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Multifunctional Two- and Three-Dimensional Polycrystalline X-Ray Diffractometry

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About the eBook

A novel X-ray diffraction (XRD) theory is intensively revealed in this book. The theory will extend present XRD view from one dimension to two and three dimensions, enabling readers to see the invisible characteristics inside materials. This book stresses upon the X-ray analyses for natural and synthetic materials. This book is dedicated to create a bridge between basic texts and specialist works and should be helpful to scholars studying XRD theory.

Contents

- ▶ Essential Properties of X-Rays
- ▶ Knowledge of Crystal Structure
- ▶ Bragg's Law and Multifunctional 2D X-Ray Diffractometry
- ▶ Fundamentals of X-Ray Phase Analysis
- ▶ Qualitative Phase Analysis
- ▶ Fundamentals of 2D X-Ray Diffraction Theory
- ▶ Depth/Azimuth-Resolved Multiple-XRD Patterns for Nanomaterials
- ▶ Residual Stresses/Strains Analysis

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