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Nota di contenuto	Advances in Materials Science; Preface, Technological Committees and Sponsors; Table of Contents; Chapter 1: Nanomaterials and Nanotechnologies; Application of the Nanostructured Carbon Coatings for Improvement of Functional Properties of Medical Polyurethanes; The Dispersion of MWCNTS in Acetone Solution of SAN; Removal of Paraquat from Aqueous Solutions Using Multi-Walled Carbon Nanotubes: Kinetic, Isotherm and Thermodynamic Studies; Effect of Nanostructured Oxide Coatings on Tensile Properties of Cast Pure Magnesium Multifunctional NaYF ₄ :Yb ³⁺ , Er ³⁺ @Au Nanocomposites: Upconversion Luminescence, Temperature Sensing and Photothermal Therapy Comparative Studies for the PAMAM/RE and HPAE/RE (RE=La, Nd, and Eu) Based on Molecular Dynamics Simulations; Facile Synthesis and Photocatalytic Properties of Mini Nanoparticle CdS Quantum Dots/Boron and Nitrogen Co-Doped TiO ₂ Transparent Photocatalyst Emulsion; Nanomagnetic Particle Anchored to Monodispers Porous Microspheres for Pectinase Immobilization; Effect of Noble Metal Nanoparticles in SERRS Measurements of Water-Soluble Porphyrins In Situ TEM Manipulation and Property Study of Cd ₂ Ge ₂ O ₃ Nanowires Structures and Performances of PA6/PVA Nanofibers

Membranes from Electrospinning; A Simple Solvothermal Synthesis of Spherical $\text{Y}_2\text{O}_3:\text{Eu}^{3+}$; Antibacterial Potential of Silver Nanoparticles Capped with Poly(4-styrenesulfonic acid-co-maleic acid) Polymer; Chapter 2: Thin Films; Synthesis, Characterization and Thermal Properties of SiO_2/P i Composite Film; Fabrication and Characterization of Al/Ni Multilayer Films; $\text{SiO}_2/\text{ZrO}_2$ Thin Films as Low Temperature NO_2 and O_3 Sensors
Preparation and Characterization of $\text{Cd}_{1-x}\text{Zn}_x\text{S}$ Thin Films with Chemical Bath Deposition
Synthesis and Characterization of Au-CdS Composite Thin Films for Photoelectrochemical Sensing of Hg^{2+} Ions; Highly Transparent Flexible Clay Film with Organized Polymer; Study on Preparation and Surface Properties of Fluorinated Acrylate Hydrophobic Polymer Film; Effect of Thermal Annealing on La_2O_3 Films Grown by Plasma Enhanced Atomic Layer Deposition; Chapter 3: Metal-Based Materials, Alloys and Metallurgical Technology
Effect of Oxygen Content in Powders on Microstructure and Mechanical Properties of WC-FeAl Composites Fabricated by Vacuum Sintering Technique
Influence of Chlorine Additives on Combustion Rate of Pulverized Coal Injection; Friction Stir Processing of Cast Iron Using Cermet Tool; Welding-Brazing Characteristic in Electron Beam Joining Vanadium Alloy and Stainless Steel; Improvement of Wet Milled TiC-FeAl Alloys; Application of Orthogonal Experiments Design to Optimize Process Parameters in the Alloy Heat Treatment; Study on Clinching for Similar and Dissimilar Titanium Alloy
The Effect of Enhanced Solution Treatment on Microstructures and Properties of 6013 Type Aluminum Alloy

Sommario/riassunto

Collection of selected, peer reviewed papers from the International Conference on Advances in Materials (ICAM 2014), December 13-14, 2014, Shanghai, China. The 167 papers are grouped as follows:
Chapter 1: Nanomaterials and Nanotechnologies; Chapter 2: Thin Films; Chapter 3: Metal-Based Materials, Alloys and Metallurgical Technology; Chapter 4: Crystallography, Chemical and Cathode Materials; Chapter 5: Polymers and Composite Materials; Chapter 6: Biomaterials and Biotechnologies; Chapter 7: Materials and Technologies in Environmental Engineering; Chapter 8: Building Materials and Technologies
