

BOOK REVIEWS

Landolt-Börnstein, Numerical Data and Functional Relationships in Science and Technology, New Series. (Ed. in Chief: K.-H. Hellwege). *Group III: Crystal and Solid State Physics. Vol. V, Parts a and b; Structure Data of Organic Crystals;* by E. Schudt and G. Weitz. Springer-Verlag, Berlin/Heidelberg/New York. xxx + 1626 pages, DM 960, US \$ 277.20.

This book (which is in two parts) is the first of the volumes in the new series of Landolt-Börnstein to present tables of structures and dimensions of organic and inorganic crystals. (It corresponds to Vol. 1/4 "Kristalle", of the 6th (1955) edition.) It presents a compilation, complete up to the end of 1968, of the space groups and lattice constants of all organic and organometallic crystals which have been studied by means of X-rays and neutron diffraction, data for about 7850 compounds being included. Simply for convenience, in view of its great bulk, it is divided into two parts, a and b, of xxii + 736 and viii + 890 pages, respectively, part a being concerned with compounds containing 1-13 carbon atoms, and part b with those containing 14-120 such atoms. The two parts must be regarded as constituting a single entity, and thus indexes appear only at the end of part b. Of special interest to readers of this journal is that the general index of all the substances is followed by a special index of coordination and organometallic compounds. Elements and inorganic compounds will be covered in later volumes of the series.

This publication represents a massive piece of work by the compilers. It constitutes a most valuable reference volume, which will transform the problem of literature searches in the field concerned. Even at its inevitably very high price, it will be indispensable in the libraries used by the many chemists interested in the structures of organic and organometallic compounds.

C. Eaborn

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Organometallic Reactions, Volume 1; Edited by E. I. Becker and M. Tsutsui, vii + 389 pages. Wiley Interscience, New York, London, Sydney, Toronto, 1970. Price £8.50.

The continuing growth of secondary literature on Organometallic Chemistry has led to the situation where much material strikes me as déjà vu and little is added to our basic understanding of organometallic structures and reactions. This new review series has a modest aim—to provide fairly comprehensive accounts of the synthesis and reactions of selected groups of organometallic compounds.

I learned a great deal from this first volume which is largely given over to the first part of a discussion of the reactions of organomercury compounds. In this review L. G. Makarova does a Stakhanovite's job of summarising the chemistry contained in nearly 900 references, dealing primarily with halides, exchange reactions with metals

and acids and reactions with hydrogen donors and halogens. Not the least to be said for the article is its reminder of the immense amount of work which has been carried out in the Soviet Union on this chemistry. Vol'pin and Shur add to the Moscow Institute's contributions with a review of the work up to 1969 on the homogeneous activation of dinitrogen. It is in a rather different vein for it runs to a brief account of the structures of molecular nitrogen complexes and related matters as well as dealing with detailed experimental procedures. Finally Mole has written a comprehensive account of redistribution reactions of organoaluminium compounds where so much useful kinetic data has been derived from magnetic resonance studies.

I shall be interested to see whether succeeding volumes keep up this momentum ; if they do, the editors and publishers may have a pretty useful series on their hands.

R. Mason

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