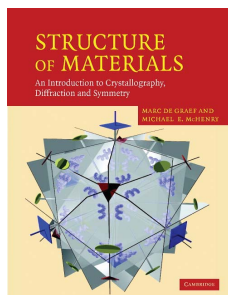


## book reviews

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.

## books received

The following books have been received by the Editor. Uncritical notices are given under this heading instead of reviews in order to facilitate rapid communication.



**Structure of Materials. An Introduction to Crystallography, Diffraction and Symmetry.** By Marc De Graef and Michael E. McHenry. Pp. xxxi+844. Cambridge: Cambridge University Press. 3rd printing, 2010. Price (hardback) USD 118.00. ISBN: 978-0521651516.

This is a self-contained textbook on the fundamentals of crystallography.

Emphasis is placed on combining visual illustrations of crystal structures (using *CrystalMaker*) with mathematical tools in accordance with the *International Tables for Crystallography* to understand the complexity of a broad range of materials. The first half of the book is devoted to the basics of crystallography, while the second half focuses on different classes of materials, allowing the reader to gain appreciation of material structure. *Contents*: 1. Materials and materials prop-

erties, 2. The periodic table, 3. What is a crystal structure?, 4. Crystallographic computations, 5. Lattice planes, 6. Reciprocal space, 7. Additional crystallographic computations, 8. Symmetry in crystallography, 9. Point groups, 10. Plane groups and space groups, 11. X-ray diffraction: geometry, 12. X-ray diffraction: intensities, 13. Other diffraction techniques, 14. About crystal structures and diffraction patterns, 15. Non-crystallographic point groups, 16. Periodic and aperiodic tilings, 17. Metallic structures I: simple, derivative and superlattice structures, 18. Metallic structures II: topologically close-packed phases, 19. Metallic structures III: rare-earth-transition metal systems, 20. Metallic structures IV: quasi-crystals, 21. Metallic structures V: amorphous metals, 22. Ceramic structures I, 23. Ceramic structures II: high-temperature superconductors, 24. Ceramic structures III: silicates and aluminates, 25. Molecular solids. References. Index. 400 homework problems are included to check progress in understanding. The text can be used for a one-semester graduate or undergraduate course on crystallography within materials science and engineering, physics, chemistry, and geosciences.