

## BOOK REVIEW

**Basic Solid State Chemistry.** By ANTHONY R. WEST. Wiley, New York, 1988. x + 415 pp., \$32.95.

For many years there has been a need for a textbook which could be used as an introduction to solid state chemistry. Although a number of specialized books (Wells, Hanay, etc.) exist, there is lacking a textbook which covers synthesis, characterization, and applications. Some 5 years ago, Dr. A. R. West of the University of Aberdeen wrote a book entitled "Solid State Chemistry and Its Applications" in an attempt to fill this void. In June 1987, John Wiley and Sons reprinted the book, which is now available as a paperback. Many of the errors which were present in the first printing have been corrected. The book, which may be used for a one-semester introductory course, contains some 21 chapters emphasizing a nonmathematical treatment of the principles and applications of structural inorganic chemistry. More than one-third of the text deals with crystallography; the material is well written and can be used as a good introduction to this aspect of solid state chemistry. There are two excellent chapters dealing with phase diagrams and phase transitions. These subjects, although

of great importance, are not available in most modern physical chemistry textbooks. The presentation of electrical and magnetic properties of solids represents a bare minimum of what a student should know; anyone involved in research will need to refer to more specialized textbooks.

The reviewer was not pleased with the brief treatment given to preparative methods—the total discussion is limited to a single chapter of some 40 pages. This is one area of solid state chemistry, which, despite its importance, seems to be absent from all of the modern textbooks. Another shortcoming of the book is the arbitrary selection of the topics chosen for the last chapters dealing with applications. Certainly, solid state organic chemistry deserves more than 13 pages. A number of the examples used, e.g., cement and concrete or refractories, although important, could be deleted and better use made of these pages. The overall emphasis of crystallography and structure, though commendable, sacrifices a balance in the treatment accorded to the preparation of materials and their applications.

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