

1. Record Nr.	UNINA9910825890903321
Titolo	Functional and structural materials : selected peer reviewed papers from the 1st Brazilian Symposium on Functional and Structural Materials (FUNCMAT 2009), UFPB, Joao Pessoa, Brazil, August 19-21, 2009 / / edited by Rodinei M. Gomes [and five others]
Pubbl/distr/stampa	Stafa-Zurich, Switzerland ; ; Enfield, New Hampshire : , : Trans Tech Publications, , [2010] ©2010
ISBN	3-03813-339-6
Descrizione fisica	1 online resource (141 p.)
Collana	Materials science forum, , 0255-5476 ; ; volume 643
Altri autori (Persone)	GomesRodinei M
Disciplina	620.11
Soggetti	Materials science Shape memory alloys Piezoelectric ceramics Aluminum alloys
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"This event was co-sponsored by the Brazilian Agencies for Research and Development (CAPES and CNPQ)"--Pref. Includes bibliographical references and indexes.
Nota di bibliografia	
Nota di contenuto	Functional and Structural Materials, FUNCMAT2009; Preface; Table of Contents; Processing Methodology to Embedding NiTi Shape Memory Fibers into a Polymer-Based Composite Plate; Vibration Attenuation in an Epoxy Smart Composite Beam with Embedded NiTi Shape Memory Wires; Preliminary Results of Stress Recovery of Constrained NiTi SMA Wire for Aerospace Applications; Thermal Activation of CFRP with Embedded NiTi Shape Memory Wires; Manufacture and Electro-Thermomechanical Characterization of a SMA Copper-Based Cylindrical Connector Dynamic Properties of NiTi Shape Memory Alloy and Classic Structural Materials: A Comparative Analysis Influence of Thermomechanical Processing on the Martensitic Transformation Temperatures of NiTi SMA Wire; Precipitates Formation in Ti-Ni Equiatomic Alloys due to Annealing Heat Treatment ; Characterization of 150mm in Diameter NiTi SMA Ingot Produced by Electron Beam Melting; Comparison between the Flexibility of Three Different Types of Rotary NiTi

Endodontic Instruments; Fatigue Life Curves of NiTi Alloys - The Z Effect

The Influence of Cyclic Straining in Torsion on Fatigue Resistance and Torsional Properties of ProTaper NiTi Endodontic Instruments; Cyclic Stress-Strain Response of Superelastic Polycrystalline Cu-12wt%Al-0.5wt%Be Alloy; Mechanical Strength Evaluation of a CuAlBe Shape Memory Alloy under Different Thermal Conditions; Application of Piezoelectric Materials for Monitoring the Growth of Defects in Structures; Microstructural Analysis and Tensile Properties of Squeeze Cast Al-7%Mg Alloy; Investigation of Quasicrystal-Reinforced Aluminium Metal Matrix Composite by Hot Extrusion; Iron Distribution in Geopolymer with Ferromagnetic Rich Precursor; Adhesion of Ceramic Plates with Geopolymer; Geopolymeric Adhesives for Aluminium Joints; Keywords Index; Authors Index

Sommario/riassunto

This special collection provides up-to-date knowledge concerning the field of functional materials such as shape memory alloys, piezoelectric ceramics and aluminium alloys. The articles therein also deal with recent investigations of quasicrystals and geopolymers: two classes of hybrid material that have attracted great scientific interest, given their unusual properties and potential engineering applications. In the first part, the papers address key issues concerning the application of two classes of functional alloy: (i) NiTi alloys, having important applications in the fields of smart stru
