**9 - Polymer blend natural fiber based composites**

## Abstract

Natural fibers extracted from natural sources have been exploited for a long time as fillers in reinforced polymer composites to provide strength and ductility. By selecting a proper ratio of the matrix and filler material, a new material can be tailored to meet the requirements of a specific application. Therefore, adding natural fillers to polymer blends is an efficient and easy method to produce new bio-composites with improved properties. The mechanical or physical properties of polymer blend composites depend on the phase morphology, action between continuous and dispersed phases, and the component ratios. In this chapter, findings on polymer blend composites are reported for future planning and production of fiber-reinforced polymers. These include characterization of mechanical, physical, thermal properties and morphology of a new recently developed natural fiber blend composites. An overview on processing methods, biodegradability, and applications of these composites are presented as well.