

International Union of Crystallography

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Structure Reports

Volume 46B of *Structure Reports* has recently been published. It is in two parts (1482 pages in all) and covers the literature for organic compounds (including organometallic compounds) for 1980. The price of the new volume is 510

Netherlands guilders for subscribers with standing orders. The full price for individual copies is 600 guilders but personal subscribers may buy a copy for their own use at 300 guilders. Orders for this publication may be placed direct with the publishers, D. Reidel Publishing Company, PO Box 17, 3300 AA Dordrecht, The Netherlands, with Polycrystal Book Service, PO Box 27, Western Springs, IL 60558, USA, or with any bookseller.

Book Review

Works intended for notice in this column should be sent direct to the Book-Review Editor (J. H. Robertson, School of Chemistry, University of Leeds, Leeds LS2 9JT, England). As far as practicable books will be reviewed in a country different from that of publication.

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Mineralogy: concepts and principles. By T. ZOLTAI and J. H. STOUT. Pp. x+505. Minneapolis, USA: Burgess Publishing Co., 1984. Price US \$38.95.

This is a textbook for undergraduate students, to present them with the material necessary for a good grounding in mineralogy - no matter what related discipline they are going to study afterwards. If one reads any chapter, or part of this book, it is clear that the authors have made use of all the rich tradition of the Buerger school, together with their own experience in teaching, to achieve this didactic objective.

The scope of the book is, accordingly, rather wide. Not only is the history of mineralogy touched upon in an introductory section, but the chronological and human aspects of the subject are emphasized everywhere, when appropriate. The book covers physical, chemical, macroscopic and microscopic properties of crystalline substances. Separate chapters deal with the most important experimental methods used for the identification and basic study of minerals; these include the latest state-of-the-art within these fields, such as the visualization of atomic arrangements by direct electron microscope lattice imaging, energy-dispersive diffractometry, *etc.* Practical aspects of sample preparation and instrument operation are indicated, in outline, too.

Formal mathematical deductions are avoided. Obviously, the main objective has been to explain the relationships and general rules that apply to minerals. Each time a new concept is introduced, care is taken to relate it to concepts already made familiar in earlier sections.

Descriptive mineralogy appeals more to the memory than to the intellect. Here it is treated in terms of logically organized mineral groups, and is placed in a second part, which serves essentially as a 'data bank' in support of the principles and concepts developed in the first part of the book. Five appendices then follow; these are oriented

towards calculations to be carried out by the students - who would be using the supplementary *Problems and Solutions Manual*, a useful 185-page booklet from the same authors.

The didactic objective of the book is particularly clear from the illustrations. These are very numerous and, together with their very well phrased captions, they give a convincing visual impression of what is stated in the text. The policy of wide coverage governs the design of the graphs and tables too, for the range of variables extends, in most cases, as far as possible - so as to follow the causes and effects of mineralogical phenomena under a single integrating principle.

An author index and a subject index make it easy to find specific items of information in the book; also, there is a glossary which gives concise definitions of the mineralogical terms used.

The utilization of SI notation throughout the book is consistent with the teacher's point of view, satisfying, in this way, the standards to be met by coming generations. In the same spirit, the book points beyond its own inevitable limits by giving additional reading at the end of each section. General suggestions as to the sources of mineralogical literature are also given.

It can safely be predicted that many students will enjoy learning mineralogy from this textbook (tribute must be paid to the publisher and printer, for its aesthetic appearance), and instructors will surely assign it for use in high schools and universities, where mineralogy is taught. It can be recommended for the bookshelves of all those who like to have well ordered scientific material on hand, and for reading by all those who wish to brush up their mineralogical knowledge from the very beginnings of this discipline up to the present, depositing it in the mind in a logically ordered, interpreted manner.

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