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Nota di contenuto	1. Advanced Polymer Composite Manufacturing Dimensions For Aerospace Engineering Applications -- 2. Impact Studies of Nano and Hybrid Composites -- 3. High Strain Rate Studies of Polymer and Hybrid Nanocomposites -- 4. Design Methodologies for Composite Structures in Aircraft Engines -- 5. Machining of Aerospace-Grade Composites and Related Stacks for Aircraft Applications -- 6. Advanced Potential Hybrid Biocomposites in Aerospace Applications: A comprehensive review -- 7. Finite element modelling of the effects of vent holes in carbon fibre reinforced composite laminates: analysis of stress field pattern -- 8. Mechanical, Thermal and Wear Behavior of SiC

Particle Strengthening of PMMA-Toughened Glass-Epoxy Hybrid Composite -- 9. An Overview on the Natural/Synthetic Fibre Reinforced Metal-Composite Sandwich Structures for Potential Application in Aerospace Sectors -- 10. Investigation and Analysis the Surface Veracity Aspects forthe WireEDM of Al/ZrO2(P)-MMC -- 11. Material Characterization of Alloys for Aerospace Applications: Effect of laser power on the Co-axially deposited T64 alloy and Cu -- 12. Optimization of Reinforcement Parameters and Turning Conditions for Improving Surface Quality of Hybrid Al-SiC-Red Mud Composite -- 13. Thermal characterization of graphitized carbon nanotube reinforced Ti64 nanocomposites synthesized by field assisted sintering technique for fuselage and wing box applications -- 14. Hybrid Biocomposites: Utilization in Aerospace Engineering -- 15. Moulding of Carbon-Epoxy Composite Prepregs for Applications in Aerospace Industries -- 16. Recent trends in Hybrid Composites for aerospace applications: A review -- 17. Flexural and impact properties of hybrid of fibre reinforced in PLA nanocomposites with for aerospace applications -- 18. Evolution of Aerospace Composite Materials -- 19. Cooling Curve Thermal Analysis ofAl-20%Mg2Si-xB4C Hybrid Composites for Aerospace Applications -- 20. Microstructural Characterization, Mechanical Properties and Sliding Wear Behavior of Al-20%Mg2Si-xB4C Hybrid Composites of the Aircraft Body -- 21. Hybrid Composites for Very Large Lightweight Wind Turbine Blades: Structural and Materials Aspects -- 22. Influence of scanning speed on the laser metal deposition of Ti-6Al-4V and Mo for aerospace application -- 23. Carbon nanomaterial-carbon fiber hybrid composite for lightweight structural composites in the aerospace industry: Synthesis, processing, and properties -- 24. Advanced Composites in Aerospace Applications: Opportunities, Challenges and Future Perspective.

Sommario/riassunto

This book presents an authoritative account of the potential of advanced composites such as composites, biocomposites, composites geopolymer, hybrid composites and hybrid biocomposites in aerospace application. It documents how in recent years, composite materials have grown in strength, stature, and significance to become a key material of enhanced scientific interest and resultant research into understanding their behavior for selection and safe use in a wide spectrum of technology-related applications. This collection highlights how their unique combination of superior properties such as low density, high strength, high elastic modulus, high hardness, high temperature capability, and excellent chemical and environmental stability are optimized in technologies within these field.