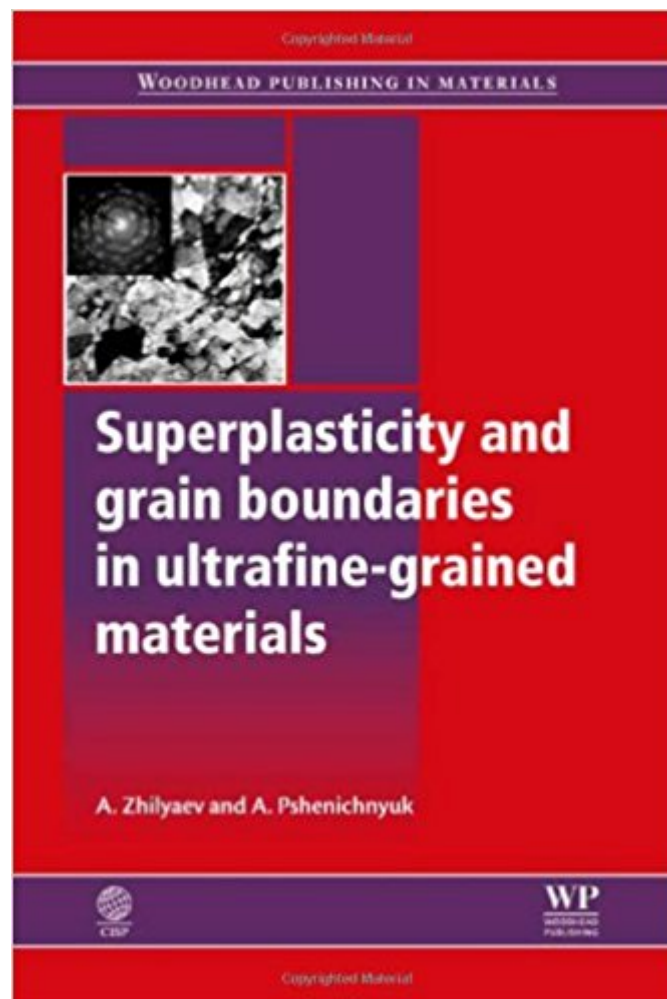


The book was found

Superplasticity And Grain Boundaries In Ultrafine-Grained Materials (Woodhead Publishing Series In Metals And Surface Engineering)



Synopsis

Superplasticity is a state in which solid crystalline materials, such as some fine-grained metals, are deformed well beyond their usual breaking point. The phenomenon is of importance in processes such as superplastic forming which allows the manufacture of complex, high-quality components in such areas as aerospace and biomedical engineering. Superplasticity and grain boundaries in ultrafine-grained materials discusses a number of problems associated with grain boundaries in metallic polycrystalline materials. The role of grain boundaries in processes such as grain boundary diffusion, relaxation and grain growth is investigated. The authors explore the formation and evolution of the microstructure, texture and ensembles of grain boundaries in materials produced by severe plastic deformation. Written by two leading experts in the field, Superplasticity and grain boundaries in ultrafine-grained materials significantly advances our understanding of this important phenomenon and will be an important reference work for metallurgists and those involved in superplastic forming processes. Discusses significant problems associated with grain boundaries in polycrystals incorporating structural superplasticity and grain boundary sliding. Assesses the role of grain boundaries in processes such as grain boundary diffusion, relaxation and grain growth. Explores the formation and evolution of the microstructure, texture and ensembles of grain boundaries in materials produced by severe plastic deformation.

Book Information

Series: Woodhead Publishing Series in Metals and Surface Engineering

Hardcover: 328 pages

Publisher: Woodhead Publishing; 1 edition (June 14, 2011)

Language: English

ISBN-10: 085709100X

ISBN-13: 978-0857091000

Product Dimensions: 6.4 x 1.1 x 9.4 inches

Shipping Weight: 1.3 pounds

Average Customer Review: Be the first to review this item

Best Sellers Rank: #2,087,358 in Books (See Top 100 in Books) #181 in Books > Science &

Math > Chemistry > Crystallography #507 in Books > Engineering & Transportation >

Engineering > Materials & Material Science > Metallurgy #14522 in Books > Science & Math >

Technology

[Download to continue reading...](#)

Superplasticity and Grain Boundaries in Ultrafine-Grained Materials (Woodhead Publishing Series in Metals and Surface Engineering) Advances in Powder Metallurgy: Properties, Processing and Applications (Woodhead Publishing Series in Metals and Surface Engineering) Laser Surface Engineering: Processes and Applications (Woodhead Publishing Series in Electronic and Optical Materials) Microsoft Surface Pro 4 & Microsoft Surface Book: The Beginner's Guide to Microsoft Edge, Cortana & Mail App on Microsoft Surface Pro 4 & Microsoft Surface Book Grain Free Diet: Against all Grain, The Surprising Truth about the Silent Killer of Wheat, Gluten, Carbs, and Sugar, The Extraordinary Grain Free Health for Weight Loss and Healthy Life Grain Brain Audiobook: David Perlmutter GRAIN BRAIN Audio CD: Grain Brain David Perlmutter Sensor Technologies for Civil Infrastructures: Sensing Hardware and Data Collection Methods for Performance Assessment (Woodhead Publishing Series in Electronic and Optical Materials) Waste Electrical and Electronic Equipment (WEEE) Handbook (Woodhead Publishing Series in Electronic and Optical Materials) Computer Design of Diffractive Optics (Woodhead Publishing Series in Electronic and Optical Materials) Minimization of Welding Distortion and Buckling: Modelling and Implementation (Woodhead Publishing Series in Welding and Other Joining Technologies) Dental Biomaterials: Imaging, Testing and Modelling (Woodhead Publishing Series in Biomaterials) Biocompatibility and Performance of Medical Devices (Woodhead Publishing Series in Biomaterials) Therapeutic Protein Drug Products: Practical Approaches to formulation in the Laboratory, Manufacturing, and the Clinic (Woodhead Publishing Series in Biomedicine) The Coal Handbook: Towards Cleaner Production: Coal Production (Woodhead Publishing Series in Energy) Biomaterials for Artificial Organs (Woodhead Publishing Series in Biomaterials) Microservices: Patterns and Applications: Designing fine-grained services by applying patterns My Grain & Brain Cookbook: 101 Brain Healthy and Grain-free Recipes Everyone Can Use To Boost Brain Power, Lose Belly Fat and Live Healthy: A Gluten-free, Low Sugar, Low Carb and Wheat-Free Cookbook 30 Days Grain-Free: A Day-by-Day Guide and Meal Plan for Beginning a Grain-Free Diet - Improve Your Digestion, Heal Your Gut, Increase Your Energy, Lose Weight, and More! WHEAT BELLY DIET FOR BEGINNERS: Grain-Free, Wheat-Free, Gluten-Free Cookbooks and Recipes For Weight Loss Plans and Solutions Included! (Wheat Free Grain Free Gluten Free Weight Loss Diet Book 1) The Organic Grain Grower: Small-Scale, Holistic Grain Production for the Home and Market Producer