

# 《X射线晶体学基础》

## 图书基本信息

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# 《X射线晶体学基础》

## 内容概要

《X射线晶体学基础(第2版)(英文版)》内容简介：Fundamentals of X-Ray Crystallography is the condensation and crystallization of the author's over 50 years of scientific research and teaching experience. In order to help readers to understand crystallography theory, to establish vivid three dimensional concepts of symmetry operations, simple geometry concepts and methods are employed in the analysis and derivation of the symmetry principles and diffraction theory in this book. This book is divided into three sections: fundamental principle of geometric crystallography, symmetry principle in the microscopic space and fundamental principles of crystal X-ray diffraction. In Section I and Section II, with the application of consistency principle between the distribution of general symmetry equivalent points and the spatial symmetry, the macroscopic and microscopic symmetry and their combinations are intensively analyzed and discussed. The 32 point groups and 230 microscopic symmetry combinations are systematically derived as well. In Section III, based on the relation between crystal lattice and its reciprocal lattice, the mathematical model of reciprocal lattice, Ewald sphere and their relations are adopted in the elucidation of Laue Equation and Bragg Reflection Equation. Several important single crystal diffraction measurement methods, instruments and their applications are also illustrated. In addition, through the principles of systematic absence of reciprocal lattice caused by microscopic translations, the systematic absence principle of diffraction is illustrated. The 120 diffraction groups are derived as well.

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# 《X射线晶体学基础》

## 章节试读

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