

CHARACTERIZATION OF BIOBASED COMPOSITES

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ABSTRACT

The increasing environmental consciousness and demands of legislative authorities is providing an incentive to recycle plastics more effectively, but also to transition from petroleum plastics to plastics made from renewable resources. In light of this, biocomposites - where both fibers and matrix are biodegradable - are gaining attention both in research and industry.

In this work, biocomposites with the matrix material as (1) a research-grade biobased resin, or (2) a commercial polylactic acid, both of which are reinforced with beech wood-fibers of different volume fractions, will be investigated. The effect of the amount of fibers, temperature and moisture on the physico-chemical as well as short and long-term mechanical properties of the biocomposites will be examined.

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