1. Record Nr. UNINA9910464516703321

Titolo	Diffusion in advanced materials / / edited by Graeme Murch, Andreas Ochsner and Irina Belova
Pubbl/distr/stampa	Durnten, Switzerland ; ; Zurich, Switzerland : , : TTP, , 2014 ©2014
ISBN	3-03826-462-8
Descrizione fisica	1 online resource (211 p.)
Collana	Diffusion Foundations, , 2296-3642 ; ; Volume 1
Disciplina	530.415
Soggetti	Diffusion Kirkendall effect Materials Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Diffusion in Advanced Materials; Preface; Table of Contents; Chapter I; Superstructure Transformations in High-Temperature Intermetallic Nanolayers: Atomistic Simulation; Chapter II; A Morphology of Diffusion Zone from Entropy Production Calculations; Chapter III; The Decisive Contributions by L. Boltzmann and C. Matano to the Quantitative Analysis of Diffusion Phenomena; Chapter IV; Hollow Hemisphere Shell Formation by Pure Kirkendall Porosity; Chapter V; Molecular Dynamics of the Transport of Ions in a Synthetic Channel; Chapter VI Grain Boundary Diffusion and Grain Boundary Segregation in Metals and AlloysChapter VII; Diffusion in Glassy Metals; Chapter VIII; Defects and Sintering-Induced Diffusion Processes in Yttria-Stabilised Zirconia Nanomaterials Studied by Positron Annihilation Spectroscopy; Chapter IX; Mechanical Activation of Mn-O Oxides: Structural Phase Transitions, Magnetism and Oxygen Isotope Exchange; Chaper X; Peculiarities of Structure and Texture of High-Strength Cu-Nb Composites; Keywords Index; Authors Index
Sommario/riassunto	In the first chapter Prof. Kozubski and colleagues present atomisticsimulations of superstructure transformations of intermetallic

nanolayers.In Chapter 2, Prof. Danielewski and colleagues discuss a formalism for themorphology of the diffusion zone in ternary alloys. In Chapter 3, ProfessorsSprengel and Koiwa discuss the classical contributions of Boltzmann andMatano for the analysis of concentration-dependent diffusion. This isfollowed by Chapter 4 by Professor Cserhati and colleagues on the use of Kirkendall porosity for fabricating hollow hemispheres. In Chapter 5,Professor Morton-Blake rep