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Nota di contenuto	Crystallographic texture-----Historical perspective and modern developments -- Basics of SEM based techniques for orientation imaging microscopy -- Electron Backscatter Diffraction based Strain Analysis in the Scanning Electron Microscope -- In Situ EBSD: A high throughput technique across the real and reciprocal space to decipher micro-mechanisms in materials -- Electron Channeling and Electron Channeling Contrast Imaging (ECCI) -- Mesotexture: A key to understanding microstructural evolution during grain boundary engineering -- Controlling the Twinning-Induced grain boundary Character Distribution -- Unravelling the phenomenon of shear banding by electron back scatter diffraction -- Automated Reconstruction of Parent Phase Microtexture in A Displacive Phase Transformation -- Unravelling the mechanism of deformation and annealing -- Microstructure and texture development during deformation and recrystallization in two phase materials -- Application of in-situ EBSD in understanding the mechanism of transformation in shape memory alloys -- Development of Microtexture during Cyclic

Deformation -- Dependence of environmental sensitivity on microtexture -- Understanding the micromechanism of deformation and annealing in Magnesium alloys by EBSD -- Understanding the kinematics of geological materials at microscale.

Sommario/riassunto

This book presents the fundamentals of texture and microtexture with the latest developments in the field and relates the same for different materials and processes. Crystallographic phase and orientation define the anisotropy of crystalline materials. In polycrystalline materials, the preferred crystallographic orientation of grain distributions, also known as (crystallographic) texture, controls the properties of materials. The evaluation of texture has been traditionally carried out by X-ray diffraction and neutron diffraction. In recent times, microtexture-based techniques have been widely used not only to examine the crystallographic texture but also to investigate the micro-mechanisms controlling the development of texture and microstructure. It has, therefore, become almost mandatory to re-visit the physical phenomenon associated with materials from the viewpoint of microtexture. The individual chapters have been written by the renowned scientists working in the respective domain. The book can be a valuable reference for researchers and professionals interested in fundamentals of texture and microtexture and allied fields.