

Supporting Information

Scalable Synthesis of $\text{Li}_{1.2}\text{Mn}_{0.54}\text{Ni}_{0.13}\text{Co}_{0.13}\text{O}_2/\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ Sphere Composites as Stable and High Capacity Cathode for Li-Ion Batteries

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Table S1. Lattice parameters of the pristine $\text{Li}_{1.2}\text{Mn}_{0.54}\text{Ni}_{0.13}\text{Co}_{0.13}\text{O}_2$ microspheres and the coated $\text{Li}_{1.2}\text{Mn}_{0.54}\text{Ni}_{0.13}\text{Co}_{0.13}\text{O}_2@ \text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ microspheres.

Composition	a(Å)	c(Å)	c/a	Vol(Å ³)	R _{wp}	FWHM(003)
Pristine	2.8621(5)	14.2229(5)	4.9689	100.9(1)	9.2	0.201
Coated	2.8537(7)	14.2622(7)	4.9976	100.5(9)	10.7	0.162

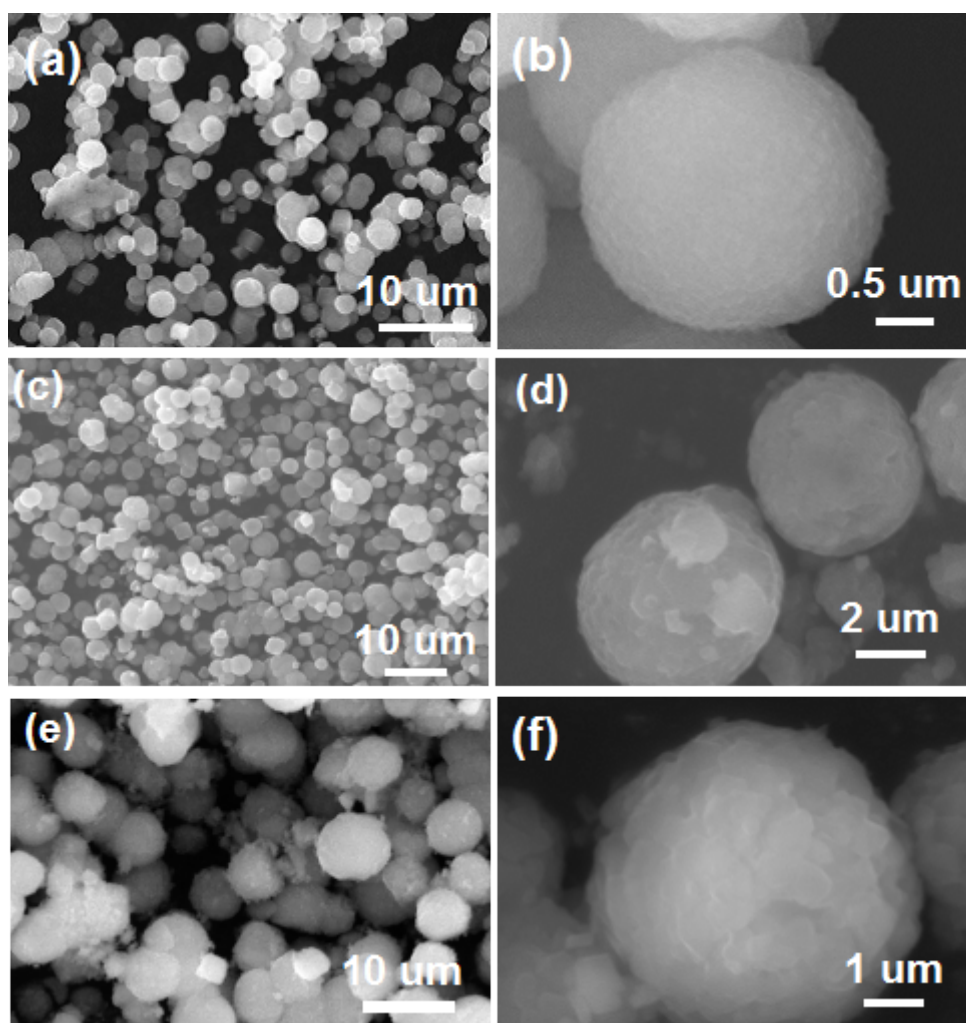


Fig. 1 Low- (a,c,e) and high-magnification (b,d,f) SEM images of Mn_{0.54}Ni_{0.13}Co_{0.13}(CO₃)_{0.8} precursor microspheres (a,b), uncoated Li-rich Li_{1.2}Mn_{0.54}Ni_{0.13}Co_{0.13}O₂ cathode microspheres (c,d), and coated Li-rich Li_{1.2}Mn_{0.54}Ni_{0.13}Co_{0.13}O₂/LiMn_{1.5}Ni_{0.5}O₄ cathode microspheres (e,f).

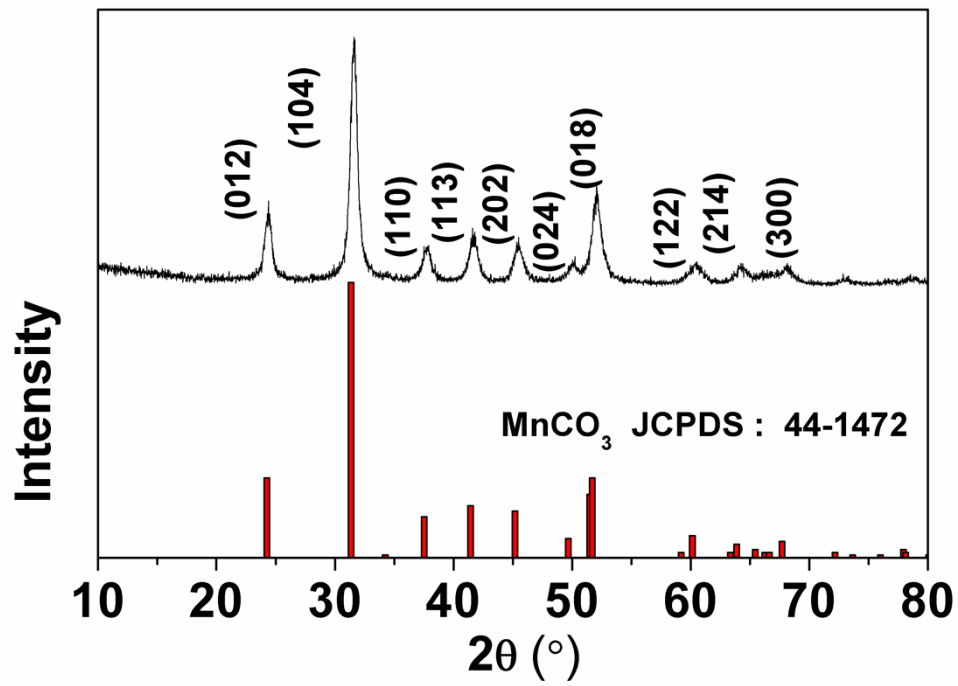


Fig. 2 XRD patterns of the carbonate precursor of $\text{Mn}_{0.54}\text{Co}_{0.13}\text{Ni}_{0.13}(\text{CO}_3)_{0.8}$, which are well consistent with the MnCO_3 standard PDF card (JCPDS: 44-1472).