

1. Record Nr.	UNINA9911006673803321
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Titolo	Composites Assembly for High Performance Fastener-Less Structures
Pubbl/distr/stampa	Stevenage : , : Institution of Engineering & Technology, , 2023 ©2022
ISBN	1-83724-480-4 1-5231-5329-6 1-83953-150-9
Edizione	[1st ed.]
Descrizione fisica	1 online resource (592 pages)
Collana	Manufacturing
Altri autori (Persone)	ThakurVijay Kumar
Disciplina	620.118
Soggetti	Composite materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Overview on design and manufacturing of assembled composite aerostructures -- Chapter 2: Processing of polymer composites: autoclave and microwave energy approaches -- Chapter 3: Industry 4.0 for composites manufacturing -- Chapter 4: Development of fibre-reinforced polymer composites through direct digital manufacturing -- Chapter 5: Joining and repair of resin-infused, continuous fibre-reinforced, thermoplastic acrylic-matrix composites for extended applicability -- Chapter 6: Aerospace composites' repair: integrated processes' feasibility -- Chapter 7: Augmented reality-equipped composites bonded repair -- Chapter 8: 3D printing of multi-material polymer composite systems -- Chapter 9: 3D printing of composites for space applications -- Chapter 10: Development and manufacturing of thermoplastic composite booms for drag augmentation system of a small satellite -- Chapter 11: Adhesively bonded polymer composite joints -- Chapter 12: Design principles and recent developments in adhesively bonded joints of fibre-reinforced plastic composite structures -- Chapter 13: Mechanical degradation of composite bonded joints subjected to environmental effects -- Chapter 14: Performance of aerospace composites in the presence of process-induced defects -- Chapter 15: Interleaving in composites -- Chapter 16: A deep learning-based tool to predict delamination induced

interlaminar stresses in composite structures -- Chapter 17: Damage assessment of composites based on non-destructive pulsed thermographic inspection -- Chapter 18: Augmented reality-equipped composite monitoring -- Chapter 19: Energy harvesting and self-sensing multi-functional polymer composites -- Chapter 20: Tailoring thermo-mechanical properties of hybrid composite-metal bonded joint -- Chapter 21: High-performance nanocomposites for strain self-sensing applications in composite joints.

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**Sommario/riassunto**

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This book provides a broad and balanced span of information, covering both fundamentals and applications across academic and industrial state-of-the-art activities on assembly, joining and repair of high-performance structures made from fibre-reinforced polymer composites.

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