occurrence of tektites and their properties, both chemical and mechanical. This is a useful, well referenced, compilation of data from many sources.

In the second half of the book the chemistry of tektites is compared with that of terrestrial and lunar rocks and this is followed by chapters entitled 'Terrestrial origin; arguments in favour' and 'Terrestrial origin; arguments against'. The first of these is, in the main, a commentary on the chemical features enumerated by Taylor (*loc. cit.*) that distinguish tektites from lunar rocks. Some of these the author does not discuss sufficiently critically, particularly the Pb isotope systematics and the $^{39}Ar/^{40}Ar$ ages. The arguments against a terrestrial origin are principally mechanistic in nature. The author argues that it is less contrived to produce a tektite glass by lunar volcanism than by meteorite or cometary impact on Earth. He accepts that tektites can only come from the Earth–Moon system and states that if a terrestrial origin cannot be proved then a lunar origin is possible. From this the book concludes with a scenario in which tektites are produced by lunar volcanism originating deep within the Moon, and it is suggested that the similarity of tektites to some terrestrial rocks implies that the Moon must have formed by fission from the Earth. To this reviewer, the latter suggestion stretches the significance of tektite data too far and is tautological. In summary, the book is well produced and the first half is more objective than the second in which the author's preference for a lunar origin of tektites is obvious and occasionally biases the discussion. A. L. GRAHAM

Roedder (E.), Editor. *Fluid Inclusion Research. Proceedings of C.O.F.F.I.* Volume 6 (1973). Ann Arbor, Michigan (Univ. Michigan Press), 1976. xii + 203 pp., 2 figs. Price $6 (cheques should be made payable to University of Michigan Press and addressed to—Fluid Inclusion Research, University of Michigan Press, 615 E. University of Ann Arbor, MI 48106, USA).

In 1968 the publication of *Fluid Inclusion Research: Proceedings of COFFI*, was started as an offshoot of the Commission on Ore-Forming Fluids in Inclusions (COFFI), of the International Association on the Genesis of Ore Deposits (IAGOD). Although closely connected with COFFI and IAGOD, the publication of these volumes is independently arranged and separately financed, solely by subscriptions, on a non-profit basis.

The Proceedings of COFFI are now an established reference work for all fluid inclusion workers. The purpose of the publications is to provide English abstracts or annotated bibliographies of all items from the world literature that contain fluid inclusion data or are pertinent to some aspect of fluid inclusion work.

In addition to the 332 abstracts from the world literature, there are 144 translated abstracts of papers presented at the Fourth Regional Conference on Thermobarogeochemistry of Mineral Forming Processes, held in 1973, in Rostov-on-Don, U.S.S.R. Many of these abstracts were translated by the new associate editor, Dr. Andrzej Kozlowski, of the University of Warsaw.

Although by its very nature the volume is heavily biased towards fluid inclusion research, other topics, such as the physical parameters of natural geothermal systems, stable isotope and petrological studies, are included. The three indices (author, subject, deposit) enable the user to locate quickly the relevant material. N. J. JACKSON

Newnham (R. E.). *Structure–Property Relations* (Crystal Chemistry of Non-Metallic Materials, Vol. 2). Berlin, Heidelberg, and New York (Springer-Verlag), 1975. ix+234 pp., 92 figs. Price £16·00 ($31.00).

This is the second volume of the series Crystal Chemistry of Non-Metallic Materials (general editor R. Roy) to be published, after vol. 4 and ahead of vols. 1 and 3. Unlike vol. 4 (O. Muller

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.

C. H. McKIE
D. McKIE

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.

D. R. BOWES