



polymers



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Natural Fibres and their Composites

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Over the last decades, natural fibers have received growing attention as alternatives to synthetic materials for the reinforcement of polymeric composites. Their specific properties, low price, health advantages, renewability and recyclability make natural fibers particularly attractive for these purposes. Furthermore, natural fibers have a CO₂-neutral life cycle, in contrast to their synthetic counterparts. However, natural fibers are also widely known to possess several drawbacks, such as a hydrophilic nature, low and variable mechanical properties, poor adhesion to polymeric matrices, high susceptibility to moisture absorption and low aging resistance. Therefore, extensive research has been conducted on natural fiber-reinforced composites in the last 20 years. In this context, this book presents several interesting papers concerning the use of natural fibers for the reinforcement of polymer-based composites, with a focus on the evaluation of their mechanical performances, ballistic properties, rheological behavior, thermal insulation response and aging resistance in humid or aggressive environments.



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