

Bio-based Fillers for Environmentally Friendly Composites

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ABSTRACT:

The use of bio-based fillers as alternative replacement for synthetic fillers has been dictated by increasing ecological concerns as well as depleting petroleum resources. The other aspect is a growing need for eco-friendly, renewable and sustainable products. In recent years, natural fibers have gained attention as suitable reinforcements in polymeric matrices because they are biodegradable, low cost, environmentally friendly and renewable. Furthermore, they possess high specific strength and can be effectively used for composites in various applications. This chapter will give an overview of the different types of bio-based fillers (natural fibers, lignin, cellulose and rice husk) used in biopolymer matrices. The application of these green composites in the industrial area will also be discussed.