



Supplementary Information

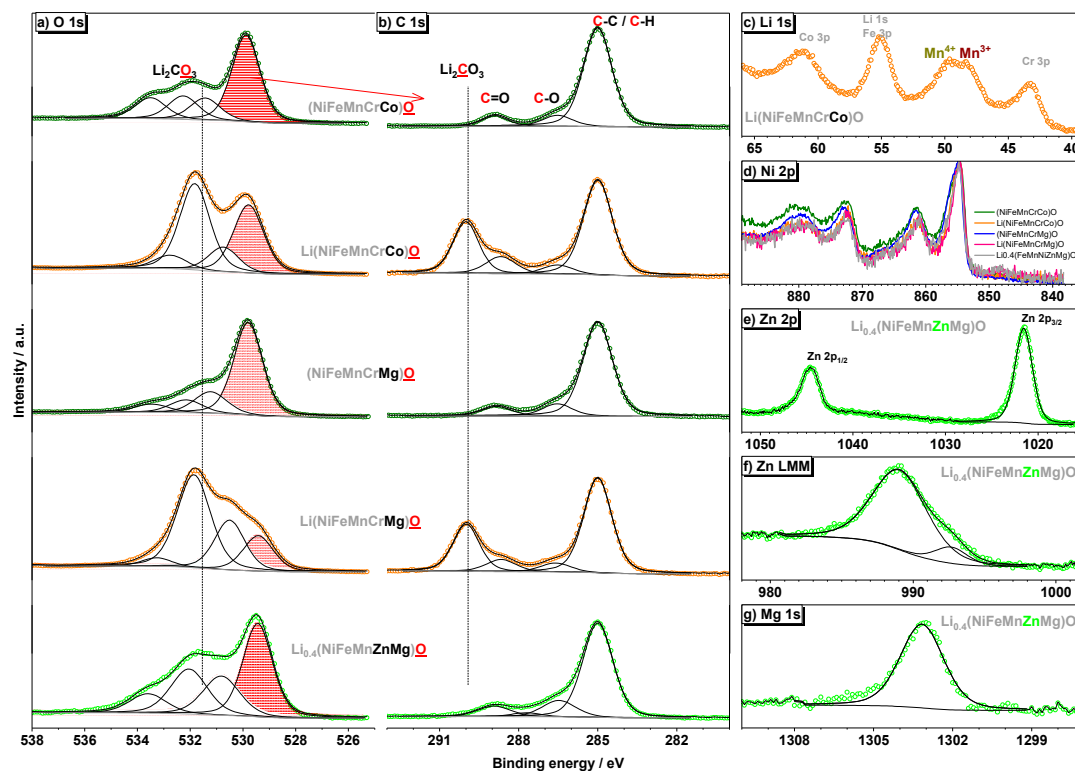


Figure S1. XPS spectra of the O 1s, C 1s, Li 1s, Ni 2p, Zn 2p, Zn LMM, and Mg 1s core level regions for HEO-1 (with $x = 0$ and 1), HEO-2 (with $x = 0$ and 1), and HEO-3 (with $x = 0.4$).

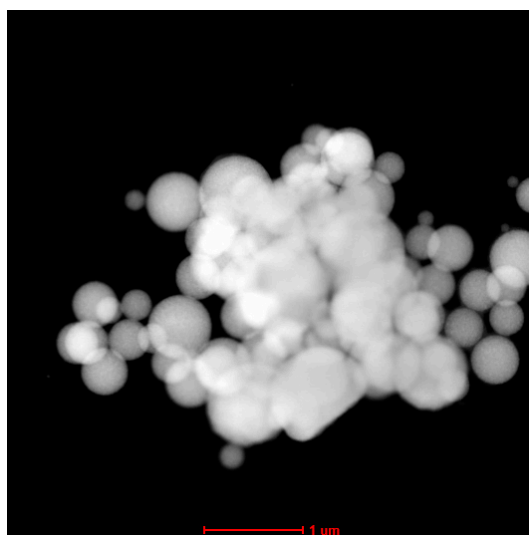


Figure S2. HAADF STEM micrograph of HEO-1.

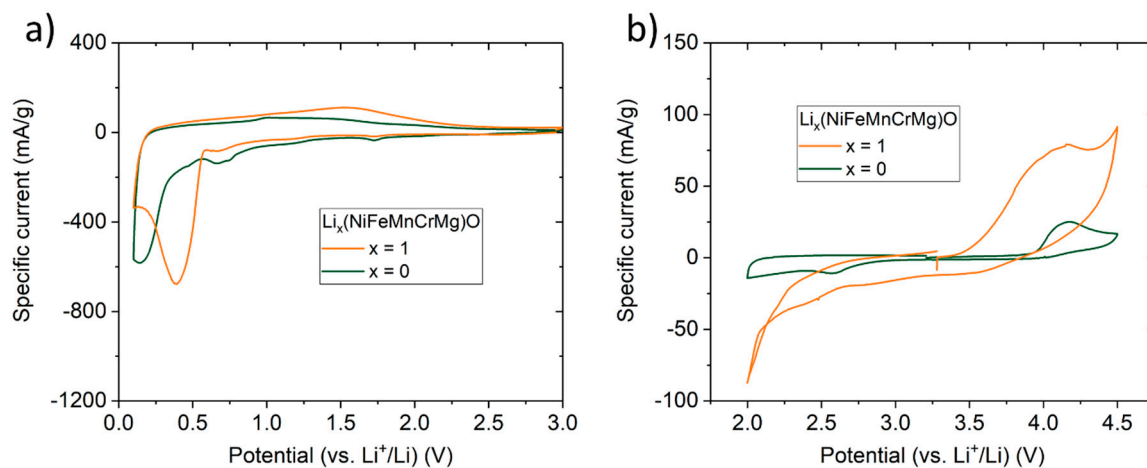


Figure F3. Cyclic voltammograms of HEO-2 (with $x = 0$ and 1) in the voltage range of a) 0.1–3.0 V and b) 2.0–4.5 V versus Li^+/Li . Note that only the initial cycle is shown.

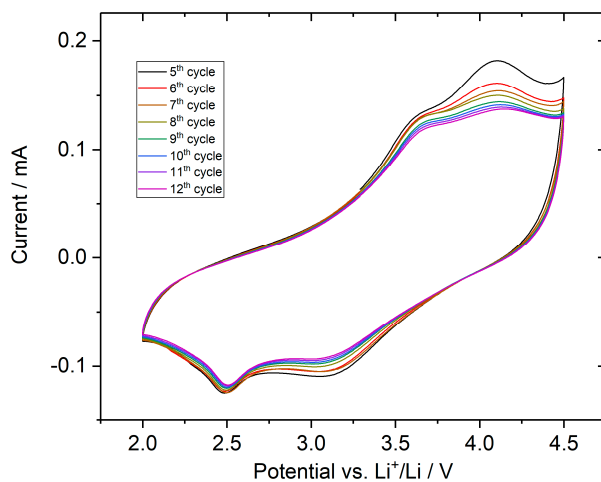


Figure S4. Cyclic voltammograms at 1 mV/s for the 5th to 12th cycles of HEO-1 (with $x = 1$) in the voltage range of 2.0–4.5 V versus Li^+/Li .