

Electronic Supplementary Information (ESI):

Title: Towards Low-cost, High Energy Density Li_2MnO_3 Cathode Materials

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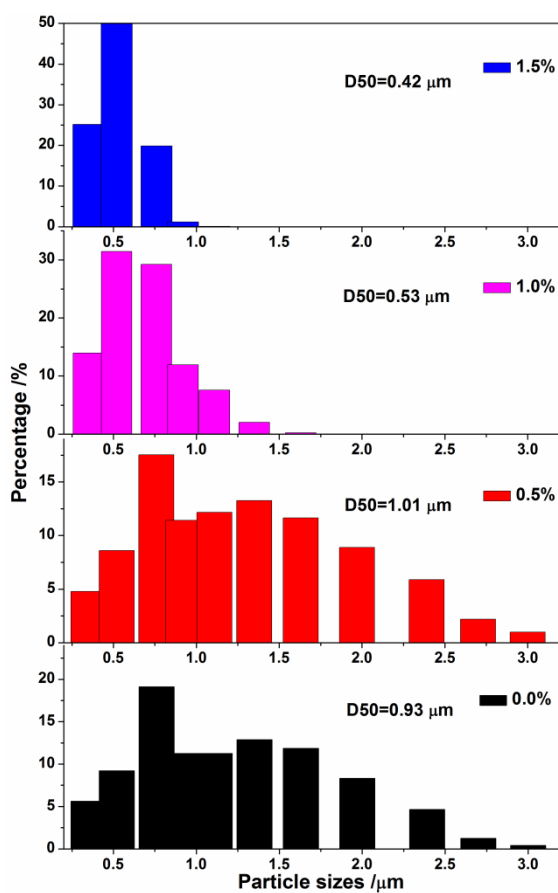


Fig. S1. The particle size distribution and the D50 of $\text{Li}_2\text{MnO}_3\text{-F}_x$.

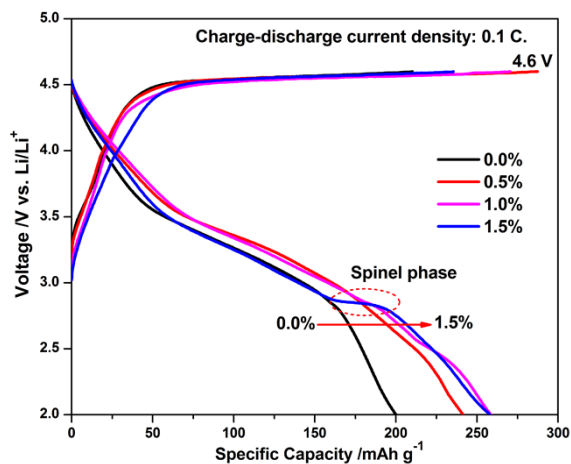


Fig. S2. The initial voltage profiles of $\text{Li}_2\text{MnO}_{3-x}\text{F}_x$ obtained at 0.1 C.

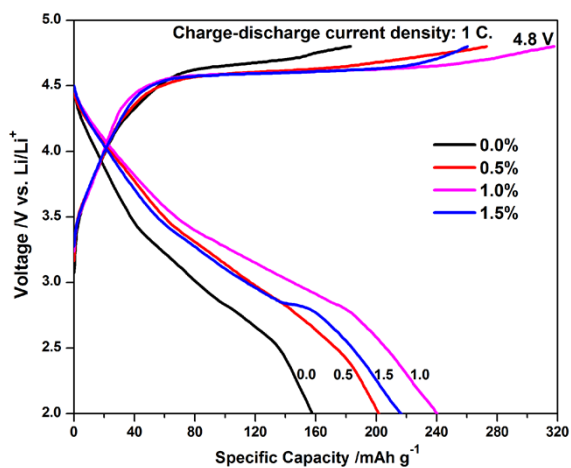


Fig. S3. The initial voltage profiles of $\text{Li}_2\text{MnO}_{3-x}\text{F}_x$ obtained at 1 C between 2.0 and 4.8 V.

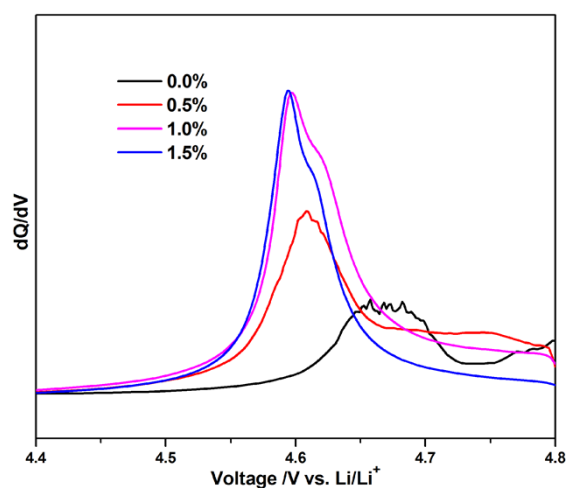


Fig. S4. The dQ/dV plots of $\text{Li}_2\text{MnO}_{3-x}\text{F}_x$ between 4.4 and 4.8 V in the initial charge process with the rate of 1 C.

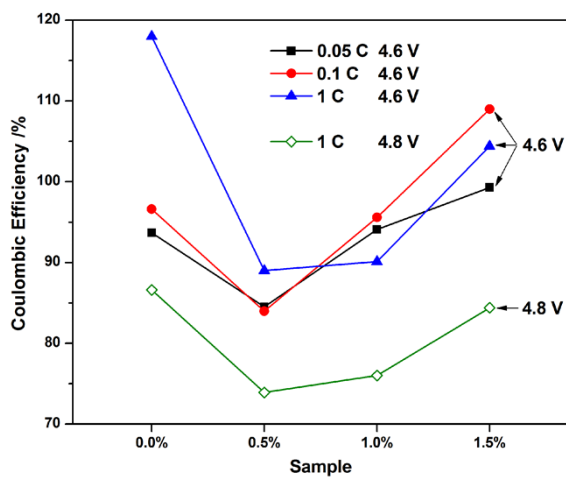


Fig. S5. The first coulombic efficiencies of $\text{Li}_2\text{MnO}_{3-x}\text{F}_x$ under different rates and cut-off voltages.

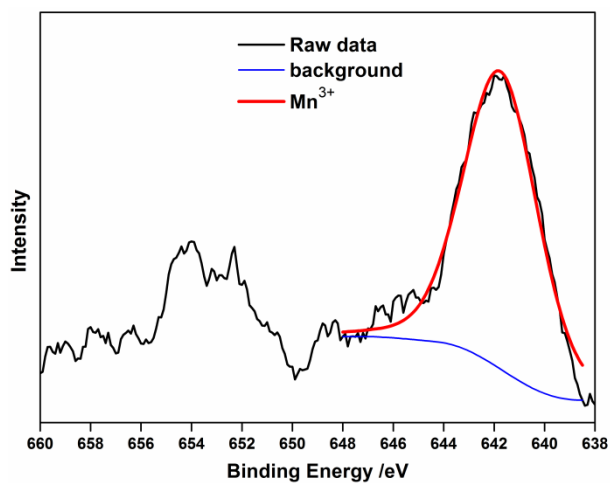


Fig. S6. The fitted XPS spectra of Mn 2p_{3/2} of the 1.0% sample after discharged to 2.0 V.

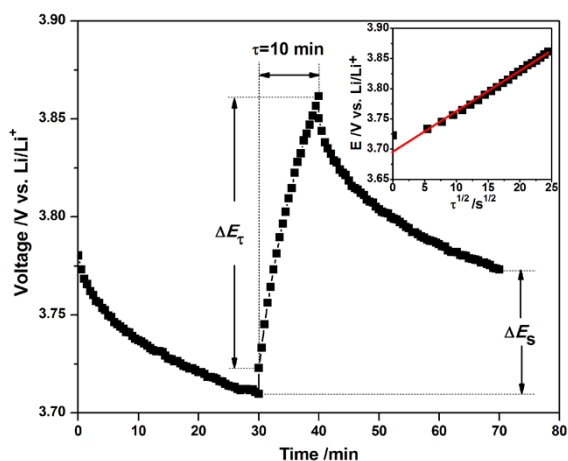


Fig. S7. The resulting voltage profile for a single titration of Li_2MnO_3 around 3.7 V and the relationship between the cell voltage and $\tau^{1/2}$ during the charge period.