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Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Materials Engineering; Preface and Committees; Table of Contents; Chapter 1: Function and Electronic Materials; Growth Dynamics of Single Void during Czochralski Silicon Crystal Growth Using Phase-Field Modeling; Electronic and Optical Properties of Sn-Doped Zno with and without O Vacancy; Enhanced Flux Pinning in La1.84Sr0.16CuO4 Thin Film with the Ferroelectric Polarization Effect of BiFeO3; Controllable Synthesis of Monodisperse Metal Oxide Nanostructures via a Solvothermal Route and Their Catalytic Properties; Preparation and Optical Properties of One-Dimensional Ag/SiOx Photonic Crystal Study on Fabrication and Properties of In Situ Si and Al2O3 Particulate Reinforced CompositesThe Synthesis and Application of the NaCl-KCl-K2HfCl6 Electrolyte; The Study on Photocatalytic Degradation of Methyl Orange Using SrFe0.5Co0.5O3-; Preparation of Antimicrobial PHEMA-g-PCBMAE Hydrogels with Improved Mechanical Properties; Chapter 2: High Performance Structural Material; Research on the Hydration Mechanism of Portland Cement with Magnesium Slag; Effects of Mono- And Dianhydrides on Thermal and Mechanical Properties Enhancement of Polybenzoxazine: A Property Comparison Reliability Optimization Design of Composite Transmission ShaftEffect of Rubber Contents on Tribological and Thermomechanical Properties of Polybenzoxazine; Study on Seismic Resistant Properties of the

Integral Structure after Adding Steel Storey on Top of the Multistoried Brick-Concrete Architecture; Thermally Induced Vibration Analysis of Composite Laminate Based on Equivalent Displacement Method; Chapter 3: Materials Processing Technology; Mesoscopic Simulation Analysis of the Influence of Die Wall Friction on Compression Process of Powder Particles
The Influence of Cr Gradient of Transition Layer on Creep Rupture Properties of Dissimilar JointInfluence of Prior Austenite Grain Size on the Dispersion of Fatigue Crack Propagation Thresholds in Weld Metal; Modeling of Disk-Shaped Anode-Support SOFC with Proton Conductor Electrolyte and Sm0.5Sr0.5CoO3--Sm0.2Ce0.8O2- Cathode; Electroless Copper Coating on Boron Carbide Particles by Using Copper Activation Method; Strength Loss Method to Evaluate the Sulfate Attack Resistance of the Cement-Porous Silica Fume Mortar; Thermal Vibration Compound Stress Relief on Thick DH36 Steel Welded Plates
Iron Removal from Hafnium Crystal Bar by Iodide ProcessResearch and Application of Numerical Control Milling Machine Tool Length Compensation Instructions; Effect of Coiling Temperature and Cold Rolling Reduction on Planar Anisotropy of Ti-Alloyed Low Carbon Steel; Device Design of Hot-Air Curing and Study on the Properties of Hot-Air Cured Phosphate Sand; The Effects of Cross Cold Rolling Reductions on Microstructure of Ti+P-IF Steel; The Breakdown Characteristic Research of Polymer Materials in Liquid Nitrogen; Keywords Index; Authors Index

Sommario/riassunto

Collection of selected, peer reviewed papers from the 2nd International Conference on Materials Engineering (ICMEN2014), May 17-18, 2014, Nanjing, China. The 28 papers are grouped as follows: Chapter 1: Function and Electronic Materials, Chapter 2: High Performance Structural Material, Chapter 3: Materials Processing Technology Materials scientists and engineers report on recent research into designing new materials, characterizing materials, optimizing manufacturing processes, computer-aided materials calculations, and similar matters. In sections on functional and electronic materials, high-