Electronic Supplementary Information

General Synthesis of $xLi_2MnO_3 \cdot (1-x)\ LiNi_{1/3}Co_{1/3}Mn_{1/3}O_2$ (x = 1/4, 1/3, and 1/2) Hollow Microspheres towards Enhancing Performance in Rechargeable Lithium Ion Batteries

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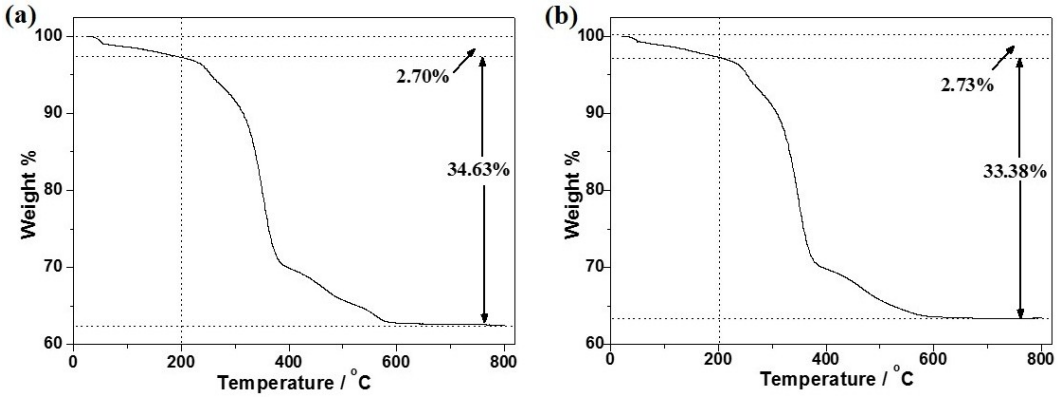
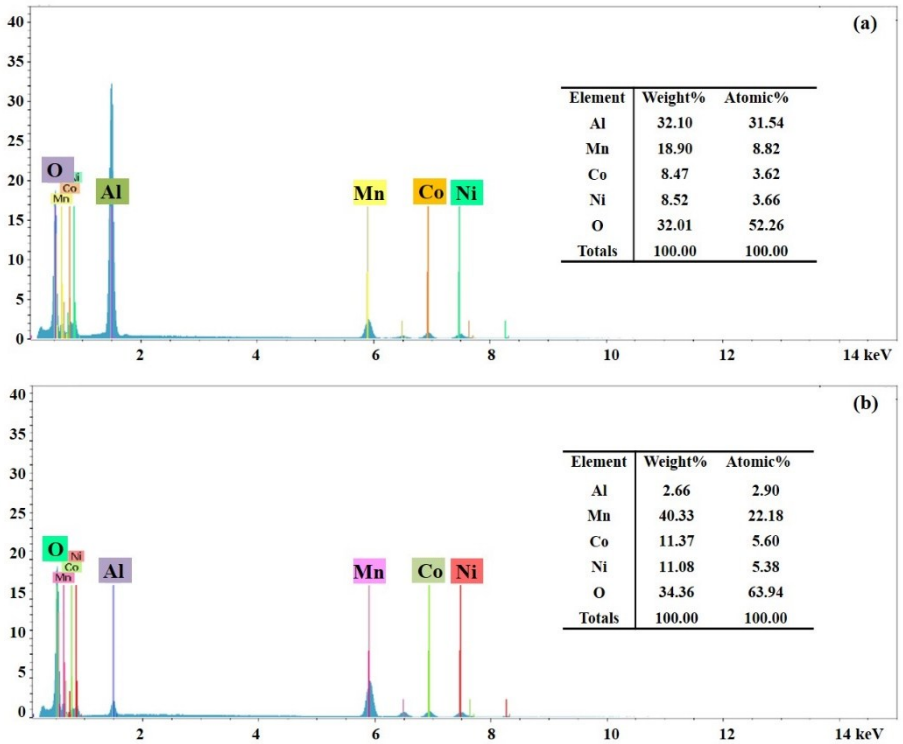


Figure S1. TGA curves for $Co_yMn_{3-y}(CO_3)_3$ precursors with (a) y = 6/7 and (b) y = 3/5.



Element	Weight%	Atomic%
Al	32.10	31.54
Mn	18.90	8.82
Co	8.47	3.62
Ni	8.52	3.66
O	32.01	52.26
Totals	100.00	100.00

Element	Weight%	Atomic%
Al	2.66	2.90
Mn	40.33	22.18
Co	11.37	5.60
Ni	11.08	5.38
O	34.36	63.94
Totals	100.00	100.00

Figure S2. EDX spectra and corresponding elemental analysis of LNCM–2 (a) and LNCM–3 (b). The Al signal originates from the SEM aluminum substrate used in the measurements.

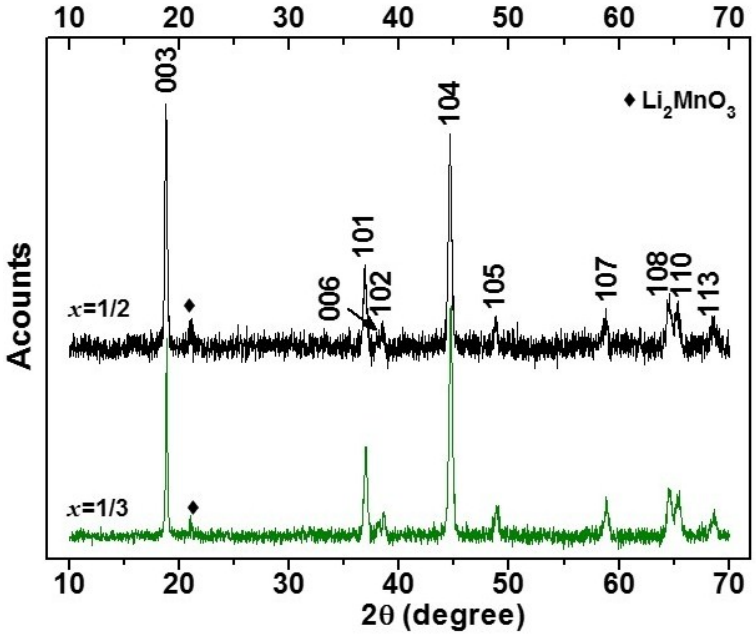


Figure S3. XRD patterns of the LNCM–2 (bottom) and LNCM–3 (top) hollow microspheres.

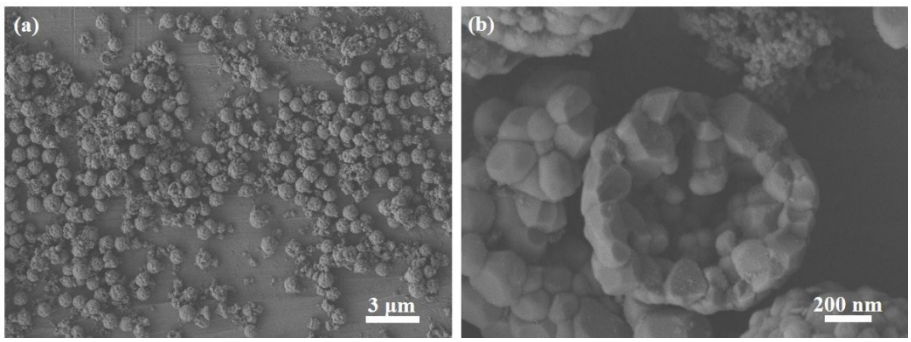


Figure S4. (a) Low and (b) high-magnification FESEM images of the electrode made of $x\mathrm{Li_2MnO_3}\cdot(1\text{-}x)\mathrm{LiNi_{1/3}Co_{1/3}Mn_{1/3}O_2}$ hollow microspheres with x = 1/3 after 200 cycles at the 1.0 C rate.