

About the Book

The book is a collection of papers presented at a seminar on advanced X-ray techniques in Research and industry. It consists of several invited review articles covering basic crystallography, local texture measurements with high energy synchrotron radiation, evolution of texture mapping by scanning X-ray diffraction, absorption tomography for three dimensional measurements in bulk materials, ultra thin films, secular x-ray reflectivity, small angle x-ray scattering x-ray diffraction and x-ray line profile analysis. A large number of chapters cover application of Rietveld refinement technique for different materials. The application of high temperature x-ray diffraction to different materials has also been discussed. Apart from this, the application of x-ray diffraction techniques to characterize the material has been dealt in different areas such as magnetic materials, nano materials, aluminium alloys, titanium alloys, biomaterials, forensic application of textile fabrics, sensors steels, and surface modifications. It also covers the geometrical aspects of x-ray diffractometer and related applications.

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