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High Performance Liquid Crystalline Bionanocomposite Ionogels Prepared by In Situ Crosslinking of Cellulose/Halloysite Nanotubes/Ionic Liquid Dispersions and Its Application in Supercapacitors

Shufei Guo^a, Kang Zhao^a, Zhiqiang Feng^a, Yuedi Hou^a, Hao Li^a, Jing Zhao^{*b}, Yuelan Tian^{*a}, Hongzan Song^{*a}

[†]College of Chemistry & Environmental Science, Hebei University, Baoding, Hebei Province 071002, P. R. China

[‡] Hebei University Center of Comprehensive Experimental, Hebei University, Baoding, Hebei Province 071002, P. R. China

Corresponding Authors

*E-mail: songhongzan@iccas.ac.cn (HZ Song); 557046849@qq.com. (J Zhao); tianyuelan@126.com (YL Tian).

ABSTRACT: A high performance halloysite nanotubes (HNTs)-doped liquid crystalline bionanocomposite ionogels has been synthesized by in situ crosslinking of cellulose/ionic liquid solutions using bisphenol A epoxy resin via ring opening reactions with cerium ammonium nitrate, and HNTs as the ionic conducting promoter. These ionogels with HNTs demonstrate significantly improved ionic conductivity compared with that of pure ionogel without the addition of HNTs, due to the liquid

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