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Nota di contenuto	Ferromagnetic Shape Memory Alloys; Editor; Sponsors; Committees; Preface; Table of Contents; Inaugural Talk; Concepts and Physical Phenomena in Magnetic Shape Memory Science; I. Sample Preparation; Development of Ni-Mn-Ga Based Ferromagnetic Shape Memory Alloy by Rapid Solidification Technique; Magneto-Mechanical Behaviour of Textured Polycrystals of NiMnGa Ferromagnetic Shape Memory Alloys; Magnetization and Domain Patterns in Martensitic NiMnGa Films on Si (100) Wafer; II. Thermal Treatments and Phase Stability; Intermartensitic Transformations in Ni-Mn-Ga Alloys: A General View Martensite Transformation and Magnetic Property Dependence on the Annealing Temperature in Ni-Rich Ni-Mn-Ga Alloy Influence of Annealing Temperature on the Properties of Co-Ni-Ga Ferromagnetic Shape Memory Alloy; Textural Ordering in NiTi, Ni-Fe-Ti, and Ni-Mn-Ga Shape Memory Alloys - Kinetics of Intra- and Inter-Domain Processes; Effect of Site Disorder on Martensitic Transformation in

Ferromagnetic Ni₅₅Fe₂₀Al₂₅ Alloy as Inferred from Magnetic and Magneto-Transport Measurements; III. Magnetic and Structural Characterization

Acoustic Energy Absorption in Ferromagnetic Ni-Mn-Ga Shape Memory Alloy Polymer Composites; Co-Ni-Ga Alloys with Room Temperature Ferromagnetic Martensite Phase; Structural Characterization of Co_{70-x}Ni_xGa₃₀ Ferromagnetic Shape Memory Alloys; Structural Studies on Mn Excess and Ga Deficient Ni-Mn-Ga; Mapping of Magnetic Domains by MFM in Ni₂MnGa; Transformation Behavior of Ni-Mn-Ga Ferromagnetic Shape Memory Alloy; Effect of Stress Relaxation on Quenched NiFeAl Ferromagnetic Shape Memory Alloy; Lattice Thermal Expansion of the Shape Memory Alloys Cu-Al-Ni, Cu-Al-Zn, Cu-Al-Be and Cu-Al-Pd

IV. Microscopic Studies of Magnetic Shape Memory Alloys; Magnetic Compton Scattering Study of Shape Memory Alloys; Hybridization Effects in Ni-Mn Based Shape Memory Alloys: XAFS Study; Electronic and Structural Properties of Ferromagnetic Shape Memory Alloys Studied by Density Functional Theory; Signature of Austenitic to Martensitic Phase Transition in Ni₂MnGa in Mn and Ni K-Edge XANES Spectra; A Charge Compton Profile Study of Ni₂MnGa: Theory and Experiment; V. Effects of External Fields; Effect of External Fields on the Martensitic Transformation in Ni-Mn Based Heusler Alloys; Effect of Magnetic Field on Martensite to Intermediate Phase Transformation in Ni₂MnGa; VI. Coupled Effects: Magnetoresistance and Magnetocaloric Effects; Magneto-Transport and Magnetic Properties of Ni-Mn-Ga; Magnetic Investigations on Ni-Mn-Sn Ferromagnetic Shape Memory Alloy; Magnetocaloric and Shape-Memory Properties in Magnetic Heusler Alloys; Keywords Index; Authors Index

Sommario/riassunto

Multiferroic shape-memory alloys that exhibit both ferroelastic and ferromagnetic properties have recently attracted much attention. They belong to the family of so-called "smart materials" and are future-generation materials that are likely to be useful in cutting-edge technologies. Apart from the theoretical challenge of understanding their fascinating properties, the quest to harness them for practical use is also attracting many scientists and engineers from all over the world. This compilation comprises peer-reviewed papers, categorized into: I. Sample Preparation, II Thermal Treatments
