

1. Record Nr.	UNINA9910453482203321
Titolo	Composite materials IV // edited by Chi Y.A. Tsao and Jingkun Guo
Pubbl/distr/stampa	Uetikon-Zuerich, Switzerland : , : Trans Tech Publications, , 2006
ISBN	3-03813-072-9
Descrizione fisica	1 online resource (185 p.)
Collana	Key Engineering Materials ; ; v.313
Altri autori (Persone)	TsaoChi Y. A GuoJingkun
Disciplina	620.1/18 620.11 620.118
Soggetti	Composite materials Materials 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 and indexes.
Nota di contenuto	Composite Materials IV; Table of Contents; Fabrication and Characterization of Nanocomposites Reinforced by Carbon Nanotubes-(2)Testing of Mechanical Properties; An Overview of the Study on Morph-Genetic Materials in State Key Lab of Metal Matrix Composites, Shanghai Jiao Tong University; Microstructure and Dielectric Properties of Heat-Treated SiC-AlN Multiphase Ceramics; Model Prediction of Thermodynamics Activity in Multicomponent Liquid Alloy ; Mg-Y-Cu Bulk Nanocrystalline Matrix Composites Containing WC Particles Discontinuously Reinforced Aluminum Composite and Its Application in Brake Discs Controlled Nano-Oxide Layer Coating on Fine Particles with Multiple Optical-Electrical Functions; Influence of Stackers of Particles on Piezoelectricity of 0-3 Type Piezo-Composite; Strengthening Zirconia by Adding Both Nickel and Alumina Particles; Evaluating Mechanical Properties of Hard Coatings by Using Relativity Method; On the High Pure Alumina Composite Powder for Sintering at 1400°C, A Preliminary Investigation ; Al/Al <sub>2</sub> O <sub>3</sub> Core-Shell Particles Synthesized by Wet-Chemical Based Route Using Friction Stir Processing to Fabricate Mg Based Composites with Nano Fillers AZ61 Mg with Nano SiO <sub>2</sub> Particles Prepared by Spray

Forming plus Extrusion; The Effect of Tungsten Addition on the Thermal Stability and Microstructure in the Electroless Ni-P-W Composite Coating; The Effect of AlN Contents on the Properties of SiC-AlN Particulate Composites ; Synthesis of the Magnesium-Based Nano/Amorphous-Composite Alloy Powder by the Combination Method of Melt-Spinning and Mechanical Alloying; Microstructure and Properties of Spark Plasma Sintering AlN/BN Ceramics  
Electrical and Mechanical Properties of Metal-Particle-Dispersed PZT-Matrix Composites Aluminum Borate Whiskers Growing by Compensation of TiB<sub>2</sub> ; Controlled Interphase in Carbon Fiber/Epoxy Composites by Molecular Self-Assembly Method; Alumina/Glass Composites Fabricated by Melt-Infiltration of Glass into Porous Alumina; In-Situ Synthesis of Metal Matrix Composite Coating with Laser Melting-Solidifying Processes; The Microstructure, Mechanical and Dielectric Properties of CNTs/Mullite Ceramics Composites  
Mechanical Behavior of a Hybrid Reinforced Magnesium Composite Fabricated by Pressure Infiltration Method Wettability at Al-Mg/Ceramic Interfaces; Influence of Cu Content on Interfacial Structure and Mechanical Properties of 3Al<sub>2</sub>O<sub>3</sub>2SiO<sub>2</sub> Fiber Reinforced Al Matrix Composites; Fabrication by SPS and Thermophysical Properties of High Volume Fraction SiCp/Al Matrix Composites; Solid State Reaction Synthesis and Thermoelectric Properties of Ag-Doped Mg<sub>2</sub>Si<sub>0.8</sub>Ge<sub>0.2</sub> ; Environmental Performance Testing System for Thermostructure Materials Applied in Aeroengines ; Keywords Index; Authors Index

---

#### Sommario/riassunto

Composite materials have been at the center of research and development, in the materials community, for decades. The concept of combining metals, ceramics and polymers of various types, shapes and properties into a single composite material having properties that none of the constituents can themselves exhibit, has provided endless scope for human beings to invent. It has therefore stimulated numerous research and development efforts, and many applications. However, in spite of the advantages of composite materials, many underlying problems arising from the complexity of the systems have

---