**Supplementary material**

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**Supplementary Figure 1:** Typical scanning electron microscopy (SEM) images of fiber curls and kinks in Eucalyptus fibers: (a) UEUC (untreated); (b) after NaOH 5% treatment (EUC5% 2 h); and (c) after NaOH 10% pre-treatment (EUC10% 2 h). Arrow 1 shows the fiber curl and arrow 2 shows kinks.