



FUNCTIONAL BIOCOMPOSITES

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Polymer nanocomposites manufactured from natural resources have been presented. Polylactic acid (PLA) was used as a major component in biocomposites, which were filled with functional nanofillers. Luminescent properties of PLA composites, caused by a luminescent phosphor, as well as the oxygen permeability and fire resistance resulted from addition of montmorillonite were discussed. Mechanical properties and structure of biocomposites were presented as a function of the matrix and filler content. Biocomposites displayed combined features of a matrix polymer and nanofillers. Functional properties resulting from interaction of fillers with external factors have been displayed.