

1. Record Nr.	UNINA9910791729703321
Titolo	Thermal and thermodynamic stability of nanomaterials : special topic volume with invited peer reviewed papers only // edited by: Suresh Chandra Parida
Pubbl/distr/stampa	Stafa-Zurich ; ; Enfield, New Hampshire : , : Trans Tech Publications, , [2010] ©2010
ISBN	3-03813-331-0
Descrizione fisica	1 online resource (157 p.)
Collana	Materials science forum, , 0255-5476 ; ; volume 653
Altri autori (Persone)	ParidaSuresh Chandra
Disciplina	620.1/1596
Soggetti	Nanostructured materials - Thermal properties Thermodynamics
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 and indexes.
Nota di contenuto	Thermal and Thermodynamic Stability of Nanomaterials; Preface; Table of Contents; Thermal Stability of Nanostructured Coatings; Anomaly in Thermal Stability of Nanostructured Materials; Thermodynamic Phase Transitions in Nanometer-Sized Metallic Systems; Prediction of Phase Diagrams in Nano-Sized Binary Alloys; Au-Si and Au-Ge Phases Diagrams for Nanosystems; Grain Growth Behavior of Al ₂ O ₃ Nanomaterials: A Review; Phase Stability of Rare-Earth Based Mixed Oxides in Nano-Regime: Role of Synthesis; Keywords Index; Authors Index
Sommario/riassunto	The study of nanomaterials is an active area of 21st-century research in physics, chemistry and materials engineering as well as biomedical engineering. Nanomaterials which are defined as substances that are in the form of spherical dot, rod, thin plate or voids of any irregular shape, but smaller than 100nm, find wide application in materials science and technology due to their very distinctive properties as compared with their bulk counterpart. This special volume is focused on two fundamental issues related to the stability of nanomaterials. Thermal stability is a very important issue in co