

Abstract Submitted
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Mechanical Properties of Cellulose Microfiber Reinforced Polyolefin SATOSHI KOBAYASHI, HIROYUKI YAMADA, Tokyo Metropolitan Univ — Cellulose microfiber (CeF) has been expected as a reinforcement of polymer because of its high modulus and strength and lower cost. In the present study, mechanical properties of CeF/polyolefin were investigated. Tensile modulus increased with increasing CeF content. On the other hand, tensile strength decreased. Fatigue properties were also investigated with acoustic emission measurement. Stiffness of the composites gradually decreased with loading. Drastic decrease in stiffness was observed just before the final fracture. Based on the Mori-Tanaka's theory, the method to calculate modulus of CeF were proposed to evaluate dispersion of CeF.

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