International Union of Crystallography announces the Ewald Prize

The International Union of Crystallography announces the establishment of the Ewald Prize for outstanding contributions to the science of crystallography. The name of the prize has been chosen with the kind consent of the late Paul Peter Ewald, to recognize Professor Ewald's significant contributions to the foundations of crystallography and to the founding of the International Union of Crystallography, especially his services as the President of the Provisional International Crystallographic Committee from 1946 to 1948, as the first Editor of the Union's publication *Acta Crystallographica* from 1948 to 1959, and as the President of the Union from 1960 to 1963.

The prize consists of a medal, a certificate and a financial award. It will be presented once every three years during the triennial International Congresses of Crystallography. The first prize will be presented during the XIV Congress at Perth, Australia, in 1987. This year will be the seventy-fifth anniversary of the discovery of X-ray diffraction in 1912.

Any scientist who has made contributions of exceptional distinction to the science of crystallography is eligible for the Ewald Prize, irrespective of nationality, age or experience. No restrictions are placed on the time or the means of publication of his or her contributions. The prize may be shared by several contributors to the same scientific achievement.

Nominations for the Ewald Prize are invited. They should be submitted in writing, accompanied by supporting documentation, to the Executive Secretary of the International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, United Kingdom. The closing date for nominations is 30 September 1986.

TH. HAHN
President

K. V. J. KURKI-SUONIO
General Secretary

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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Crystal structures. By G. HARSCH and R. SCHMIDT. 38 Figs. Darmstadt, Federal Republic of Germany: 3D-Technik für Lehre & Forschung, 1983. Price DM440, US $106.00.

Crystal Structures is a ring binder of stereo transparencies of structure types, intended to be projected using a standard overhead projector and viewed with red-green spectacles, of which 30 are provided. The first thing to be said about this system for demonstrating crystal structures is that it works. Even at the back of a small lecture theatre the 3D structure can be seen quite clearly irrespective of seating position, although it is possible that with very much larger classes problems would be experienced. By and large, however, the structures appear with striking clarity. Unfortunately, the spectacles provided are not robust and are likely to need reinforcing or replacing after a couple of years of exposure to students.

The structures illustrate different types of packing and the coordination and degrees of filling of the interstices. The illustrations of the differently coordinated sites within cubic or hexagonally packed structures are clear and provide a useful introduction for all aspects of crystallography. A series of examples illustrates some of the possibilities, although all are of simple compounds. Perovskite and spinel are the most complex examples used. There are also a series of examples of structures of native elements, and two structures (ice and boric acid) with hydrogen bonding. Each structure is accompanied by a short description in both English and German. Although obviously written originally in German, the English descriptions are clear, if not always translated with complete fluency, and give an adequate explanation of the figure and the structure that it represents. The English captions on the transparencies are, however, less well translated and have a number of idiosyncrasies: 'closest packing' for 'close packing' and 'Jodine' for 'Iodine'.

This book will be a useful teaching aid for introducing crystal structure in all disciplines, but is limited because it does not have more complex examples. From the point of view of the mineralogist quartz is the only silicate structure present, and while enough useful structures are illustrated, *e.g.* perovskite, spinel, calcite *etc.*, as well as the principles of packing, to make the volume worthwhile, it is a great pity that more polymorphs are not shown as this method of teaching would be particularly well suited to distinguishing between, say, calcite and aragonite. Clearly examples of more complex silicate types, as well as other structures, *e.g.* rutile, which are of general importance, would also be useful. I am sure that specialists in other areas could make their own list of omissions, but nevertheless this should not detract from the value of the work at an elementary level to introduce the principles of packing and structure. In teaching, this approach appears to complement the use of crystal models. While it cannot provide such a clear 3D image for complex structures, it does demonstrate the differently coordinated interstices, the unit cell, *etc.*, in a way that can be difficult to achieve with a model and, furthermore, it permits the lecturer to demonstrate a structure to the entire class. Despite the limitation of the range of illustrations, I have no hesitation in recommending it to anyone involved in the teaching of crystal structure at University first-year level, or in high school.

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