

Supporting Information

Synthesis and electrochemical performance of nano TiO₂(B)-coated Li[Li_{0.2}Mn_{0.54}Co_{0.13}Ni_{0.13}]O₂ cathode material for lithium-ion batteries

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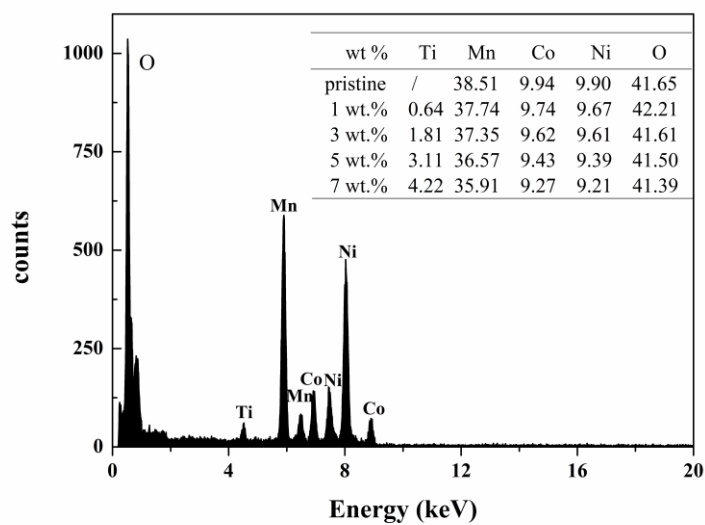


Fig. S1 EDS results of pristine LMCNO and the LMCNO samples coated with different $\text{TiO}_2(\text{B})$

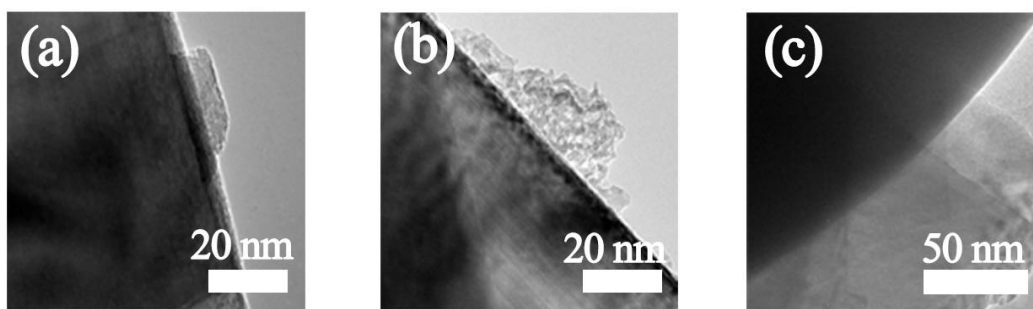


Fig. S2 TEM images of $\text{TiO}_2(\text{B})$ -coated LMCNO composite, (a) 1 wt.% (b) 3 wt.%, (c) 7 wt.%

Table. S1 Comparison of cycle performance of $\text{TiO}_2(\text{B})$ -coated LMCNO samples at 2C rate			
sample	Initial capacity (mAh g ⁻¹)	Capacity after 400 cycles (mAh g ⁻¹)	Capacity retention
Pristine LMO	127.2	44.7	35.1%
1 wt.%	154.7	79.9	51.6%
3 wt.%	174.1	62.3	35.7%
5 wt.%	210.3	90.2	42.9%
7 wt.%	127.8	28.3	22.1%

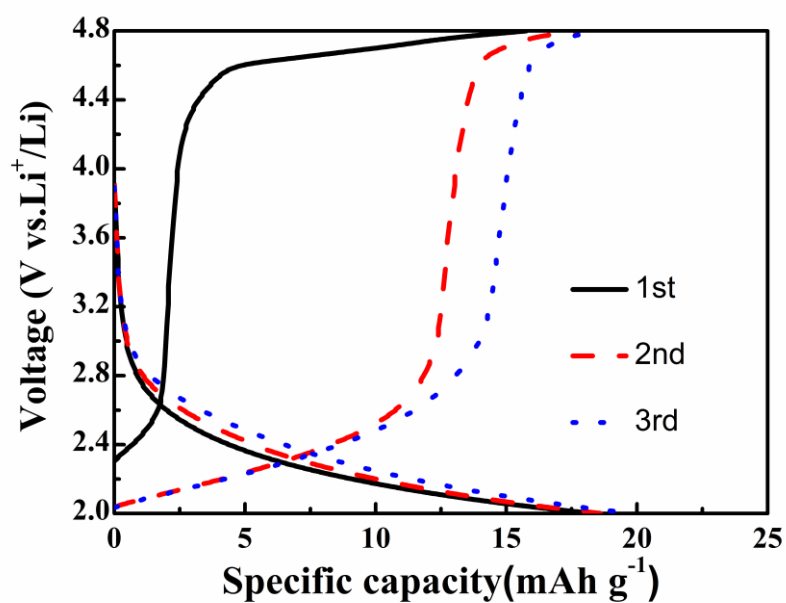


Fig. S3 Charge/discharge profile of $\text{TiO}_2(\text{B})$ at 2-4.8V

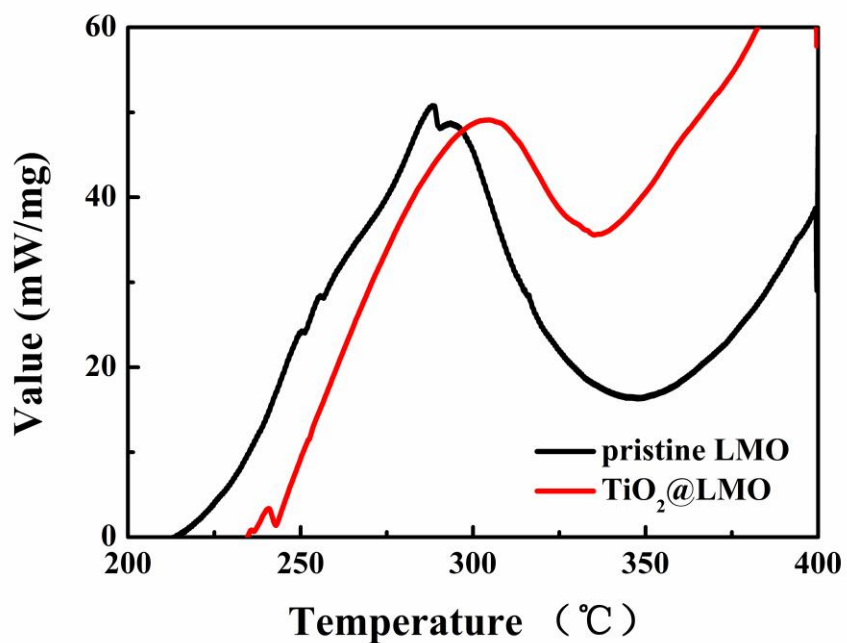


Fig. S4 DSC profiles of pristine LMCNO and LMCNO sample coated with 5 wt.% $\text{TiO}_2(\text{B})$ after charging to 4.8 V (vs. Li/Li^+)