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Nota di contenuto	Ferromagnetic Shape Memory Alloys II; Committees; Sponsors and Exhibitors; Conference Photo and list of attendees; Preface; Table of Contents; A. Basic Phenomena and Theory; Fundamental Aspects of Magnetic Shape Memory Alloys: Insights from Ab Initio and Monte Carlo Studies; The Symmetry-Conforming Theory of Martensite Aging; B. Structure and Magnetic Properties; NiMn-Based Metamagnetic Shape Memory Alloys; Incommensurate and Commensurate Structural Modulation in Martensitic Phases of FSMA; Structural, Thermal and Magnetic Properties of Ga Excess Ni-Mn-Ga Structural Relation between the X-Phase and other Phases in Ni ₂ MnGa Positron Annihilation Spectroscopy Study of NiMnGa Modulated and Non-Modulated Martensitic Phases; X-Ray Diffraction Reciprocal Space Mapping Study of Modulated Crystal Structures in 10M

Ni-Mn-Ga Martensitic Phase; Domain Structures across the Martensitic Transformation in $Ni_{2+x}Mn_{1-x}Ga$; Study of Co-Ni-Al Alloys with Magnetically Controlled Shape Memory Effect; Annealing Effect on Martensitic Transformation and Magneto-Structural Properties of Ni-Mn-In Melt Spun Ribbons
Influence of Magnetic Field on Magnetostructural Transition in $Ni_{46}Mn_{32.8}Sn_{20.8}$ Heusler Alloy
Magnetic and Martensitic Transitions in $Ni_2Mn_{1+x}Sn_{1-x}$ Alloys; Effect of Co and Mn Doping on the Martensitic Transformations and Magnetic Properties of Fe-Pd Ferromagnetic Shape Memory Alloys; Structural, Magnetic and Transport Properties of Ni-Fe-Al Alloys; C. Magnetomechanics and Magnetocaloric Effect; Recent Developments in Ni-Mn-Ga Foam Research; Magnetoelastic Coupling in Ni-Mn-Ga Magnetic Shape Memory Alloy; Evaluation of Magnetostriction of the Single-Variant Ni-Mn-Ga Martensite
Theoretical Modeling of Magnetocaloric Effect in Heusler Ni-Mn-In Alloy by Monte Carlo Study
D. Thin Films and Composites; Recent Progress in FSMA Microactuator Developments; Structural and Magnetic Properties of Epitaxial Ni_2MnGa Thin Films; Magnetically Anisotropic Ni_2MnGa Thin Films: Coating Glass and Si Micro-Cantilevers Substrates; Fabrication and Magnetic Properties of CoNiAl Ferromagnetic Shape Memory Alloy Thin Films; E. Modeling and Simulations; Thermodynamic Modelling of Ferromagnetic Shape Memory Actuators; Simulation of an Improved Microactuator with Discrete MSM Elements
F. Processing and Engineering
Extruded Rods with Axial Texture of Polycrystalline Ni-Mn-Ga Alloys; Twinning Behaviour of Textured Polycrystalline Ni-Mn-Ga Alloy after Hot Extrusion; Nano-Positioning with Ferromagnetic Shape Memory Alloy Actuators; Keywords Index; Authors Index

Sommario/riassunto

This work on Ferromagnetic Shape Memory Alloys contains selected peer-reviewed papers. Such materials belong to the most exciting and fastest-growing group of martensitic multifunctional materials. The selected papers cover the following topics of: Basic phenomena and theory; Structure and magnetic properties; Magnetomechanics and magnetocaloric effect; Thin films and composites; Modeling and simulations and Processing and engineering. This volume will be useful to anyone who is already working with novel advanced materials, as well as to those seeking an accessible introduction to the relativ
