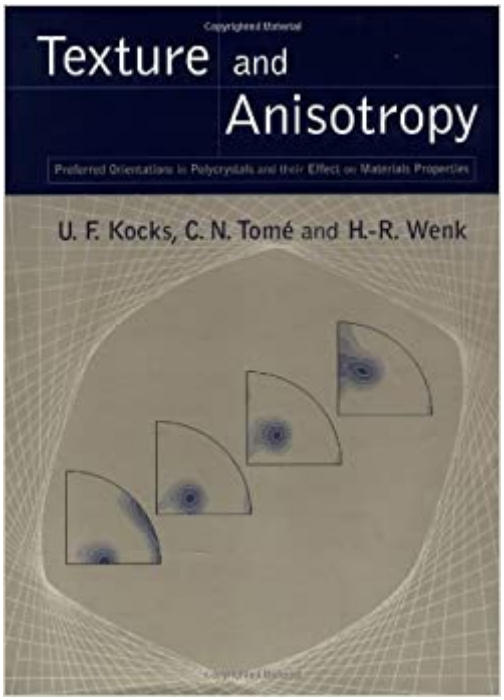
Texture And Anisotropy: Preferred Orientations In Polycrystals And Their Effect On Materials Properties



Synopsis

This book provides valuable information for all scientists and engineers interested in materials properties. Coverage discusses the measurement and analysis of textures, the prediction of polycrystal properties from measured textures and known single crystal properties, and the prediction of the development of texture and the ensuing anisotropic properties during elastic and plastic deformation. It also gives an overview of observed textures in metals, ceramics and rocks. There is a balance between theoretical concepts and experimental techniques. The book addresses several issues. Part I provides tools and describes methods to obtain quantitative data on textures of polycrystals. It should be of interest to experimentalists. Part II emphasizes modeling of deformation and incorporates theoretical concepts of mechanics. Part III illustrates successful applications in engineering and earth sciences.

Book Information

Paperback: 692 pages
Publisher: Cambridge University Press (August 15, 2000)
Language: English
ISBN-10: 052179420X
ISBN-13: 978-0521794206
Product Dimensions: 6.8 x 1.4 x 9.7 inches
Shipping Weight: 3 pounds (View shipping rates and policies)
Average Customer Review: 5.0 out of 5 stars 2 customer reviews
Best Sellers Rank: #1,196,269 in Books (See Top 100 in Books) #99 inÃ Â Books > Science & Math > Chemistry > Crystallography #103 inÃ Â Books > Engineering & Transportation > Engineering > Materials & Material Science > Strength of Materials #1240 inÃ Â Books > Engineering & Transportation > Engineering > Materials & Material Science > Materials Science

Customer Reviews

"This book provides valuable information for all scientists and engineers interested in materials properties." Applied Mechanics Reviews

This book provides valuable information for all scientists and engineers interested in material properties. It describes the measurement and analysis of textures and gives a clear and detailed discussion of the directional dependence of material properties, how they originate, and how they can be modified to improve the material performance. The book also provides an overview of

observed textures in metals, ceramics and rocks. There is a useful balance between experimental techniques, theoretical concepts, and applications.

A complete and rigorous review on this subject, this book notably solves the compromise of answering scientific inquiries of general knwoledge on anisotropic materials behaviour and the easy and quick browsing for specific materials properties. This is achieved through the addition of many ilustrative figures and examples (specially texture pole figures based on observed and simulated results) as well as the big amount of references to other studies and publications all over the text. Physicists, engineerings and crystalographers inside the materials science scope will find this book surprisingly complete, amusing and helpful.

Written by experts, a must for all texture researchers. This book will be the preeminent text in its field for years to come.

Cosmetology 2008 Songwriting Journal : Large Print 8.5x11 - (Wood Texture Cover) Lined/Ruled Paper 104 Pages - With Lyric Line, Staff, TAB and Chord Boxes (Songwriter Journal) Vol.5: Songwriting Notbook