

## **Effect of Nano-CaCO<sub>3</sub> on Thermal and Mechanical Properties of Toughened Poly(lactic Acid)**

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Poly(lactic acid) (PLA) has been known to be extremely brittle even without notching, which greatly limits its application. As such, a novel toughening agent was introduced in order to significantly enhance the toughness as well as deformability of PLA. In order to further enhance its mechanical performance and thermal stability without sacrificing biodegradability, naturally derived fillers were incorporated into PLA. In this study, nano-sized CaCO<sub>3</sub> obtained from precipitation and deposition techniques was used as the filler for PLA. The effects of CaCO<sub>3</sub> on the structure, crystallization, thermal stability and mechanical performance of PLA will be evaluated.