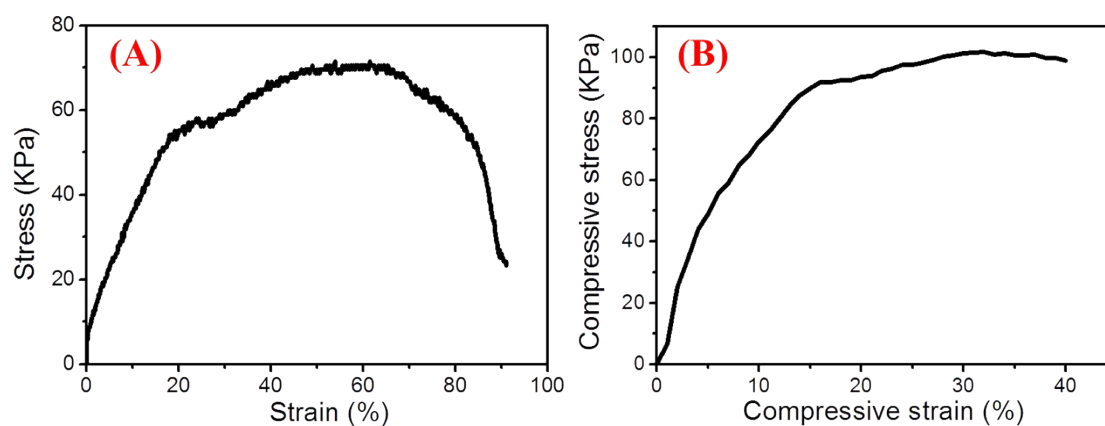


## Electronic Supplementary Information

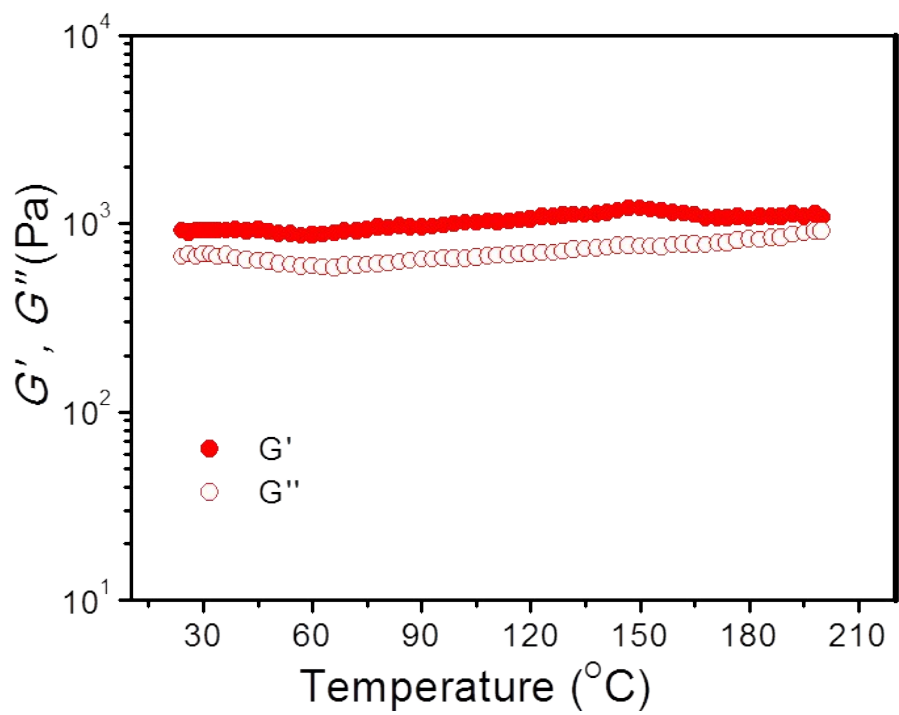
### **Liquid crystal self-assembly of halloysite nanotubes in ionic liquids: a novel soft nanocomposite ionogels electrolytes with high anisotropic ionic conductivity and thermal stability**

Ningning Zhao, Yulin Liu, Xiaomeng Zhao, Hongzan Song\*

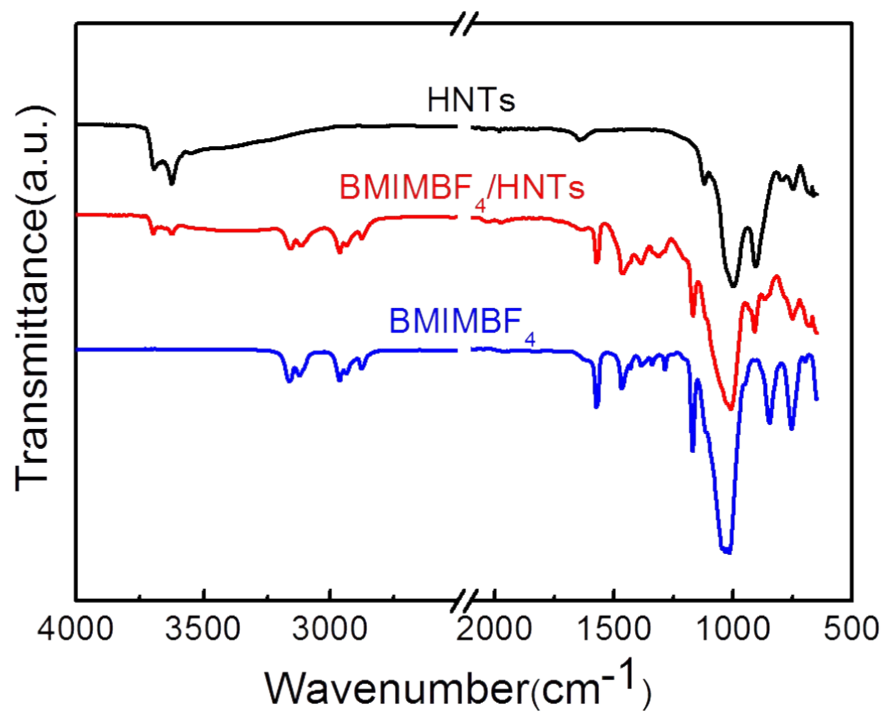
College of Chemistry & Environmental Science, Hebei University,  
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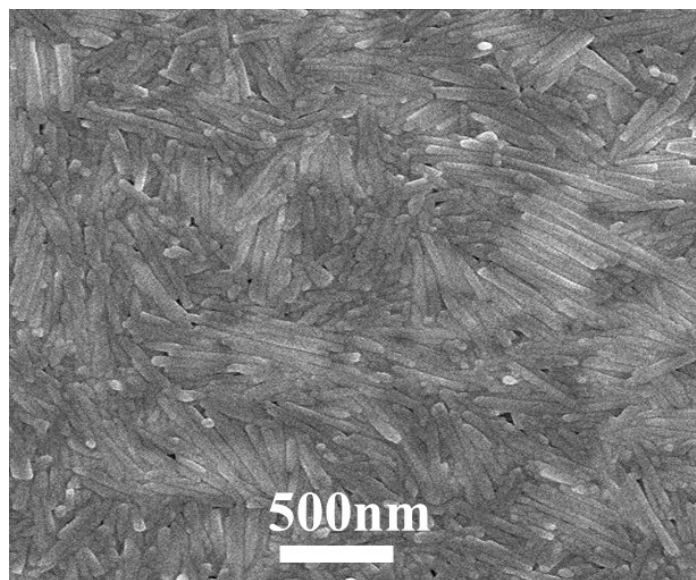
**Fig.S1** Typical tensile stress-strain curve (A) and compressive stress-strain curve of ionogel with 60% HNTs.



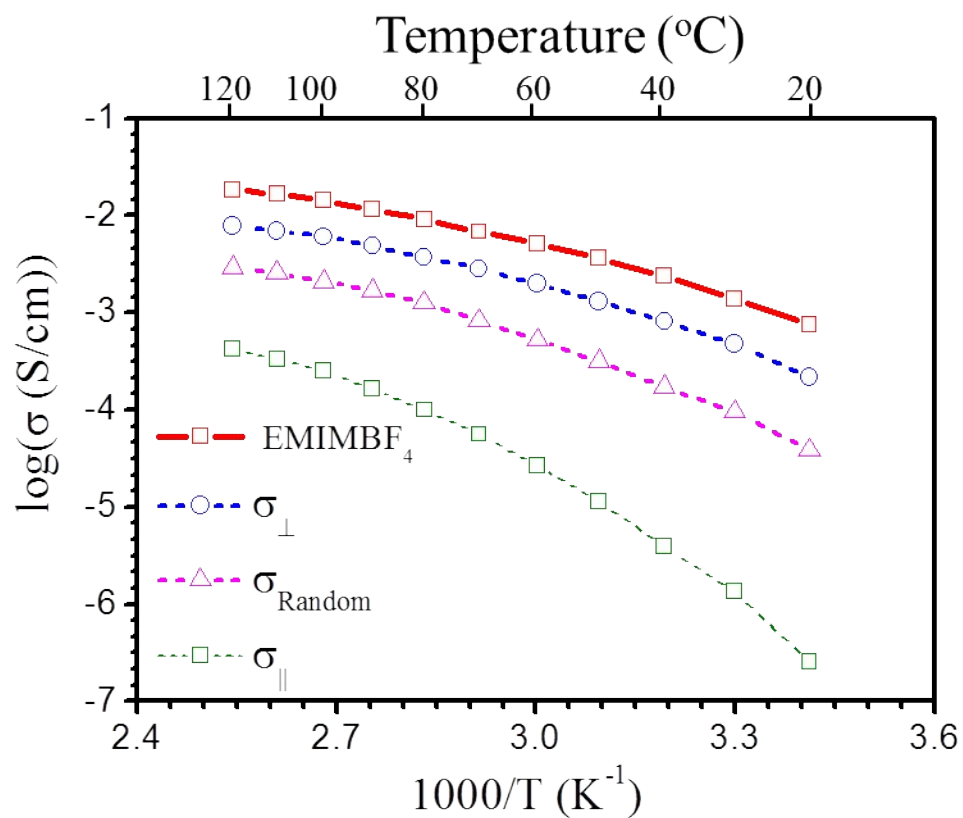
**Fig. S2** Changes of storage modulus,  $G'$ , and loss modulus,  $G''$ , with increasing temperature for nanocomposite ionogels



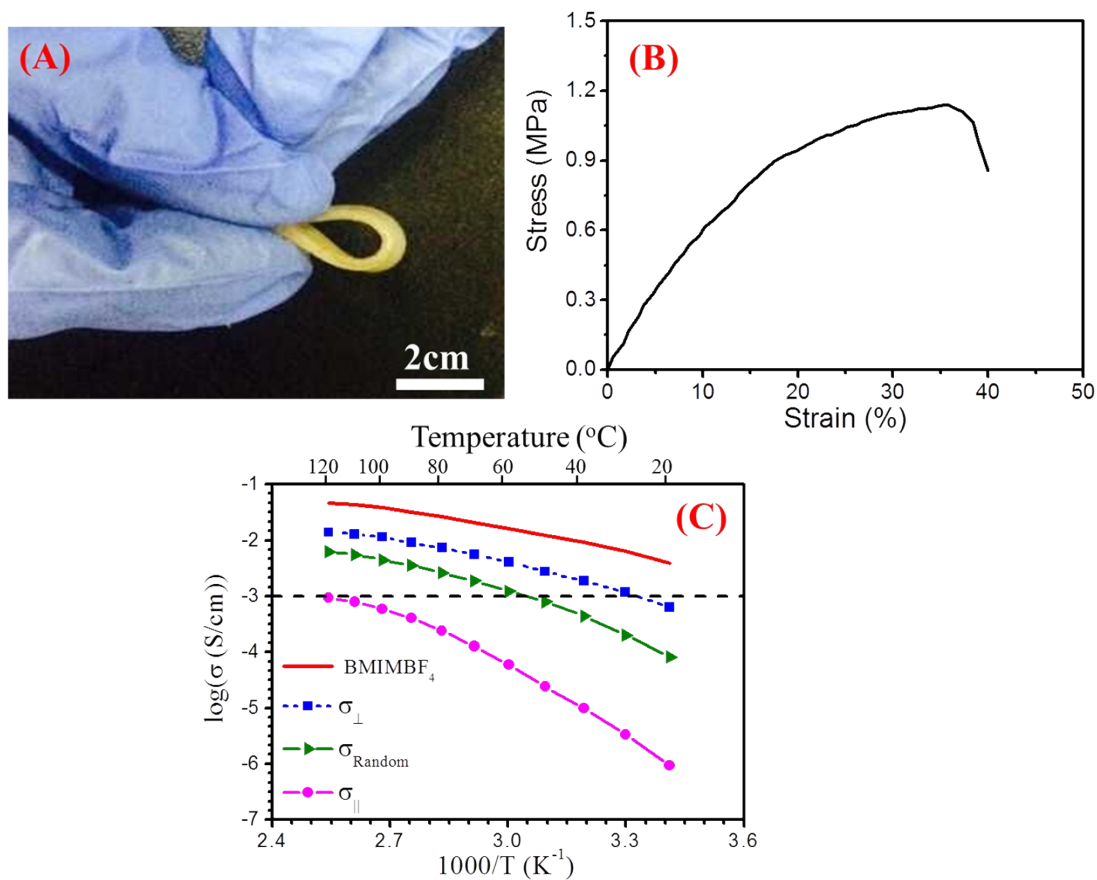
**Fig. S3** FTIR spectra of pure HNTs, pure BMIMBF<sub>4</sub> and ionogel of BMIMBF<sub>4</sub>/HNTs.



**Fig.S4** SEM image of the morphology of the side surface sections for HNTs/BMIMBF<sub>4</sub> ionogel without shear.



**Fig. S5** Temperature dependence of conductivities for EMIMBF<sub>4</sub>/HNTs system



**Fig.S6** (A) Bent nanocomposite gel polymer electrolytes (GPE) (30% HNTs/50% BMIMBF<sub>4</sub>/10% PVDF/10% LiBF<sub>4</sub>). (B) Stress-strain curves for the GPE. (C) Temperature dependencies of ionic conductivity for the GPE.