**Supporting Information**

**Antifreezing ionotronic skin based on flexible, transparent, and tunable ionic conductive nanocellulose hydrogels**

Enwen Zhua,b, Haiyu Xub, Yuanyuan Xieb, Yiheng Songb, Dongning Liub, Yujiao Gaob, Zhuqun Shia,b\*, Quanling Yangb\*, Chuanxi Xiongb

a School of Chemistry, Chemical Engineering and Life Sciences, Wuhan University of Technology, Wuhan 430070, China

b School of Materials Science and Engineering, Wuhan University of Technology, Wuhan 430070, China

\*Corresponding author. E-mail: zqshi2016@whut.edu.cn (Z. Shi), yangql@whut.edu.c n (Q. Yang)

**Table S1.** Mechanical properties of the hydrogels of H+-TOCN, 4Li+-TOCN, 4Ca2+-TOCN, 4K+-TOCN.





**Fig. S1.** Compressive stress-strain curves of (a) H+-TOCN, 4Li+-TOCN, 4Ca2+-TOCN, and 4K+-TOCN hydrogels; (b) Li+-TOCN hydrogels with different Li+ concentrations.

****

**Fig. S2.** Sensing properties of H+-TOCN hydrogel.