1. Record Nr. UNINA9910465298903321

Titolo	Advanced structural and functional materials for protection : selected, peer reviewed papers from the Symposium T on Advanced Structural and Functional Materials for Protection, International Conference on Materials for Advanced Technologies (ICMAT2011), International Convention & Exhibition Centre June 26 - July 1, 2011, Singapore / / edited by Ma Jan and Santhiagu Ezhilvalavan
Pubbl/distr/stampa	Durnten-Zurich, Switzerland : , : Trans Tech Publications, , 2012 ©2012
ISBN	3-03813-698-0
Descrizione fisica	1 online resource (149 p.)
Collana	Solid State Phenomena, , 1662-9787 ; ; Volumes 185
Altri autori (Persone)	JanMa EzhilvalavanSanthiagu
Disciplina	623.38
Soggetti	Smart materials Textile fabrics - Technological innovations Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Advanced Structural and Functional Materials for Protection, ICMAT 2011; Preface; Table of Contents; ZnO Nanostructures for Sensor Applications; Wave Scattering Phenomena for Health Monitoring of Hard-to-Inspect Defects ; Thermoelectric Properties of N-Type Bi2Te2. 7Se0.3 and P-Type Bi0.5Sb1.5Te3 Films for Micro-Cooler Applications; Atomic Layer Deposition of Thin Inorganic Coatings onto Renewable Packaging Materials; Corrosion Resistance of Pulse-Electroplated Ni-W Alloys; Development of Piezoelectric Diaphragm Pump Multiwalled Carbon Nanotubes Reinforced Portland Cement Composites for Smoke DetectionImproved Electrical and Mechanical Properties of Niti/TiOx/PZT/TiOx Thin Film Heterostructures; Investigation of Trapped Charges-Induced Stain Formation on RF-PECVD Diamond-Like Carbon Films; Athermal Martensites, Temperature-Time-Transformation Diagrams and Thermal Hysteresis: Monte Carlo Simulations of Strain Pseudospins; Developing Woven Enhanced Silk

Fabric for Ballistic Protection; Effect of In Doping on Thermoelectric and Magnetoresistive Properties of ZnO Films Prepared by RF Magnetron Sputtering
Fabrication and Spectroscopic Properties of Transparent Yb:YAG Laser CeramicsOn the Design of Bi-Layer Armor Materials; Fabrication and Properties of High Quality Transparent Ho:YAG Ceramics; Fabrication and Upconversion Luminescence of Highly Transparent Er:YAG Ceramics; Electro-Optic Properties of (100)-Oriented (Pb,La(Zr,Ti)O3 Thin Film; Novel Piezoelectric Tactile Sensor Materials with Improved Properties; ZnO Surface Acoustic Wave Sensor for the Enhanced Detection of DMMP; Study on the Growth and Corrosion Resistance of Manganese Phosphate Coatings on 25Cr2Ni4WA Alloy Steel
Investigating the Thermoelectric and Structural Properties of Bismuth Telluride Thin Films for Harvesting Energy from Waste HeatMechanical Properties of AlCrTiSiN Coatings Developed by Cathodic Arc for Protection Applications; Evolution of Microstructures on GTA Welded AISI304 Subjected to Hot Corrosion at 700°C under Na2SO4 + V2O5 (60%); Assessment of Mechanical and Corrosion Properties of GTA Welded Monel 400 Plates Exposed to Air Oxidation at 700°C
Enhancing the Char Resistant of Expandable Graphite Based Intumescent Fire Retardant Coatings by Using Multi-Wall Carbon Nano Tubes for Structural SteelEffect of Sputtering Process Parameters on the Thermoelectric Properties of P and N-Type Bi2Te3 Films; Damage Monitoring in Realistic Structures Using Lamb Waves; Effects of Sintering Temperature and Cooling Rate on Mechanical Properties of Powder Injection Molded 316L Stainless Steel; Developing New Sol-Gel Surface Treatments Formulation for Bonded Repair of Aircraft
Green Inhibitors: Anti Corrosive Propensity of Garcinia mangostana for Aluminum 1100

Sommario/riassunto

This collection of 37 papers describes materials for protecting civilians and soldiers against vehicle collision, blast-damage, fragmentation and unconventional attack. They also treat multi-functional materials for enhancing civilian and soldier performance under extreme conditions. The detailed topics include the atomic-layer deposition of thin inorganic coatings into renewable packaging materials, the development of woven enhanced silk fabric for ballistic protection, novel piezo-electric tactile sensor materials having improved properties, enhancement of the char resistance of expandable g