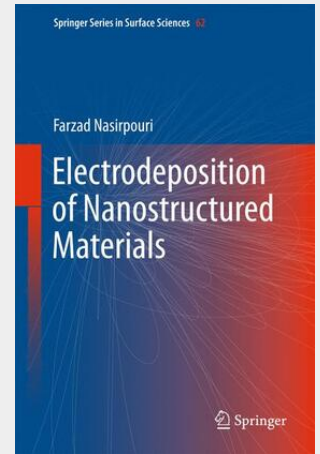


Electrodeposition of Nanostructured Materials

This book provides an overview of electrodeposition of nanomaterials from principles to modern concepts for advanced materials in science and technology. Electrochemical deposition or electrodeposition is explained for fabrication and mass production of functional and nanostructured device materials. The present book spans from principles to modern insights and concepts. It gives a comprehensive overview of the electrochemistry of materials, which is useful as basic information to understand concepts used for nanostructuring of electrodeposited materials, reviews the electrodeposition constituents, thermodynamics and kinetics of electrodeposition, electrochemical and instrumental assessment techniques and other physical factors affecting the electrodeposition mechanisms. A wide variety of nanostructured materials and related concepts and applications are explained with respect to nanocrystals, nanocrystalline films, template-based nanostructures, nanocomposite films, nanostructures on semiconductors, multilayers, mesoporous films, scanning microscopical probe assisted fabrication and galvanic replacement. This book is useful for researchers in materials science, engineering technologists and graduate students. It can also be used as a textbook for undergraduates and graduate students studying related disciplines.

This book provides an overview of electrodeposition of nanomaterials from principles to modern concepts for advanced materials in science and technology. Electrochemical deposition or electrodeposition is explained for fabrication and mass production of functional and nanostructured device materials. The present book spans from principles to modern insights and concepts. It gives a comprehensive overview of the electrochemistry of materials, which is useful as basic information to understand concepts used for nanostructuring of electrodeposited materials, reviews the electrodeposition constituents, thermodynamics and kinetics of electrodeposition, electrochemical and instrumental assessment techniques and other physical factors affecting the electrodeposition mechanisms. A wide variety of nanostructured materials and related concepts and applications are explained with respect to nanocrystals, nanocrystalline films, template-based nanostructures, nanocomposite films, nanostructures on semiconductors, multilayers, mesoporous films, scanning microscopical probe assisted fabrication and galvanic replacement. This book is useful for researchers in materials science, engineering technologists and graduate students. It can also be used as a textbook for undergraduates and graduate students studying related disciplines.



181,89 €

169,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783319449197

Medium: Buch

ISBN: 978-3-319-44919-7

Verlag: Springer International Publishing

Erscheinungstermin: 24.10.2016

Sprache(n): Englisch

Auflage: 1. Auflage 2017

Serie: Springer Series in Surface Sciences

Produktform: Gebunden

Gewicht: 6328 g

Seiten: 325

Format (B x H): 160 x 241 mm

