Supporting information

LaPO$_4$-coated Li$_{1.2}$Mn$_{0.56}$Ni$_{0.16}$Co$_{0.08}$O$_2$ as cathode materials with enhanced Coulombic efficiency and rate capability for lithium ion batteries

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Fig. S1 Capacity retention of the pristine Li$_{1.2}$Mn$_{0.56}$Ni$_{0.16}$Co$_{0.08}$O$_2$ and 2% LaPO$_4$ coated Li$_{1.2}$Mn$_{0.56}$Ni$_{0.16}$Co$_{0.08}$O$_2$ electrodes at 55 °C in a potential region between 2.0 and 4.7V at 1 C.

Fig. S2 The DSC curves of the Li$_{1.2}$Mn$_{0.56}$Ni$_{0.16}$Co$_{0.08}$O$_2$ before and after the surface modification with 2% LaPO$_4$ after charging to 4.7 V (vs. Li/Li$^+$) in the first cycle.