

**Effect of Wood-fiber geometry size on Mechanical Properties of Wood-fiber From  
*Neolamarckia Cadamba* Species Reinforced Polypropylene Composites**

**ABSTRACT**

Using natural wood-fiber as reinforcement in commercial thermoplastics is gaining momentum due to its high specific properties and renewable resources. In this study, the effect of wood particle geometry size on mechanical properties of thermoplastics composite was investigated. The wood species that has been chosen is Kelempayan species (*Neolamarckia cadamba*) and reinforced with polypropylene using fiber geometry size of 75 and 250  $\mu$ m. Thermoplastic composites were produced from two types of ratio (30:70 and 10:90) between wood-fiber and polypropylene. Static bending and tensile strength were tested. The result showed that wood-fiber from 75  $\mu$ m geometry sizes with ratio of 30:70 between wood-fiber and polypropylene was most suitable in producing thermoplastic composites. The geometry sizes of wood particle as well as the ratio between wood-fiber and polypropylene were found to influence the mechanical properties of the thermoplastic composites.