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Nota di contenuto	Frontier of Nanoscience and Technology II; Preface, Committees and Sponsors; Table of Contents; Chapter 1: Nanoscience; A Control System Design for Nanoparticle Manufacturing by Using Im-Pinging-Jet Micromixers; Development of Anodic Titanium Oxide Nanotubes Applied to a pH Sensor with Amperometric and Potentiometric Methods; Compressive Mechanical Properties of Carbon Nanotube Sponges: Experiments and Modeling; Design and Fabrication of Micropump Actuated by Laser Shock Wave; Design and Fabrication of Thermocapillary Micro Bubble Pump Development of Nano-TiO <sub>2</sub> Coating on Titanium Alloy Substrate for Biomedical ApplicationsPreparation and Characterization of Attapulgite-KH550 Nanocomposites and their Application to Methane Absorption; Preparation and Characterization of Cellulose Nanowhiskers in N, N-Dimethylacetamide; Preparation and Characterization of Chitosan-Poly(MA-PEG400-SA) Nanoparticles as Drug Carrier; Preparation and Hydrogen Storage Kinetics of Nanocrystalline and Amorphous Mg <sub>20</sub> Ni <sub>10-x</sub> M <sub>x</sub> (M=Co, Cu; x=0-4)

Alloys; Preparation and Properties of Gd and Sb Doped SnO<sub>2</sub> Conductive Nanoparticles  
Preparation of Cortex Moutan Nanoparticles and its Microscopic Characteristics and Physicochemical Properties  
Preparation of Liuweidihuang Nano-Microcapsules and its Physicochemical Properties; Process for Manufacturing Multi-Functional Nano-TiO<sub>2</sub> Composite Powder; Removing of Nano-Particles from Semiconductor Wastewater Using a Hybrid Treatment System; Resonance Suppression on Nanoscale Viscoelasticity Measurement; Cellular Uptake of PEGylated PLGA Nanoparticles in Hela Cells; A Fabrication Study on Diode FED Panel Utilizing Improved Film-Electrode; Chapter 2: Materials Engineering  
A Computational Study on Structures, Stabilities and Electronic Properties of Trifluoromethyl Silsesquioxanes Si<sub>2</sub>nO<sub>3</sub>n(CF<sub>3</sub>)<sub>2</sub>n (n=1-5)  
AFM Interaction Forces of Lubricity Materials Surface; Adsorption Kinetics of Pb (II) onto Na-Bentonite/Poly AMPS Composite; Capsaicin Injectable In-Situ Forming Gels; Calcium Ion Treatment Behavior of Silk Fibroin/Sodium Alginate Scaffolds; Characteristics of Compression Wood Tracheid of Loblolly Pine Induced by Artificial Inclination; Controlled Synthesis and Upconversion Luminescence Properties of Yb<sup>3+</sup>-Tm<sup>3+</sup> Codoped NaYF<sub>4</sub> Hexagonal Submicroplates  
Dielectric Properties of Zr-Doped CCTO Based Ceramics Prepared via Sol-Gel Method  
Li<sup>+</sup> Extraction/Insertion Reaction with LiMnTi<sub>0.25</sub>O<sub>3</sub> Spinel; Effect of Rare Earth on the Inclusions and Pitting Resistance of Duplex Stainless Steel; Effect of Temperatures on Tensile of Aluminium Thin Films; Film Properties of Poly(lactic Acid) Comprising N-Methyl-2-Pyrrolidone; Friction Welding of Zr<sub>41</sub>Ti<sub>14</sub>Cu<sub>12.5</sub>Ni<sub>10</sub>Be<sub>22.5</sub> Bulk Metallic Glass and Temperature Field Simulation; Investigation of Precipitation in a Aging Hardened Plastic Mould Steel  
Investigation on the Infrared Absorption Spectrum of Pearl and Nacre

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#### Sommario/riassunto

This book comprises 62 peer-reviewed papers on the topics of Nanoscience and Materials Technology, and has the aim of promoting the development of Nanoscience and Materials Technology, strengthening international academic cooperation and communications and exchanging research ideas. This work provides readers with a broad overview of the latest advances in the field of Nanoscience and Materials Technology. Review from Book News Inc.: Kao (National Sun Yat-Sen U., Taiwan) et al. collect 62 papers from the 2012 International Conference on Frontiers of Nanoscience and Technology (ICFNST 2012), he

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