

and R. Roy, *The Major Ternary Structural Families*) it is published without a general preface and in consequence stands in isolation as an apparently independent textbook. Structure–property relations are central to our understanding of the crystalline state; but data are generally sparse, being abundant only for some—not all—structures of current technological interest. So however hard Professor Newnham tried to produce a rounded comprehensive text he was doomed to failure unless he were prepared to obtain the experimental data himself; that would have made vol. 2 the last volume, by many years, to be published in this series.

A chatty preface and a short introductory chapter on *Symmetry and Crystal Physics* are followed by six chapters, each of which is concerned with one group of properties: *Electronic Transport in Materials*, *Thermal Properties and Ion Transport*, *Ferroelectrics and Other Ferroic Materials*, *Optical Materials*, *Magnetic Materials*, and *Materials with Useful Mechanical Properties*. In general each chapter is an independent essay and can be read in isolation.

The level of assumed knowledge is so variable from chapter to chapter and within some chapters that it is far from clear for what sort of reader the book was written. For instance, chapter 1 devotes four pages to an elementary exposition of crystal classes, three to space groups, and one to the calculation of interatomic distances; this is all too brief and hurried to get the non-crystallographer to grips with these important concepts and too trivial to be of interest to the practising crystallographer. In other chapters the reader is assumed to be thoroughly familiar with all the physical properties discussed and with a variety of technical terms. All too often the text is a mere collection of statements; there is not enough argument and the status of adjacent statements is occasionally so obscure that it becomes difficult to distinguish with certainty between present development and future potential. In too much of the book the central theme, the relationship between structure and properties, seems to have been almost forgotten. Only in the chapter on magnetic materials is the reader presented with a sustained exposition of how structural knowledge can be used to facilitate the search for new materials for technology. Overall the hoped-for synthesis of the relationship between crystal structure and physical properties is elusive. Nevertheless the author is to be congratulated on bringing together within the compass of a single volume such a wealth of technical information, much of it from not very readily accessible sources. The book is well produced and has excellent Chemical and Subject Indexes.

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Tank (R. W.), Editor. *Focus on Environmental Geology: a collection of case histories and readings from original sources* (Second Edition). New York and London (Oxford Univ. Press), 1976. xiv + 538 pp., 106 figs., 36 sketch-maps. Price (paperback) £5.00.

The pace of research and publication in environmental geology has accelerated so rapidly that an updated and revised second edition follows only three years after the first publication of this most useful and informative book (*Mineral. Mag.*, **39**, 1974, 934–5). An introduction to the subject of environmental geology is followed by a section on Geological Hazards and Hostile Environments, which deals with volcanism, earthquake activity and tectonic movements, mass movements, erosion and sedimentation, and floods. Other sections on Mineral Resources and the Environment, Water Resources, and Waste Disposal cover aspects that students of geology should be conversant with, but so rarely are. Unfortunately the more than doubling of the price in three years will probably limit the use of the book, which ought to be read by students, to reference on library shelves rather than individual purchase.

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