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Altri autori (Persone)	KaleG. B
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Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Phase Transformation and Diffusion; Preface; Table of Contents; Diffusion in the Lattice and Interfaces of Real Engineering Materials: A Unified Approach; The Lattice Monte Carlo Method for Solving Phenomenological Mass and Thermal Diffusion Problems; Diffusion and Melting; Thermodynamic Diffusion Coefficients; Novel Method of Evaluation of Diffusion Coefficients in Ti-Zr System; Diffusion in Cu(Al) Solid Solution; A Probabilistic Approach to Analyze Austenite to Ferrite Transformation in Fe-Ni System; Recrystallization Kinetics in 17Cr 1Mo Ferritic Steel Effect of Thermal Aging on the Transformation Temperatures and Specific Heat Characteristics of 9Cr-1Mo Ferritic Steel Gibbs Free Energy Difference in Bulk Metallic Glass Forming Alloys; Effect of Cerium Addition on the Microstructure and Mechanical Properties of Al-Zn-Mg-Cu Alloy; -Hydride Habit Plane Determination in -Zirconium at 298 K by Strain Energy Minimization Technique; Calorimetric Studies of Dissolution Kinetics of Ni ₂ (Cr,Mo) Phase in Ni-Cr-Mo Alloys Using Non-Isothermal Approach Kinetics and Mechanism of Growth of -Solid Solution during Reaction Diffusion in Binary Titanium and Zirconium Alloy Systems Effect of Cu Addition on Nanocrystallization Behavior in a Co-Based Soft Magnetic Metallic Glass; Alpha to Omega Transition in Shock Compressed Zirconium: Crystallographic Aspects; Selection of Lattice Invariant Shear

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Development of a Thermodynamic Criterion to Predict the Alloy
Compositions for Amorphous and Nanocrystalline Phase Formation
during Mechanical Alloying; Keywords Index; Authors Index

Sommario/riassunto

Given that the basic purpose of all research in materials science and technology is to tailor the properties of materials to suit specific applications, phase transformations are the natural key to the fine-tuning of the structural, mechanical and corrosion properties. A basic understanding of the kinetics and mechanisms of phase transformation is therefore of vital importance. Apart from a few cases involving crystallographic martensitic transformations, all phase transformations are mediated by diffusion. Thus, proper control and understanding of the process of diffusion during nucleation, g
