



Symmetry and Physical Properties of Crystals

Cécile Malgrange, Christian Ricolleau, Michel Schlenker

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Crystals are everywhere, from natural crystals (minerals) through the semiconductors and magnetic materials in electronic devices and computers or piezoelectric resonators at the heart of our quartz watches to electro-optical devices. Understanding them in depth is essential both for pure research and for their applications.

This book provides a clear, thorough presentation of their symmetry, both at the microscopic space-group level and the macroscopic point-group level. The implications of the symmetry of crystals for their physical properties are then presented, together with their mathematical description in terms of tensors. The conditions on the symmetry of a crystal for a given property to exist then become clear, as does the symmetry of the property. The geometrical representation of tensor quantities or properties is presented, and its use in determining important relationships emphasized.

An original feature of this book is that most chapters include exercises with complete solutions. This allows readers to test and improve their understanding of the material.

The intended readership includes undergraduate and graduate students in materials science and materials-related aspects of electrical and optical engineering; researchers involved in the investigation of the physical properties of crystals and the design of applications based on crystal properties such as piezoelectricity, electro-optics, optical activity and all those involved in the characterization of the structural properties of materials.

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This Symmetry and Physical Properties of Crystals book is just not ordinary book, you have it then the world is in your hands. The benefit you have by reading this book is actually information inside this guide incredible fresh, you will get information which is getting deeper anyone read a lot of information you will get. This Symmetry and Physical Properties of Crystals without we know teach the one who examining it become critical in contemplating and analyzing. Don't end up being worry Symmetry and Physical Properties of Crystals can bring whenever you are and not make your tote space or bookshelves' become full because you can have it within your lovely laptop even cellphone. This Symmetry and Physical Properties of Crystals having fine arrangement in word and also layout, so you will not sense uninterested in reading.

Theodore Huff:

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