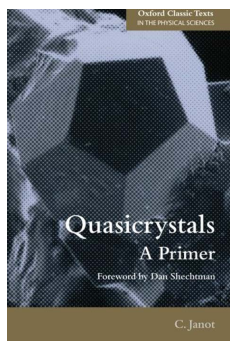


book reviews

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



Quasicrystals. A Primer, second edition. By Christian Janot. Oxford Classic Texts in the Physical Sciences. Oxford University Press, 2012. Pp. 427. Price GBP 42.50 (paperback). ISBN 978-0-19-965740-7.

This book on quasicrystals by C. Janot was first published in 1992, with a second edition in 1994. This version of the book is the same as the second edition, but has a foreword by Dan

Shechtman, who received the Nobel Prize in Chemistry in 2011.

The book is written for a non-specialist audience in a very pedagogical way. After a general introduction on *How to fill space with atoms in condensed matter states*, the second chapter presents the different ways to synthesize and characterize quasicrystals. The third chapter gives an introduction to high-dimensional (or superspace) crystallography, starting with simple one-dimensional quasicrystals, with a general-

ization then to three-dimensional quasicrystals. The fourth chapter, *Where are the atoms?*, presents a few examples of structural analysis in which the high-dimensional approach is used. The fifth chapter deals with the dynamics of quasicrystals and phonons, but also introduces the notion of phasons and the concept of dislocations in quasicrystals. The last chapter presents a discussion of the difficult questions of how the quasicrystalline long-range order propagates and whether it is possible with finite-range interactions. This chapter ends with a presentation of the electronic properties of quasicrystals.

Each chapter ends with a few exercises, which are very useful for testing the knowledge gained from the chapter. Although the material in the book has not been updated for 20 years, this book remains a classic introduction to quasicrystals and will be very useful for an undergraduate or a curious scientist intrigued by the quasicrystalline world.

Marc de Boissieu

Sciences de l'Ingénierie des Matériaux et Procédés, Grenoble-INP, UJF, CNRS, 1130 Rue de la Piscine, BP75, F-38402 Saint Martin d'Hères cedex, France