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Electronic Supplementary Information

Solution-processed PDMS/SWCNTs porous electrode with high mass loading: Toward high performance all-stretchable-component lithium ion batteries

Jing Liang[a], Shuya Wang[a], Hongyan Yu[a], Xiaoli Zhao[a]*, Haiting Wang[b], Yanhong Tong[a]*, and Qingxin Tang[a]* and Yichun Liu[a]

[a]Centre for Advanced Optoelectronic Functional Materials Research, and Key Laboratory of UV-Emitting Materials and Technology of Ministry of Education, Northeast Normal University, 5268 Renmin Street, Changchun 130024, China.

[b]Information science and technology, Qingdao University of Science and Technology, Qingdao 266061, China

Email: zhaoxl326@nenu.edu.cn; tongyh@nenu.edu.cn; tangqx@nenu.edu.cn

Tel./fax: +86-431-85099873.

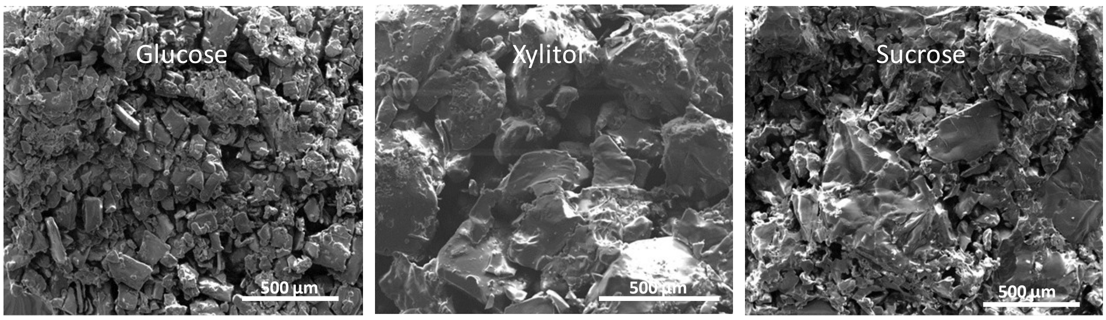

Fig. S1 SEM images of commercial sugar cubes consisted of Glucose, Xylitol, and Sucrose.

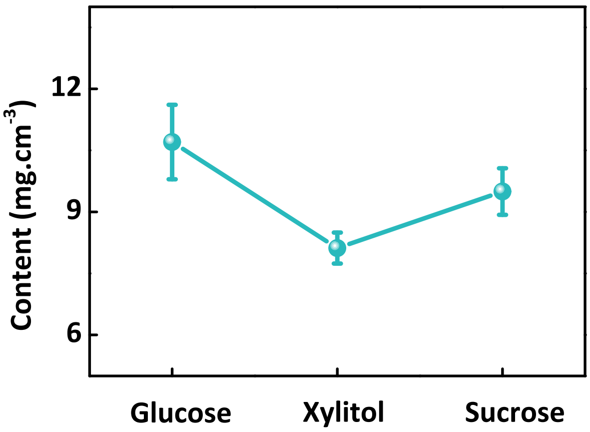

Fig. S2 The content of SWCNTs in the PDMS porous frameworks with same volume based on glucose, xylitol and sucrose as templates

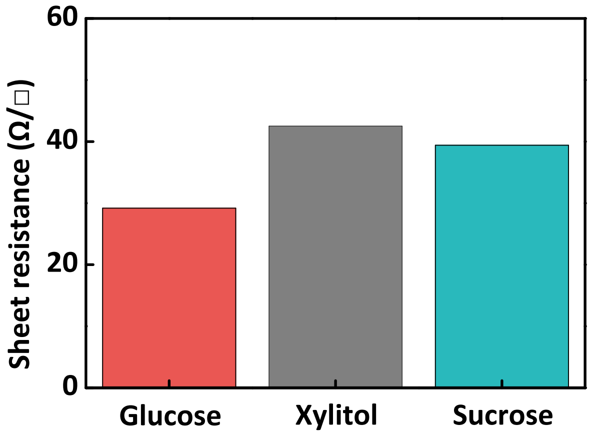

Fig. S3 The sheet resistance of the PDMS/SWCNTs sponge based on glucose, xylitol and sucrose as templates.

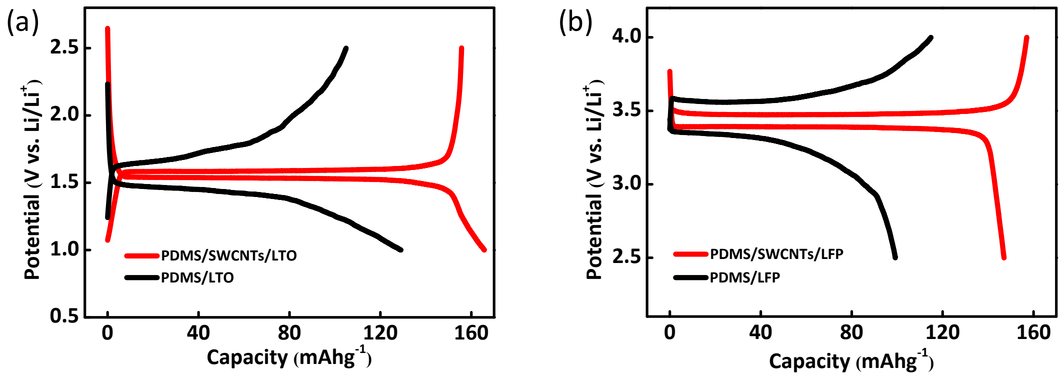

Fig. S4 Charge-discharge voltage profiles of the (a) LTO anode and (b) LFP cathode at 0.2 C.

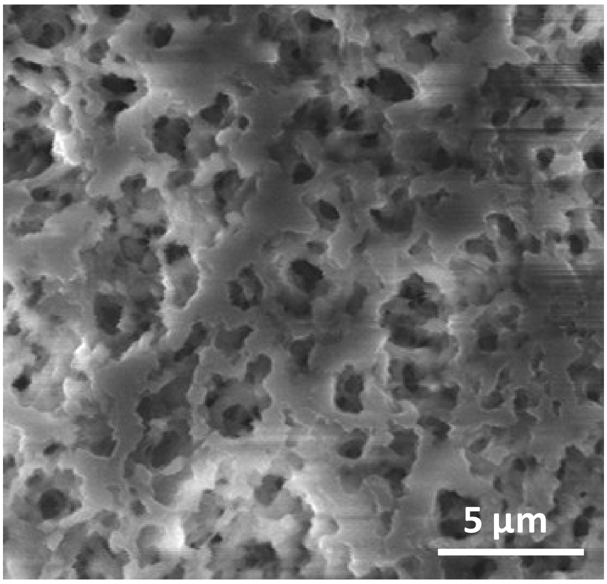

Fig. S5 SEM image of the prepared PVDF-HFP gel electrolyte.

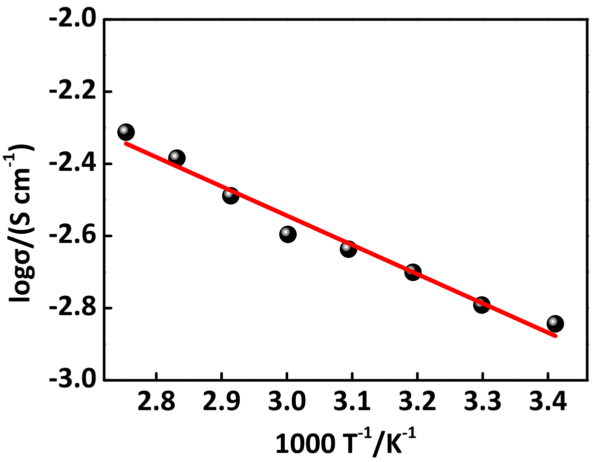

Fig. S6 The conductivity of the PVDF-HFP gel separator

The ionic conductivity of the gel separator was measured in blocking-type cell, which were fabricated by sandwiching the swollen PVDF-HFP membrane between two stainless steels. Impedance data were obtained with a CHI660C in the frequency range 0.1Hz-100 KHz. The ionic conductivity of the prepared gelled polymer electrolyte was calculated from $\sigma = d/(R_b\ S)$, where σ is the ionic conductivity, R_b is the bulk resistance from the EIS measurement, d is the thickness of the polymer electrolyte, and S is the area of the stainless steel electrode.