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Collana	Materials science forum, , 0255-5476 ; ; volume 643
Altri autori (Persone)	GomesRodinei M
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Nota di bibliografia	Includes bibliographical references and indexes.
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-0.5 wt%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

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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

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