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Altri autori (Persone)	KozubskiRafa <1955-> MurchG. E ZiebaPawe
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Migration in Ti, Zr and Hf Hexagonal Close-Packed Metals from First Principles ; Monte Carlo Simulation of Texture and Microstructure Transformation during Annealing of Steel
A Phase Field Model for grain Growth and Thermal Grooving in Thin Films with Orientation Dependent Surface Energy An Extensive Study of Charge Effects in Silicon Doped Heterofullerenes ; Interface Shape Change and Shift Kinetics on the Nanoscale; Analysis of Oxygen Segregation at Metal-Oxide Interfaces Using a New Lattice Monte Carlo Method ; Materials Hardness Estimation by Simulation of the Indentation Process ; Stability of Hollow Nanospheres: A Molecular Dynamics Study ; First Principles Study of Al(100) Twisted Interfaces Interface Dynamics of Melt Instabilities on Semiconductor Surface Grain Boundary Migration in Nanocrystalline Iron ; Mutiscale Plastic Deformation near a Fatigue Crack from Diffraction ; Statistical Model of Grain Growth in Polycrystalline Nanomaterials ; Keywords Index; Authors Index

Sommario/riassunto

The inspiration for this book was to gather together the efforts of those physicists, materials scientists/engineers and other scientists who are carrying out interdisciplinary research into multiscale modelling of time-evolving phenomena in materials. The resultant collection focuses on the principal topics of: 1. The current development of theoretical and model approaches to structural kinetics (links between quantum electron theories of solids and non-equilibrium thermodynamics); 2. Computer simulations as an effective tool for studying atomistic mechanisms of structural kinetics (Monte Car