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Nota di contenuto	Introduction to plant/synthetic fiber based woven & non-woven fabrics for laminated composites -- Material advancements in plant/synthetic fiber based woven & non-woven fabrics and their composites -- Commercially available plant/synthetic fiber based woven & non-woven fabrics -- Hybridization of plant/synthetic fiber based woven & non-woven fabrics and their composites -- Manufacturing of plant/synthetic fiber based woven & non-woven fabrics and their composites -- Surface modifications on plant/synthetic/hybrid fabrics in woven and non-woven polymeric laminates -- Mechanical & thermal properties of plant fiber in woven fabric polymeric composites -- Mechanical & thermal properties of plant/plant fiber hybrid fabric woven polymeric composites -- Mechanical & thermal properties of plant fiber non-woven fabric polymeric composites -- Mechanical & thermal properties of plant/plant fibers in hybrid non-woven fabric

polymeric composites -- Mechanical & thermal properties of synthetic fibers in wovenfabric polymeric composites -- Mechanical & thermal properties of synthetic/synthetic fibers in hybrid woven fabric polymeric composites -- Mechanical & thermal properties of synthetic fibers in non-woven fabric polymeric composites -- Mechanical & thermal properties of synthetic/synthetic fibers in hybrid non-woven fabric polymeric composites -- Mechanical & thermal properties of plant/synthetic fibers in hybrid woven/non-woven fabric polymeric laminates -- Tribological properties of plant fiber in woven/nonwoven fabric polymeric laminates -- Tribological properties of synthetic fibers in woven/non-woven fabric polymeric laminates -- Tribological properties of synthetic/plant fibers in woven/non-woven fabric hybrid polymeric laminates -- Static and Dynamic mechanical properties of woven/non-woven fabric polymeric laminates -- Acoustic properties of woven/non-woven fabric polymeric composites -- Effect of staking sequence on mechanical and thermal properties of woven/non-woven fabric polymericlaminates -- Thermo-mechanical behavior of woven/non-woven fabric polymeric laminates -- Microscopy and fracture analysis of woven/non-woven fabric polymeric laminates -- Effect of fillers over woven/non-woven fabric laminates -- Degradability of woven/non-woven fabric polymer laminates -- Fatigue and interlaminar properties of woven/non-woven fabric polymeric laminates -- Future scope and Life cycle assessment on woven/non-woven fabric polymeric laminates.

Sommario/riassunto

This book presents an extensive survey about the recent developments and advancements in the materials technologies using plant/synthetic/hybrid fibers as woven and non-woven fabrics for polymer composite technologies and versatile industrial applications. It looks at the different aspects of manufacturing of various polymer composite fabric materials, their properties, advancements, technologies, materials, applications, life cycle assessments, and future scope. It shows that these woven and non-woven fabric polymeric laminates have excellent mechanical, thermal, and tribological properties and its performance parameters can be tailored depending upon the type of materials used. With the ability to achieve enhanced performance and behavioral characteristics of plant/synthetic hybrid fibers in woven/non-woven fabric laminates, this has allowed achievable potential for high demanding applications. This book is an asset and reference source providing information on recent developments and advancements for researchers, engineers, and technologists working on woven/non-woven fabrics and its composites. Furthermore, it will also be very much useful in automotive, defense, and aerospace industries for developing lightweight components with high mechanical performance.