

1. Record Nr.	UNINA9910298601803321
Titolo	Metal-Matrix Composites Innovations, Advances and Applications : An SMD Symposium in Honor of William C. Harrigan, Jr. // edited by T. S. Srivatsan, Yuzheng Zhang, William C. Harrigan, Jr
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	9783319728537 3319728539
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XIV, 250 p. 146 illus.)
Collana	The Minerals, Metals & Materials Series, , 2367-1696
Disciplina	620.16
Soggetti	Metals Ceramic materials Materials Metals and Alloys Ceramics Materials Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Part 1. Aluminum and Lightweight Metal Matrix Composites -- Aluminum Matrix Composites 1970 to 2017 -- Development of an Electroless Plating Process for Multi-wall Carbon Nanotubes (MWCNTs) to Improve Their Dispersion and Wettability in Molten Aluminum -- Part 2. Synthesis and Developments of Emerging Composites -- Study on Hot Deformation Behavior and Processing Map of 20vol.% Al18B4O33w/2024 Composites -- Development and Characterization of In-situ Al-TiC Composites Prepared by Pneumatic Powder Injection Route -- Part 3. Basic History and Advances in Metal Matrix Composites -- Microstructure and Mechanical Behavior of Cryomilled Al-Mg Composites Reinforced with Nanometric Yttria Partially Stabilized Zirconia -- Fatigue Crack Growth Resistance of Titanium Metal Matrix Composites -- Experimental Optimization of Dry Sliding Wear Behavior of Titanium Matrix Composites Using Taguchi Methods -- Model-based

Algorithm for Damage Detection in Piezoelectric Fiber-based Composites -- Part 4. Mechanical Behavior of Metal Matrix Composites -- Effect of Matrix Properties and Sliding Counterface on the Wear Behavior of Magnesium Alloy-based Metal Matrix Composites -- Synthesis and Microstructural Development of Particulate Reinforced Metal-matrix Composites Using the Technique of Spray Atomization and Deposition -- Magnetically Induced Cavitation for the Dispersion of Particles in Liquid Metals -- An Engineered Magnesium Alloy Nanocomposite: Mechanisms Governing Microstructural Development and Mechanical Properties -- The Tensile Response and Fracture Behavior of a Copper-Niobium Microcomposite: Role of Surface Modification -- Fundamental Issues and Highlights of Reactive Wetting in Carbon-based Composites -- Part 5. Poster Session -- Influence of Graphene Nanoplatelet Reinforcements on Microstructural Development and Wear Behavior of An Aluminum Alloy Nanocomposite.

Sommario/riassunto

This book includes papers on recent research carried out in the field of metal-matrix composites (MMCs). Processing, microstructure, and mechanical properties of MMCs and unreinforced matrix alloys will be covered with a focus on aluminum, titanium, nickel, and copper MMCs. Those involved in the research of MMCs and unreinforced alloys, particularly in aerospace, space, and automotive materials research, will find this volume indispensable.
