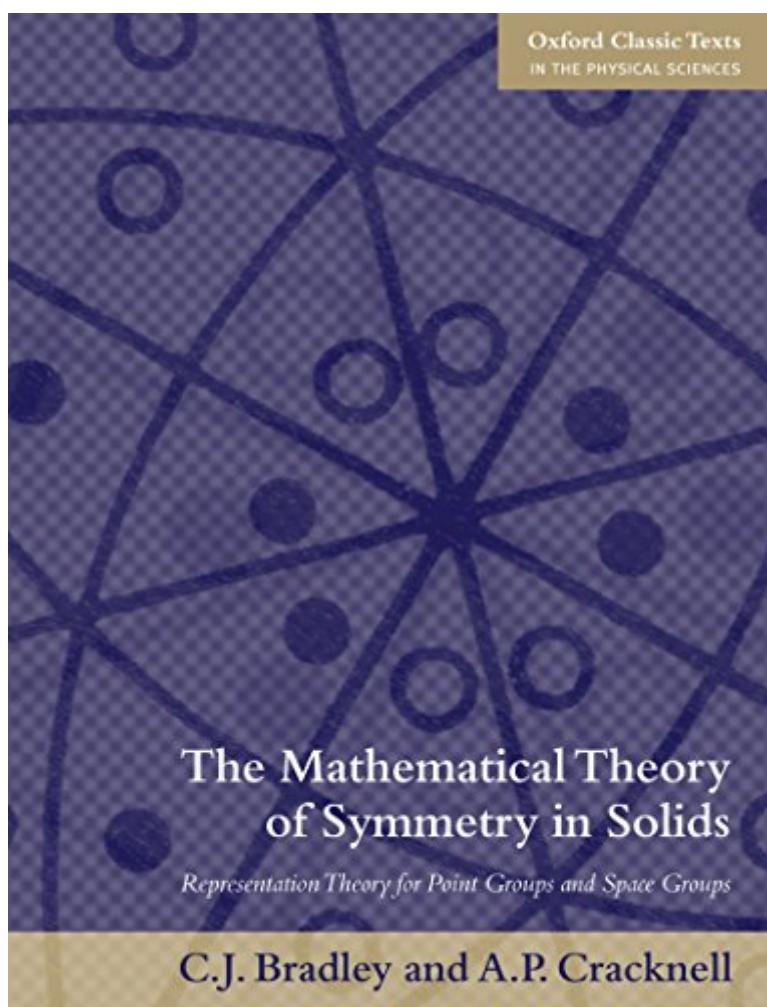


The book was found

The Mathematical Theory Of Symmetry In Solids: Representation Theory For Point Groups And Space Groups (Oxford Classic Texts In The Physical Sciences)





Synopsis

This book gives the complete theory of the irreducible representations of the crystallographic point groups and space groups. This is important in the quantum-mechanical study of a particle or quasi-particle in a molecule or crystalline solid because the eigenvalues and eigenfunctions of a system belong to the irreducible representations of the group of symmetry operations of that system. The theory is applied to give complete tables of these representations for all the 32 point groups and 230 space groups, including the double-valued representations. For the space groups, the group of the symmetry operations of the k vector and its irreducible representations are given for all the special points of symmetry, lines of symmetry and planes of symmetry in the Brillouin zone. Applications occur in the electronic band structure, phonon dispersion relations and selection rules for particle-quasiparticle interactions in solids. The theory is extended to the corepresentations of the Shubnikov (black and white) point groups and space groups.

Book Information

File Size: 38578 KB

Print Length: 760 pages

Publisher: OUP Oxford (December 10, 2009)

Publication Date: December 10, 2009

Sold by: Digital Services LLC

Language: English

ASIN: B01N4X4HXA

Text-to-Speech: Not enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #459,983 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #10
in Kindle Store > Kindle eBooks > Nonfiction > Science > Physics > Solid-State Physics #242
in Books > Science & Math > Physics > Solid-State Physics #252 in Books > Science & Math > Chemistry > Physical & Theoretical > Physical Chemistry

Customer Reviews

Pretty useful for those that have to deal with representation theory in solids.

This was just what we wanted. We had already been using a library's copy.

[Download to continue reading...](#)

The Mathematical Theory of Symmetry in Solids: Representation Theory for Point Groups and Space Groups (Oxford Classic Texts in the Physical Sciences) Electrons and Phonons: The Theory of Transport Phenomena in Solids (Oxford Classic Texts in the Physical Sciences) The Friction and Lubrication of Solids (Oxford Classic Texts in the Physical Sciences) The Mathematical Theory of Black Holes (Oxford Classic Texts in the Physical Sciences) Young Tableaux: With Applications to Representation Theory and Geometry (London Mathematical Society Student Texts) Groups and Symmetry (Undergraduate Texts in Mathematics) Symmetry Rules: How Science and Nature Are Founded on Symmetry (The Frontiers Collection) Mathematical Problems from Combustion Theory (Applied Mathematical Sciences) (v. 83) An Introduction to the Representation Theory of Groups (Graduate Studies in Mathematics) Representation Theory of Finite Groups: An Introductory Approach (Universitext) Emergence of the Theory of Lie Groups: An Essay in the History of Mathematics 1869–1926 (Sources and Studies in the History of Mathematics and Physical Sciences) Groups and Symmetries: From Finite Groups to Lie Groups (Universitext) Introduction to Lie Algebras and Representation Theory (Graduate Texts in Mathematics) (v. 9) A Short Course on Banach Space Theory (London Mathematical Society Student Texts) Representation Theory: A First Course (Graduate Texts in Mathematics) Site Symmetry in Crystals: Theory and Applications (Springer Series in Solid-State Sciences) Groups, Languages and Automata (London Mathematical Society Student Texts) Symmetry, Group Theory, and the Physical Properties of Crystals (Lecture Notes in Physics) Band Theory and Electronic Properties of Solids (Oxford Master Series in Physics) Applied Functional Analysis: Applications to Mathematical Physics (Applied Mathematical Sciences) (v. 108)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)