Supplementary Information

Removal of suspended solids from water by waste biomass-based

cationized cellulose nanofibers: a comparative analysis of flocculation

performance from different biomass sources

Peng Lin, Jinglin Yuan, Mingyu Lei, Yi Jin, Sikai Chen*, Han Zhang*

School of Environmental Science and Engineering, Southwest Jiaotong University, Chengdu 611756, P. R. China

*Corresponding author: Sikai Chen, Han Zhang

E-mail

Sikai Chen: chensikai@swjtu.edu.cn Han Zhang: zhanghan@home.swjtu.edu.cn

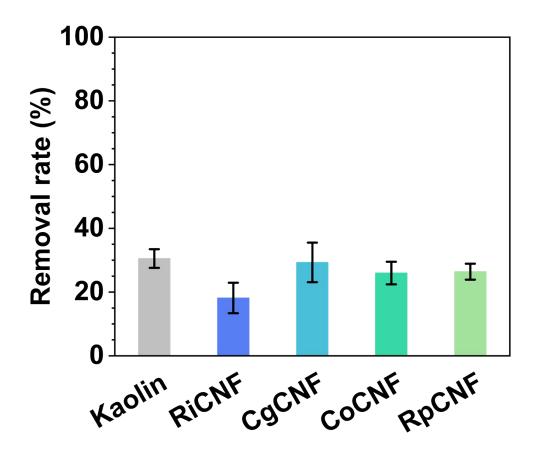


Figure S1. The removal efficiency of suspended solids after 30 minutes of flocculation and sedimentation using cellulose nanofibers extracted from rice straw, coffee grounds, corncob, and rape straw, as well as the removal efficiency of the blank sample. (CNF =1.8 g/L).

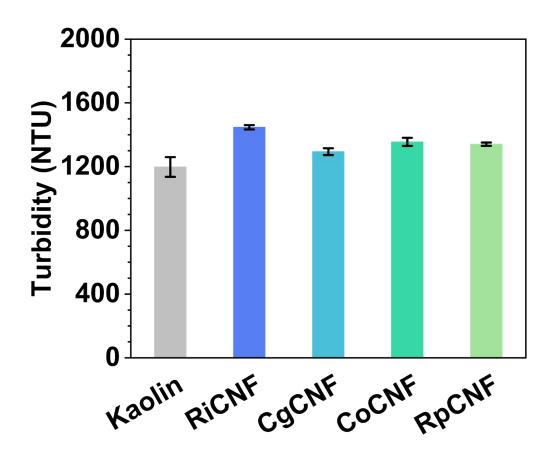


Figure S2. The turbidity values of the supernatant after 30 minutes of flocculation and sedimentation using cellulose nanofibers extracted from rice straw, coffee grounds, corncob, and rape straw, as well as the turbidity values of the blank sample. (CNF =1.8 g/L).

The standard curve of suspended solids

Suspensions at concentrations of 0 mg/L, 30 mg/L, 60 mg/L, 90 mg/L, 120 mg/L, 180 mg/L, and 240 mg/L were prepared by dilution with 3 g /L of kaolin suspension. The absorbance was measured at 810 nm using a UV-Vis spectrophotometer (Unico, UV-4802, China) with water as the reference. Then the corresponding SS concentration working curves were plotted.

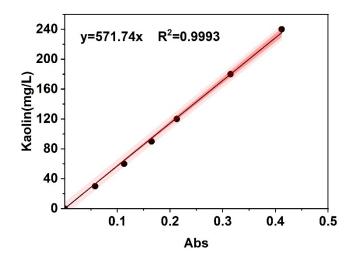


Figure S3. Standard curve for suspended solids (Kaolin).