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Short Notices

Numerical Data and Functional Relationships in Science and Technology New Series

Group III: Crystal and Solid State Physics:

Volume 4: Magnetic and other Properties of Oxides and Related Compounds, Part a. Landolt-Börnstein

Editors: K. H. Hellwege and A. M. Hellwege

Pp xv + 367, 519 figures (Springer Verlag, 1970)
D.M. 218; \$60.00

This part contains four articles in English and partly in German on: (1) "Fe oxides and Fe-Me-O compound systems (other than ferrites garnets and perovskites)" by R. A. Lefever; (2) "Compounds with lanthanide and actinide elements of some special structure types" by F. Holtzberg, T. R. McGuire and S. Methfessel; (3) "Perovskites" by J. B. Goodenough and J. M. Longo; (4) "Yttrium and rare earth garnets" by D. L. Huber. Part *b*, due to appear later, will deal with other garnets, spinels and hexagonal ferrites. This book follows the familiar pattern of the Landolt-Börnstein volumes in that it provides very comprehensive numerical data in the form of tables, graphs and diagrams, prefaced by a brief introduction, interlaced with terse summaries of theories and concluded by long lists of references. The subject matter includes information on phase diagrams, details of crystalline and magnetic structure and it extends over a wide range of mechanical spectroscopic, electrical and magnetic data. Many of the results quoted have been established during the last few years and substantial gaps remain in the underlying theory.

The authors are well-known authorities in their fields and this is reflected in the high standard of presentation and selection of their material. The book meets a definite need and will inevitably become a standard source of reference for anyone who, in the next few years, will need information quickly on the physical constants

which determine the properties of these transition metal compounds. The cost of producing a work of this kind is inevitably considerable, though the price of this series is high by any standard. This will inevitably limit its availability to well-endowed specialist centres. This is a pity and it raises the question of whether it continues to be an economic proposition to provide encyclopaedic information on Materials Science in the format of an expensively bound, bi-lingual dictionary.

R.P.

Clean Surfaces: Their Preparation and Characterisation for Interfacial Studies

Edited by George Goldfinger

Pp 385 (Marcel Dekker, New York 1970) 178s

Based on a Symposium held at North Carolina State University at Raleigh in 1968, this volume contains amplified versions of the papers presented there. The symposium aimed at an interdisciplinary collection of information on the nature and preparation of clean surfaces. The papers reflect this objective and include surface studies of a wide variety of materials including polymer crystals, latexes, alkali halides, mercury, aqueous liquids, glass, minerals, and semiconductor surfaces. A similarly wide variety of techniques employed for these surface studies include low energy electron diffraction, scanning electron microscopy, ellipsometry, transmission electron microscopy, electrochemical techniques and methods for adsorption studies. The book includes a number of review and theoretical papers and, since most of the chapters have good introductions, pointing out the relevance of the work to applications etc., it can be strongly recommended to readers not conversant with the field, as well as specialists, who will find the papers generally of a high standard of presentation and technical content. The only regret is that no discussion of papers is included, but it is clear that such interchange of ideas across disciplines could bring significant advances in this and other fields of materials science.

A.F.W.W.