Group II; Atomic and Molecular Physics; Vol. 11. Magnetic Properties of Coordination and Organometallic Transition Metal Compounds, Supplement 3; editors, K.-H. and A.M. Hellwege. Springer-Verlag, Berlin etc., 1981, xxxiv + 1002 pages, DM. 1190.

This addition to this fine (but inevitably costly) series of compilations of physical data is concerned with publications on magnetic susceptibilities and electron spin resonance which appeared in 1971 and 1972. As usual, the presentation is immaculate. Organometallic chemists concerned with magnetic properties of transition metal compounds will find this volume and its earlier companion volumes of great value, and will regret that similar compilations for the years 1972—1981 are not yet available.

About three quarters of the pages are devoted to magnetic susceptibility data and one quarter to electron spin resonance data. As would be expected, compounds of Fe, Co, Ni, and Cu together take up a large amount of the total space.

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Silicon in Organic Synthesis; by E. Colvin, Butterworths, London etc., 1981, xi + 348 pages, Cased £30.00, Limp £15.00.

The most striking development of organosilicon chemistry in the past decade has been the use of organosilicon compounds in organic synthesis. The development will be further accelerated by the appearance of this book, which succeeds impressively in summarizing the most relevant features of organosilicon chemistry for the guidance of practising synthetic organic chemists. (It also, incidentally, provides a very useful summary for practising organosilicon chemists of the most important uses of organosilicon compounds in organic synthesis.)

The author has succeeded in his formidable task by using reaction mechanisms to rationalize the wide range of seemingly diverse material. For this purpose the account is divided into the following topics: physical properties, the β-effect, α-metallated organosilanes, rearrangements involving migration of silicon, organohalogenosilanes and substitution at silicon (a very brief account),