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book reviews

Works intended for this column should be sent direct to the Book-Review Editor, whose address appears in this issue. All reviews are also available from **Crystallography Journals Online**, supplemented where possible with direct links to the publisher's information.

Complete online set of International tables for crystallography, Vols. A–G. Edited by H. Fuess, Th. Hahn, H. Wondratschek, U. Müller, U. Shmueli, E. Prince, A. Authier, V. Kopský, D. B. Litvin, M. G. Rossmann, E. Arnold, S. Hall and B. McMahon. Springer, jointly published with the IUCr, 2007. Price for online access USD 2080.00. eISBN: 978-1-4020-5259-0, doi: 10.1107/97809553602060000001, http://it.iucr.org.

The eight volumes (including A1, *i.e.* comprising a total of about 6000 pages) of this well established series of *International Tables for Crystallography* (IT) provide the state-of-the-art of theoretical foundations, experimental methods and data relevant to structure research and structure–property relationships. They have already become a standard tool for students and scientists in all branches of condensed-matter research such as inorganic and organic chemistry, biochemistry, molecular biology, pharmacy, solid-state physics, mineralogy and materials science. Each volume of IT serves a particular purpose. While Vols. A and A1 focus on the symmetry properties of crystals, delivering a complete listing of relevant symbols as well as a comprehensive explanation of the theory behind them, the general purpose of Vol. B is to provide the user with the benefit of reciprocal space in crystallographic research. Vol. C is dedicated to the mathematical, physical and chemical information needed for experimental work. When dealing with structure–property relationships, the impact of symmetry upon tensor properties has proven an efficient tool to rationalize both experiment and theory. Vol. D presents these aspects in a unified way. At the centre of Vol. E stand subperiodic (frieze, rod and layer) groups, composed in the format of Vol. A. Vol. F is a guide to macromolecular crystallography for the structural biologist. It recognizes the rapidly increasing importance of biological systems. Finally, Vol. G is aimed at standardizing the exchange of crystallographic data and providing the data ontology necessary for programmers.

For more details, the reader is referred to a number of reviews {Vol. A: K. M. Stadnicka, B. J. Oleksyn & K. Z. Sokalski [*Acta Cryst.* (1987). A**43**, 156–159], P. Paufler [*Acta Cryst.* (2004). A**60**, 641–642]; Vol. A1: R. Gould [*Crystallography News*, No. 92, March 2005, p. 28]; Vol. D: M. Moore [*Crystallography News*, No. 90, September 2004, pp. 11–12], P. Paufler [*Acta Cryst.* (2006). A**62**, 316–318]; Vol. E: R. Gould [*Crystallography News*, No. 85, June 2003, p. 13]; Vol. F: C. W. Carter Jr [*Structure* (2002). **10**, 289], J. J. Müller [*Z. Kristallogr.* (2002). **217**, 627–628]; Vol. G: A. Blake [*Crystallography News*, No. 97, June 2006, pp. 8–9], J. M. Goodman [*Chem. Inf. Lett.* **13**, July 2006]}.

To comply with the demands of modern data handling, it seemed highly desirable to have online access to each of these volumes and, even more, to interlink them electronically. This has now been realized. IT Online allows for access to the full text of the series as both pdfs and interlinked html. The possibility to download each of the carefully composed tables and drawings is already a great benefit in itself. The interlinking proves a powerful means for various tasks occurring in structure research and in teaching crystallography. Using the interactive version, the reader may search for a certain term like 'twin' either throughout all or in specific volumes and will find various levels of definition as well as different aspects of structure research where twins are involved. Particularly advantageous is the interlinking of symmetry-related data contained in Vols. A, A1 and E. Given a space group, the reader will easily obtain access to subgroups, supergroups, Wyckoff positions, graphic presentations *etc.*, including the explanation of all relevant symbols used to designate symmetry properties. Non-specialists and beginners, who sometimes consider the latter a secret language, will certainly enjoy the fast, precise and compact support offered by those links. While the degree of interlinking in the eight volumes is different, the html version of each volume enables one to move rapidly around each volume providing quick access to chapters, tables, figures, equations, references or key terms cited within the same volume. Another special feature of IT Online worth mentioning is that supplementary software attached to the hard-copy versions of IT may be downloaded. Moreover, IT Online users might like to search directly in the *World Directory of Crystallographers*. They can do so owing to a direct link.

The series, which is planned, edited and maintained by the IUCr's Commission on International Tables, represents a new generation of crystallographic references with an enormous amount of information, it sets standards for the subject of crystallography in general as a 'hard' and far-reaching branch of science. Thanks to the availability of this reference written by the most prominent experts in nearly all fields of present structure research, there is an international consensus on key concepts and symbols of crystallography. It is also a vivid and still growing series. Future extensions already planned are aimed at including more links to related databases and to tables for non-standard settings.

So IT Online is like a bundle of eight individual fibres. The bundle is much stronger than the simple addition of eight volumes of IT. Therefore, it can be warmly recommended to all those who want a truly encyclopedic and authoritative reference.

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