

BOOK REVIEWS

Advances in the Synthesis and Reactivity of Solids, Volume 2. Edited by Thomas A. Mallouk. JAI Press Ltd., London/Greenwich, CT, 1994. xii + 283 pp. \$78.50.

Four of the five review articles in the second volume in this series (see *J. Solid State Chem.* 105, 305 (1993) for a short review of Volume 1) concentrate on aspects of preparative solid state chemistry. Meyer discusses the use of the ammonium ion in inorganic synthesis, Rouxel covers soft chemical approaches to solid state synthesis, Stein and Ozin present a comprehensive review of sodalite, and Fister *et al.* discuss the use of superlattice reactants to control solid state reactions. The fifth review (Yethiraj and Honig) discusses phase transitions in 3d metal oxides.

In addition to preparative details, each chapter includes details on structures and some physical properties. A welcome comprehensive index is included.

Handbook of Molecular Sieves. Rosemarie Szostak. Van Nostrand-Reinhold, New York, 1992. xvi + 584 pp. \$153.95.

This is a particularly useful compilation of structural and preparative data (including, in many cases, thermal and other spectroscopic information) for over 500 zeolitic materials (both synthetic and naturally occurring). Of particular interest is the inclusion of framework topologies for many of the zeolite structures.

While the data are presented without critical analysis, the author has extensively cataloged the literature through 1991, including patents and conference proceedings. Unfortunately, due to space consideration, references are given in condensed form (omitting complete pagination and authors' names), which limits the usefulness of the handbook for cross-referencing by author. There is an extensive index by subject, structure, and organic additives.

Advances in Solid State Chemistry, Volume 3. Edited by C. R. A. Catlow. JAI Press Ltd., London/Greenwich, CT, 1993. x + 285 pp. \$90.25.

Five articles, covering a broad range of topics, make up the third volume in this series. Two of these involve high temperature superconductivity: structure and electronic properties of oxide superconductors (Singh and Edwards) and simulation studies of structural and defect properties (Allan and Mackrodt). Meyer and Hardouin Duparc review recent studies of plastic crystals, Townsend presents a short discussion of the control of defects in lithium niobate, and Cormack summarizes defect processes in ceramics with special attention to the formation of crystallographic shear planes. As in previous volumes in this series, a subject index is lacking.

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