

## **The effect of chemical modification on properties of polypropylene /bagasse fiber composites compounding using two roll mill**

### **Abstract**

This study is concerned on chemical modification of bagasse fiber (BF) filled polypropylene (PP) composites compounding using two roll mill. The fibers were chemically modified with different chemical treatment (alkaline, acetic acid and silane coupling agent). Effect of chemical modification towards BF/PP composites was evaluated by tensile test and flexural test. The chemical modification efficiency was verified by Fourier Transform Spectrometer (FTIR) analysis. From FTIR analysis, there is an increase on intensity on acetyl group (C-H) indicated the existing of chemical bonding between PP and BF. Chemical modified composites increased the mechanical behavior. Composites that modified with acetylation (acetic acid) shows better mechanical properties compared to others.

**Keywords** — Bagasse fiber, polypropylene, two roll mill