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Collana	Materials Horizons: From Nature to Nanomaterials, , 2524-5384
Disciplina	620.118
Soggetti	Manufactures Surfaces (Physics) Chemistry, inorganic Ceramics, Glass, Composites, Natural Materials Manufacturing, Machines, Tools, Processes Characterization and Evaluation of Materials Tribology, Corrosion and Coatings
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Nota di contenuto	1. Conventional and Non-conventional Machining Processes of Composite Structures -- 2. Variability of The Mechanical Properties Due To The Manufacturing Process And The Machining Process -- 3. Life cycle Assessment of composites and it's impacts on composites industry and benefits -- 4. An Hybrid MCDM technique for designing composites -- 5. Application of MCDM Techniques on Non-Conventional Machining of Composites -- 6. In-situ Processing of Light Weight Metal Matrix Composites for Next generation Automobile Applications -- 7. Design of metal matrix composite with particle reinforcement produced by deep cryogenic treatment -- 8. Deformation behavior, material modeling and its applications at elevated temperature -- 9. Finite element modeling of FRP composites -- 10. Friction Surfacing of Al- Alloys, D3Tool steel, SS316 on Low carbon steel as a composite surface layer formation to enhance the metallurgical & Mechanical Properties -- 9. Fabrication of medical model/ implants -- 11. Fabrication of medical model/ implants -- 12.

Evaluation of industrial lime sludge filled HDPE composites for environmental sustainability -- 13. Effect of addition of reinforcement on mechanical properties of metal matrix composites -- 14. Synthesis and Characterization of oxide dispersion strengthened W based nanocomposites -- 15. Stir Casting of Metal Matrix Composites -- 16. Experimental Investigation on machining and surface characteristics of Ti-Nb-Ta-Zr alloy by nano-hydroaxyapatite powder mixed Electrical discharge machining -- 17. In-situ fabrication of biodegradable low elastic porous Mg-Zn-Mn-(Si, HA) bio-composite by mechanical alloying and spark plasma sintering for Orthopedics Application -- 18. Additive Manufacturing of Polymer and Metal based Composite Materials -- 19. Green Polymer Composites -- 20. Fabrication and applications of composites developed by metal additive manufacturing route -- 21. Synthesis, Characterization, and Applications of Composites -- 22. Evaluation of industrial lime sludge filled HDPE composites for environmental sustainability -- 23. Recent developments and challenges in the fabrication, characterization, and Properties enhancement of Polymer nanocomposites: A Critical Review -- 24. Fabrication of Metal Matrix Composites by Friction Stir Processing -- 25. A Study of PCA-GRA and GRA-PCA optimisation design for the evaluation of ECM Process Parameters -- 26. Hybridizing principle of PCA with PSO approach for the evaluation of EDM Process Parameters -- 27. Additive technology for the development of new composite electrodes for high EDM properties -- 28. Hybrid electrical discharge machining: Emerging improved surface properties.

Sommario/riassunto

This book presents a collection of chapters on various aspects of futuristic composite materials, from manufacturing challenges to materials characterization. The book covers the scientific basis of processing and synthesizing futuristic composites, including the prerequisite theoretical background and latest fabrication techniques. The book also discusses industrial applications of composites, such as in aerospace, automotive, and sports equipment. This book will serve as a valuable guide for researchers and professionals working in the area of futuristic lightweight materials.