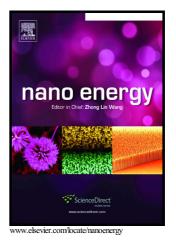
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High-efficiency Ramie Fiber Degumming and Selfpowered Degumming Wastewater Treatment Using Triboelectric Nanogenerator

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Abstract

As one of the strongest and oldest natural fibers, ramie fiber has been widely used for fabric production for at least six thousand years. And degumming is a critical procedure that has been developed to hold the ramie fiber's shape, reduce wrinkling, and introduce a silky luster to the fabric appearance. Herein, we introduce a fundamentally new working principle into the field of ramie fiber degumming by using a triboelectric effect. Resort to a water-driven triboelectric nanogenerator (WD-TENG), the ramie fibers degumming efficiency was greatly enhanced with improved fiber quality, including both surface morphology and mechanical properties. Download English Version:

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