

Supporting Information

Luminescent and transparent nanopaper based on rare-earth up-converting nanoparticles grafted nanofibrillated cellulose derived from garlic skin

Jingpeng Zhao[†], Zuwu Wei[†], Xin Feng^{,†}, Miao Miao[†], Lining Sun^{*,†}, Shaomei
Cao[†], Liyi Shi^{†,‡}, Jianhui Fang[‡]*

[†] Research Center of Nano Science and Technology, Shanghai University, Shanghai
200444, P. R. China.

[‡] Department of Chemistry, Shanghai University, Shanghai 200093, P. R. China.

*Correspondence should be addressed to:

E-mail: fengxin@shu.edu.cn (X. Feng); lnsun@shu.edu.cn (L. N. Sun).

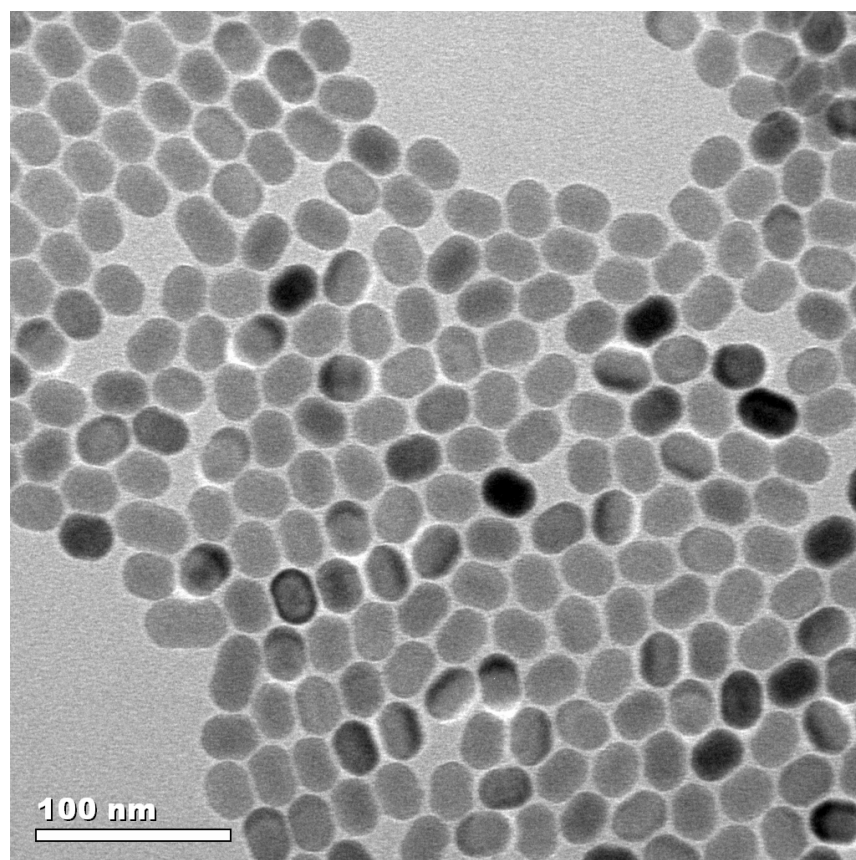


Figure S1. TEM image of as-prepared UCNPs.

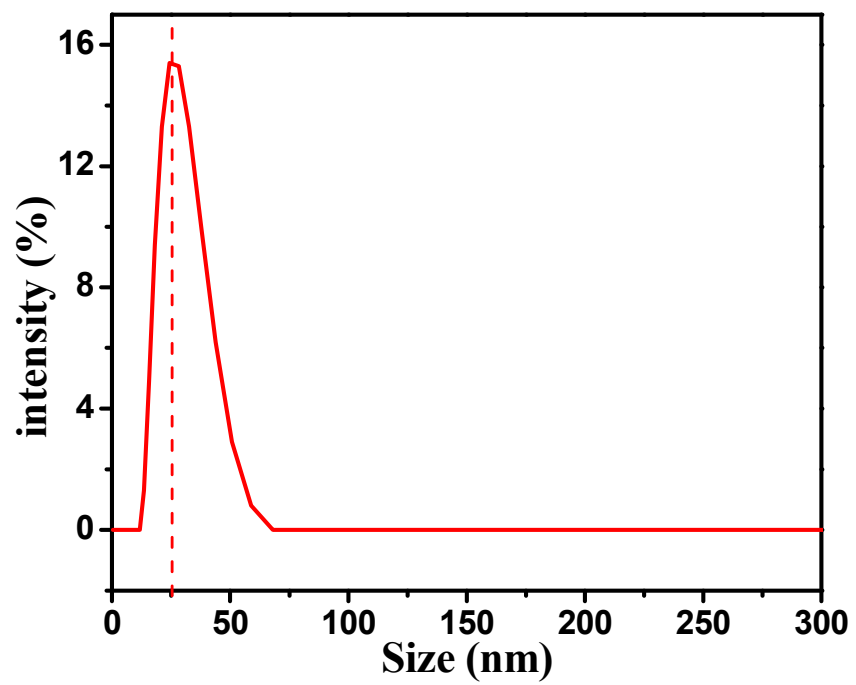


Figure S2. DLS measurement of the size distribution of UCNPs.

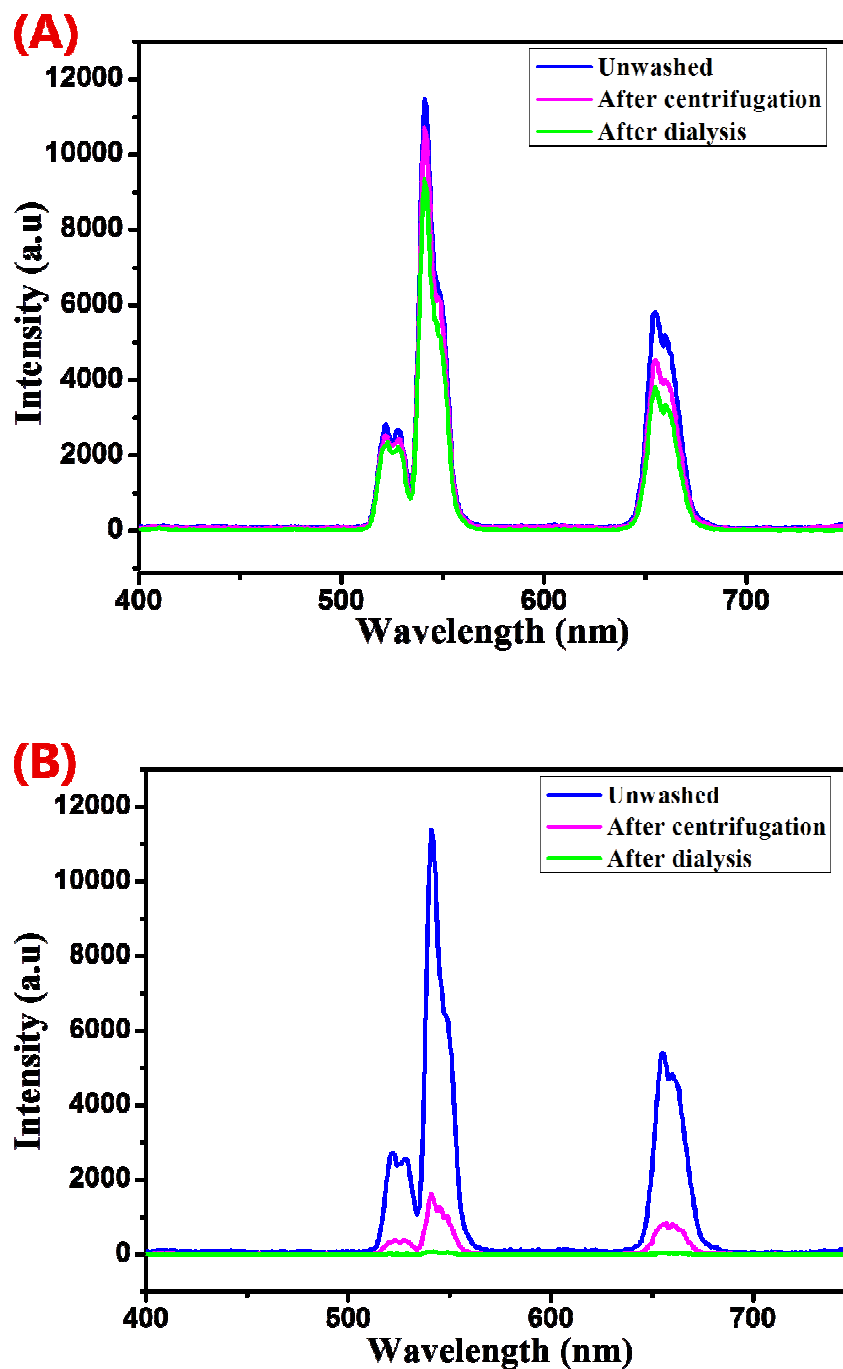


Figure S3. Up-conversion luminescence spectra of NFC-UCNPs with epoxidation reaction: unwashed, after centrifugation, after dialysis (A); Up-conversion luminescence spectra of NFC(UCNPs) without epoxidation reaction: unwashed, after centrifugation, after dialysis (B).

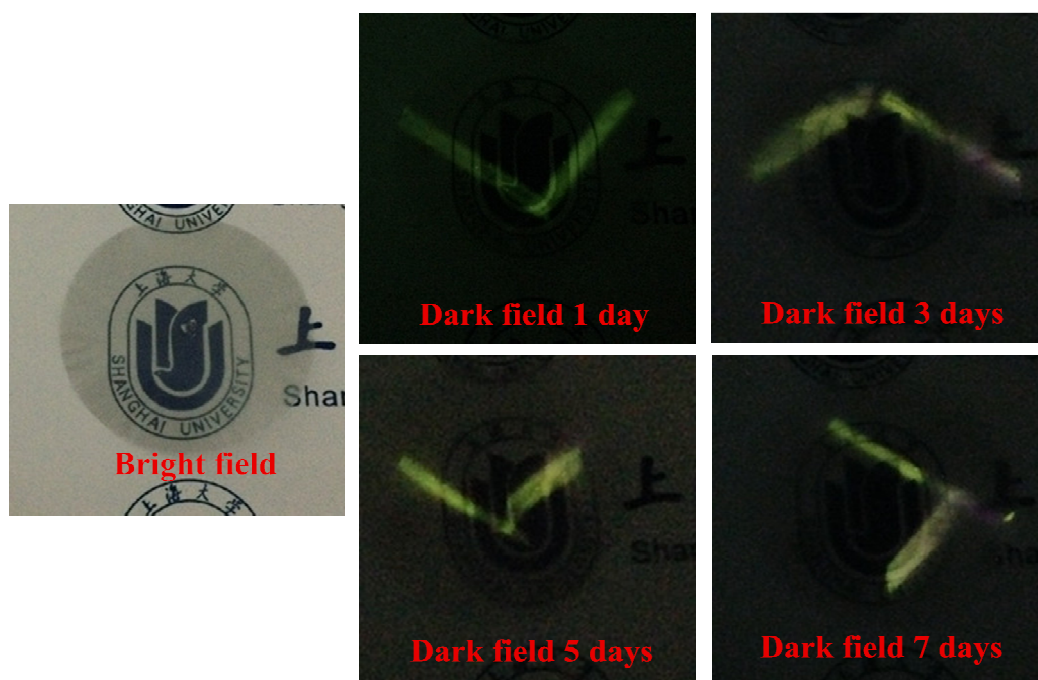


Figure S4. Picture of NFC-UCNPs nanopaper in the bright field and pictures of NFC-UCNPs nanopaper under excitation of 980 nm light with a power of 2 W after being soaked in the water for 1 day, 3 days, 5 days, 7 days, respectively.