Supporting Materials

Highly transparent and self-extinguishing nanofibrillated cellulosemonolayer clay nanoplatelethybrid films

Siyi Ming, Gang Chen, Jiahao He, Yudi Kuang, Yu Liu, Ruiqiang Tao, Honglong Ning, Penghui Zhu, Yingyao Liu, Zhiqiang Fang, Andrews Yudi Kuang, Yu Liu, Ruiqiang Tao, Honglong

1. State Key Laboratory of Pulp and Paper Engineering, South China University of Technology, Guangzhou 510640 Guangdong, China

Email: mszhqfang@scut.edu.cn

2. Institute of Polymer Optoelectronic Materials & Devices, State Key Laboratory of Luminescent Materials & Devices, South China University of Technology, Guangzhou 510640 Guangdong China

Email:ninghl@scut.edu.cn,

3. Key Laboratory of Pulp and Paper Science & Technology of Ministry of Education/Shandong Province, Qilu University of Technology, Jinan 250353 Guangdong, China

*Corresponding authors

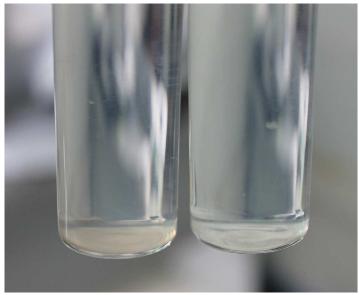


Figure S1 Left: clay nanoplatelet suspension left undisturbed for 1 week, obvious clay nanoplatelet sediment is observed at the bottom of the container. Right: NFC-dispersed clay nanoplatelet suspension left undisturbed for 1 month, minor clay nanoplatelet sediment is observed at the bottom of the container.

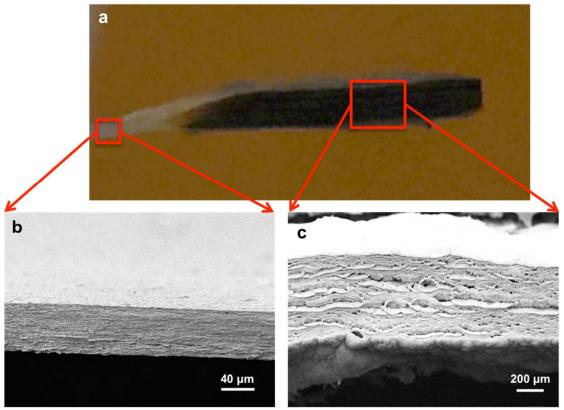


Figure S2 (a) Digital photograph showing the intumescent behavior of transparent hybrid film with 50 wt% clay nanoplatelets after flammability testing. Cross-sectional SEM images of hybrid film with 50 wt% clay nanoplatelets before (b) and after (c) burning.