Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting Information

Boosting Electrochemical Performance with Functionalized Dry Electrode for Practical All-solid-state Batteries

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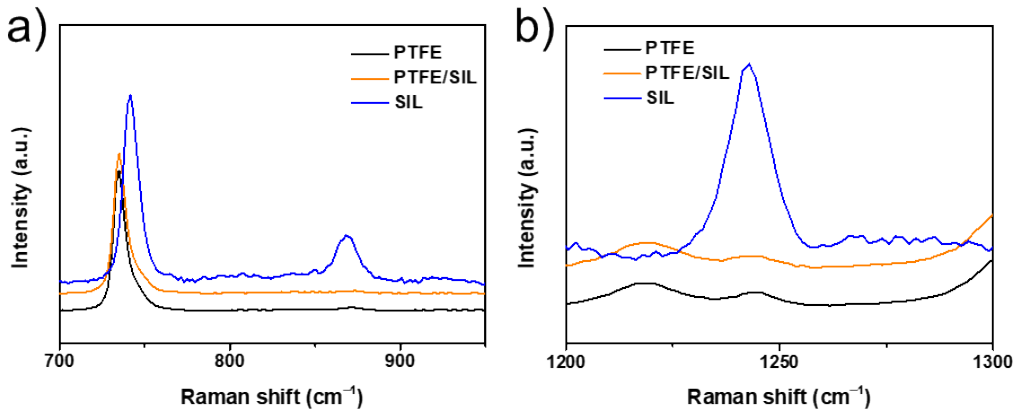

Fig. S1 Raman Spectra of PTFE and SIL in the range of (a) 700 to 950 cm^{-1} and (b) 1,200 to 1,300 cm^{-1}.

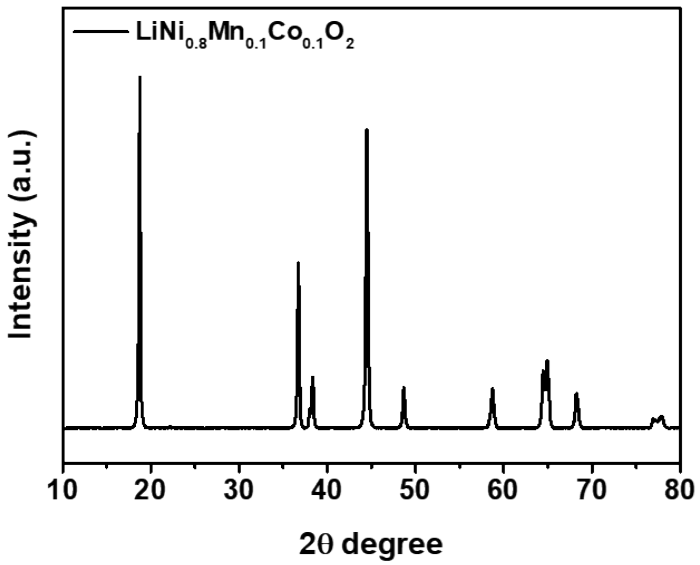

Fig. S2 XRD patterns of $LiNi_{0.8}Mn_{0.1}Co_{0.1}O_2$.

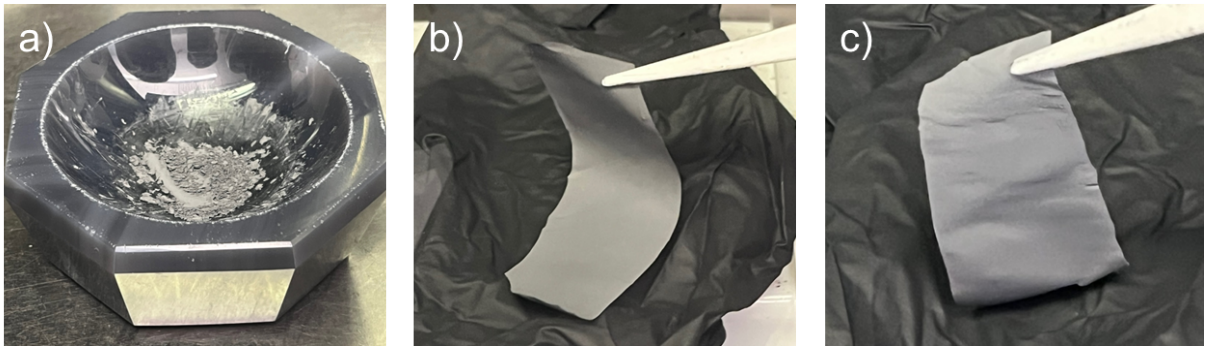

Fig. S3 Digital photography of (a) dry mixing, (b) reference cathode, and (c) FDE.

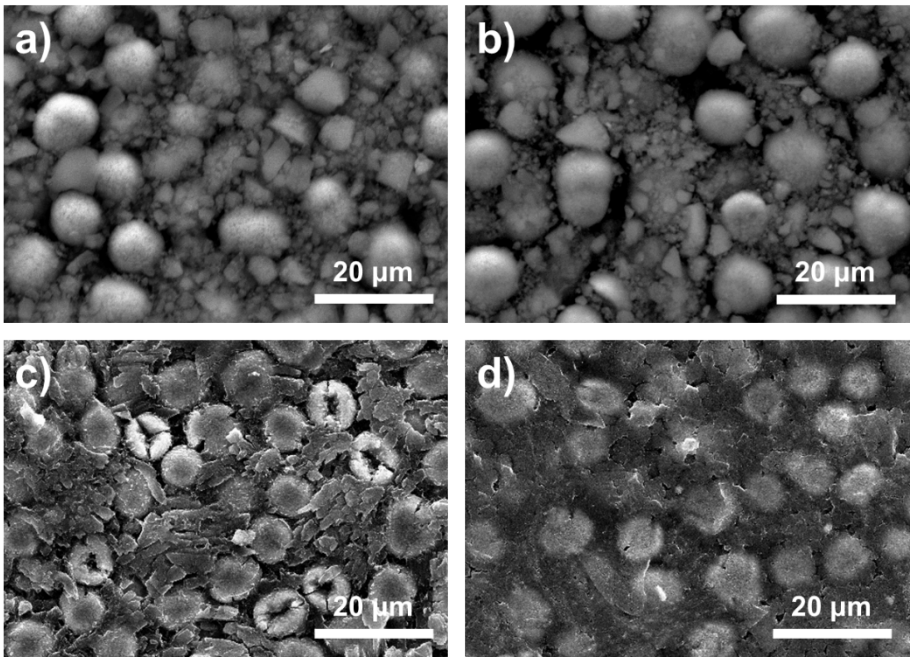

Fig. S4 SEM images of the pristine electrodes before cycling for (a) reference and (b) FDE, and the electrodes after 200 cycles for (c) reference and (d) FDE.

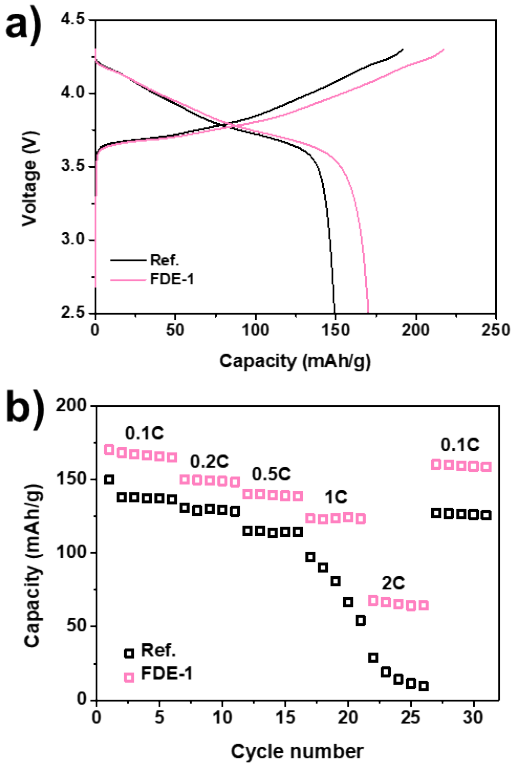

Fig. S5 Electrochemical characterization of FDE–1 with a low SIL content. (a) Initial voltage profiles and (b) rate capability up to 2C rate of the reference cathode and the FDE–1. The FDE–1 was formulated with the weight ratio of NMC–811, LPSX, VGCF, PTFE, EC as 70 : 26 : 2 : 0.5 : 0.5 : 1.

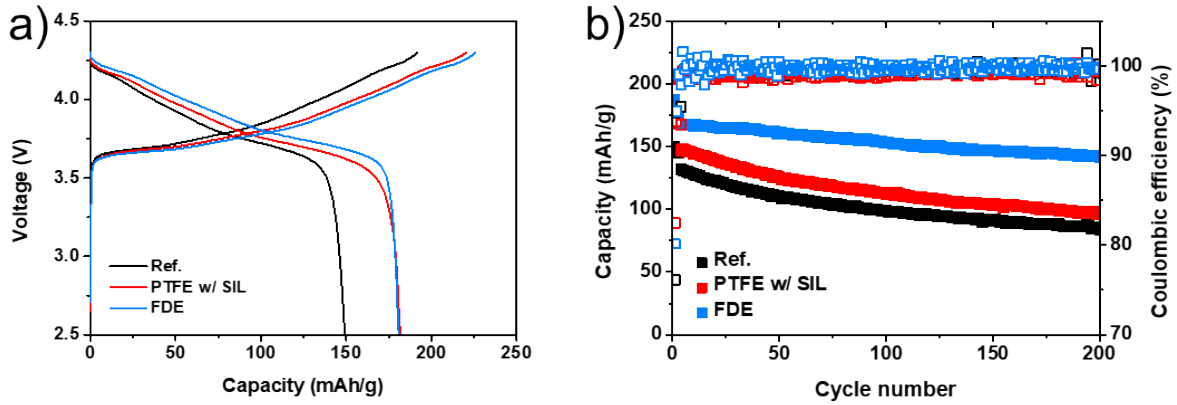

Fig. S6 (a) Initial voltage profiles and (b) cycle performance of the reference cathode, the cathode with SIL, and FDE.