New reference books on magnetic properties of matter

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Landolt-Börnstein. *Numerical Data and Functional Relationships in Science and Technology.* New Series/Ed. in Chief O. Madelung-Group III. Vol. 19: Magnetic Properties of Metals. Subvol. C: Alloys and Compounds of d-Elements with Main Group Elements; subvol. e2: Compounds of Rare Earth Elements with Main Group Elements; Vol. 27: Magnetic Properties of Non-Metallic Inorganic Compounds Based on Transition Elements. Subvol. a: Pnictides and Chalcogenides.–Springer-Verlag, Berlin; Heidelberg; New York; London; Paris; Tokyo, 1988. 306, 425, 465 pp.

Three more volumes of the well-known reference series devoted to the magnetic properties of metals and nonmetals have been published. They are all supplements to books that have been published in the seventies in a new series gathering together different data, in particular, on solid-state physics.

The section c2 of volume 19 contains information on the magnetic properties of alloys and compounds of d elements and elements of the Main Group. In several chapters compiled by well-known specialists in this field (Y. Nakamura, D. Fruchart, S. Misawa, P. J. Webster, and others) numerous data are assembled that have been obtained with the aid of practically all the experimental methods utilized in the physics of magnetic phenomena. The first section examines alloys and compounds of 3d elements with C, Si, Ge, Sn and Pb followed by Heusler alloys and metallic perovskites. This is followed by information on compounds of the 4d and 5d elements with elements of the Main Group.

Volume III/19 e2 begins with the section devoted to the properties of compounds of rare-earth elements with Be, Mg, Zn, Cd and Hg (P. Morin). In subsequent chapters data are given on various properties of compounds of rare-earth elements with boron (H. Oesterreicher and K. Oesterreicher) and with Al, Ga, In, Tl, C and others. (A. Chelkowski).

The publication of volume III/27 reflects the continuing interest in the magnetic properties of nonmetals. It is a supplement to Volume III/12 (which in its turn consisted of three parts), the publication of which was completed in 1982. Section a of volume III/27 contains data on the properties of pnictides, chalcogenides and compounds related to them (the authors are K. Adachi and S. Ogawa). In subsequent sections of this volume the publishers propose to collect information on magnetic properties of binary, pseudobinary and more complicated oxides.

On the whole all three volumes being reviewed are distinguished by completeness and reliability characteristic of the entire project. References to the scientific literature include work published in 1987.

The new books, undoubtedly, are of interest for a wide circle of specialists in the physics of magnetic phenomena.

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