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Quasicrystals

NEW EDITION

A Primer

SECOND EDITION

Christian Janot, Institut Laue-Langevin, France

'The book deserves wide distribution among all solid state scientists because it is dealing with rather new matter not yet considered in conventional textbooks' **Peter Paufler**

'Quasicrystals is an excellent, mathematical sophisticated primer to a new and very interesting state of matter.' **Library of Science**
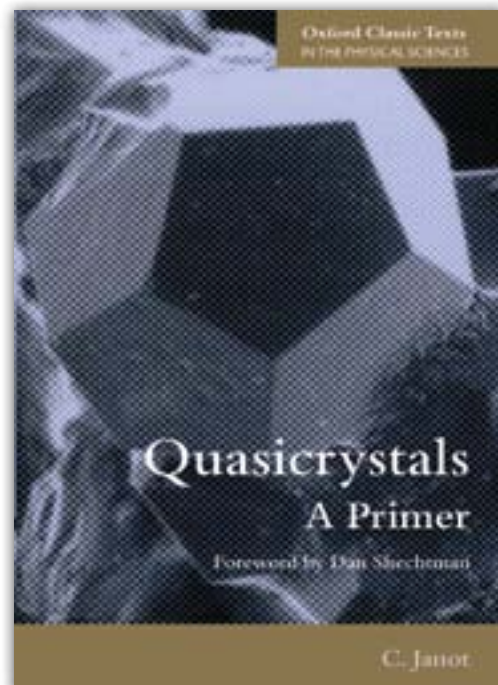
In 1984 physicists discovered a monster in the world of crystallography, a structure that appeared to contain five-fold symmetry axes, which cannot exist in strictly periodic structures. Such quasi-periodic structures became known as quasicrystals. A previously formulated theory in terms of higher dimensional space groups was applied to them and new alloy phases were prepared which exhibited the properties expected from this model more closely. Thus many of the early controversies were dissolved. This primer provides a descriptive approach to the subject for those coming to it for the first time. The various practical, experimental, and theoretical topics are dealt with in an accessible style. The book is completed by problem sets and there is a computer program that generates a Penrose lattice.

- Foreword by 2011 Nobel prize winner Dan Shechtman, Technion, Israel Institute of Technology, Israel

- Provides a descriptive approach to the subject of quasicrystals for those coming to it for the first time

- Contains problem sets for students

TABLE OF CONTENTS

1: How to fill space with atoms in condensed matter states
2: Real quasicrystals: preparation and characterization
3: High-dimensional crystallography
4: Where are the atoms?
5: Phonons, phasons, and dislocations in quasicrystals
6: A little more about the physics of quasicrystals

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