Supporting information

P2-Type Transition Metal Oxides for High Performance Na-Ion Battery Cathodes

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Figure S1. SEM images of Na$_{0.67}$Ni$_{0.33}$Mn$_{0.67}$O$_2$ particles prepared by USP before (a) and after (b) heat treatment.
Figure S2. TEM image and EDS mapping of Na$_{0.67}$MnO$_2$ particles after heat treatment.

Figure S3. TEM image and EDS mapping of Na$_{0.67}$Mn$_{0.65}$Fe$_{0.20}$Ni$_{0.15}$O$_2$ particles after heat treatment.
Figure S4. XRD full-pattern fitting of Na$_{0.67}$Ni$_{0.33}$Mn$_{0.67}$O$_2$ sample after heat treatment.

Figure S5. Cyclic voltammograms of Na$_{0.67}$Ni$_{0.33}$Mn$_{0.67}$O$_2$ scanned between 2.0–3.8 V at a rate of 0.1 mV/s.
Figure S6. Galvanostatic charge/discharge curves of Na$_{0.67}$MnO$_2$ in narrow (a) and expanded (b) cutoff window; Galvanostatic charge/discharge curves of Na$_{0.67}$Fe$_{0.20}$Ni$_{0.15}$Mn$_{0.65}$O$_2$ in narrow (c) and expanded (d) cutoff window.
Figure S7. Galvanostatic charge/discharge curves of Na$_{0.67}$Ni$_{0.33}$Mn$_{0.67}$O$_2$ cell cycled at 0.1 C.

Figure S8. Capacity retention of Na$_{0.67}$Ni$_{0.33}$Mn$_{0.67}$O$_2$ cycled at 0.1 C in various voltage windows.
Figure S9. High resolution TEM image for the thin layer of Al$_2$O$_3$ on Na$_{0.67}$MnO$_2$ electrode.

Figure S10. Impedance analysis for Na$_{0.67}$MnO$_2$ electrode and Al$_2$O$_3$-Na$_{0.67}$MnO$_2$ electrode.