1. Record Nr. UNINA9910734879503321 Autore Khan Tabrej Titolo Green Hybrid Composite in Engineering and Non-Engineering Applications / / edited by Tabrej Khan, Mohammad Jawaid Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2023 Pubbl/distr/stampa **ISBN** 981-9915-83-X [1st ed. 2023.] Edizione Descrizione fisica 1 online resource (292 pages) Collana Composites Science and Technology, , 2662-1827 Altri autori (Persone) JawaidMohammad Disciplina 620.118 Soggetti Composite materials Materials Chemistry **Polymers** Composites Materials Chemistry Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia The Challenges of Natural Fiber on Manufacturing, Material Selection Nota di contenuto and Technology Application -- Advanced Natural / Synthetic Polymer Hybrid Composites -- Tensile Properties of Kenaf Reinforced with Polypropylene Polymer under Ultraviolet Light Exposure -- Ecologically Enhanced Natural/Synthetic Polymer Hybrid Composites for Aviation-Interior and Secondary Structures -- Natural Fiber Reinforced Composites and their Role in Aerospace Engineering -- Advanced Natural/Synthetic Polymer Hybrid Composites of the Future for the Aerospace Industry -- Natural/Synthetic Polymer Hybrid Composites in Automotive Applications -- Application of Hybrid Reinforced Cellulose-Glass Fiber Based Composites in Automotive Industries -- Development of Composite Aerostructure for UAV Application -- Natural/Synthetic Polymer Hybrid Composites - Lightweight Materials for Automotive.

Sommario/riassunto

Applications.

This book introduces the different advanced hybrid composite materials used in aerospace, automotive, marine, and general engineering infrastructures. It represents the current development processes and applications in aircraft, automobile, and marine structures. This book also contains test cases and their validation using a finite element approach using computer tools. The book also deals with the design approach for innovative hybrid composite materials focused on diverse engineering and non-engineering applications. A detailed review of the state-of-the-art composite materials study presented here would be of interest to scientists, academics, students, and engineers and professionals in general working in the field of advanced composite materials and structures. This book is also useful for Ph.D. research scholars to improve their fundamental understanding of advanced materials and is also suitable for master's and undergraduate courses on composite materials.