

supplementary information

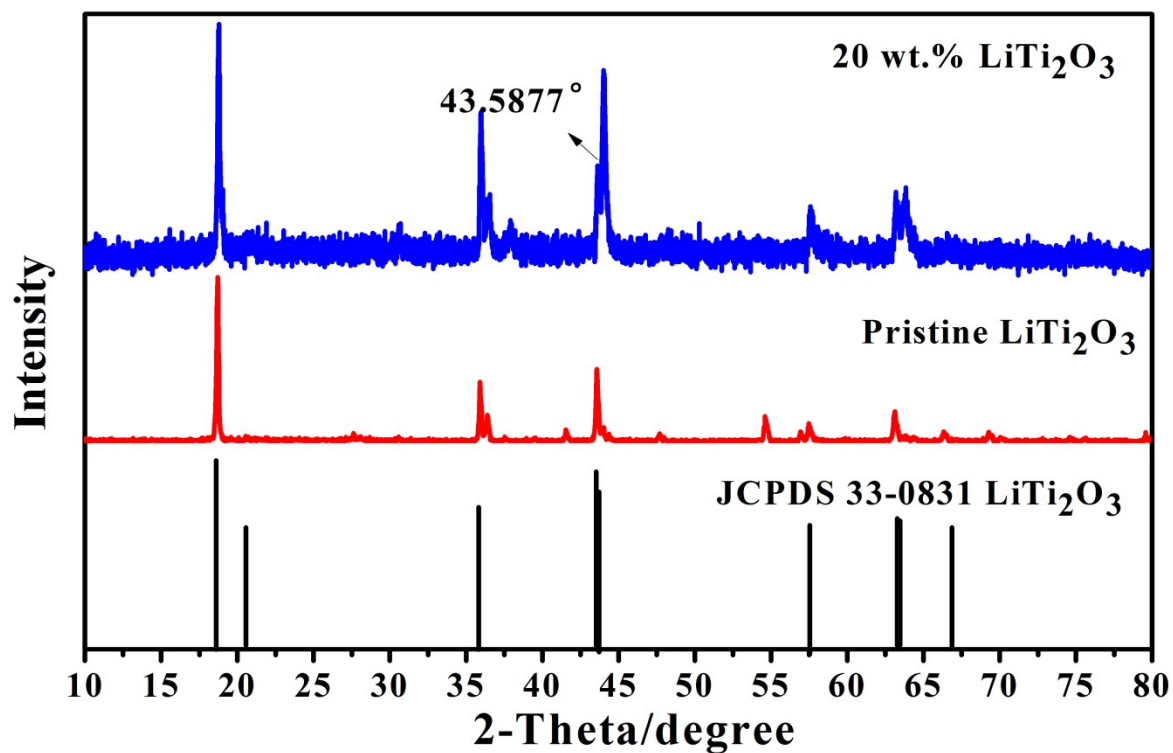


Fig. S1 XRD patterns of the pristine Li_2TiO_3 and 20 wt.% LiTi_2O_3 -modified $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ sample.

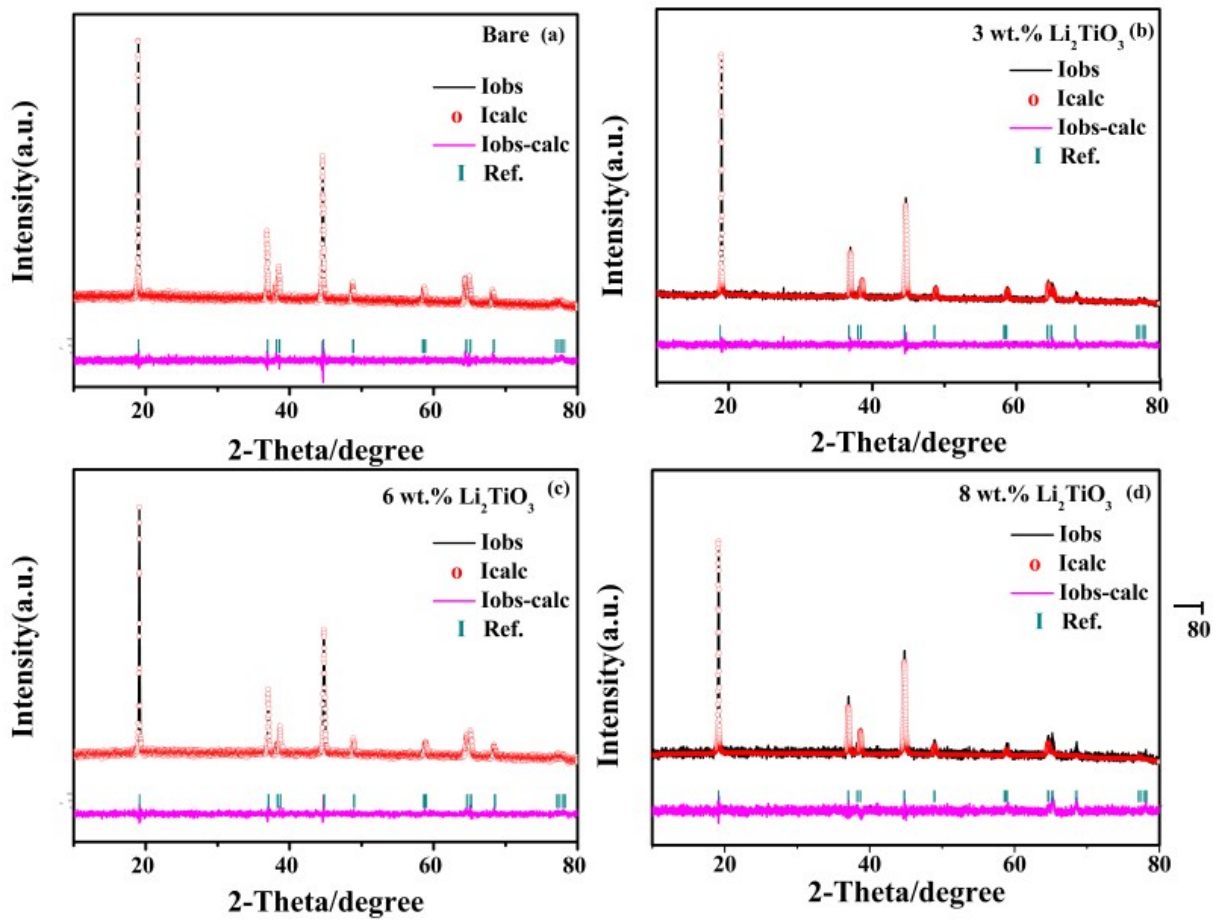


Fig. S2 Rietveld refinement results (a-d) of the pristine and Li_2TiO_3 -modified $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ samples.

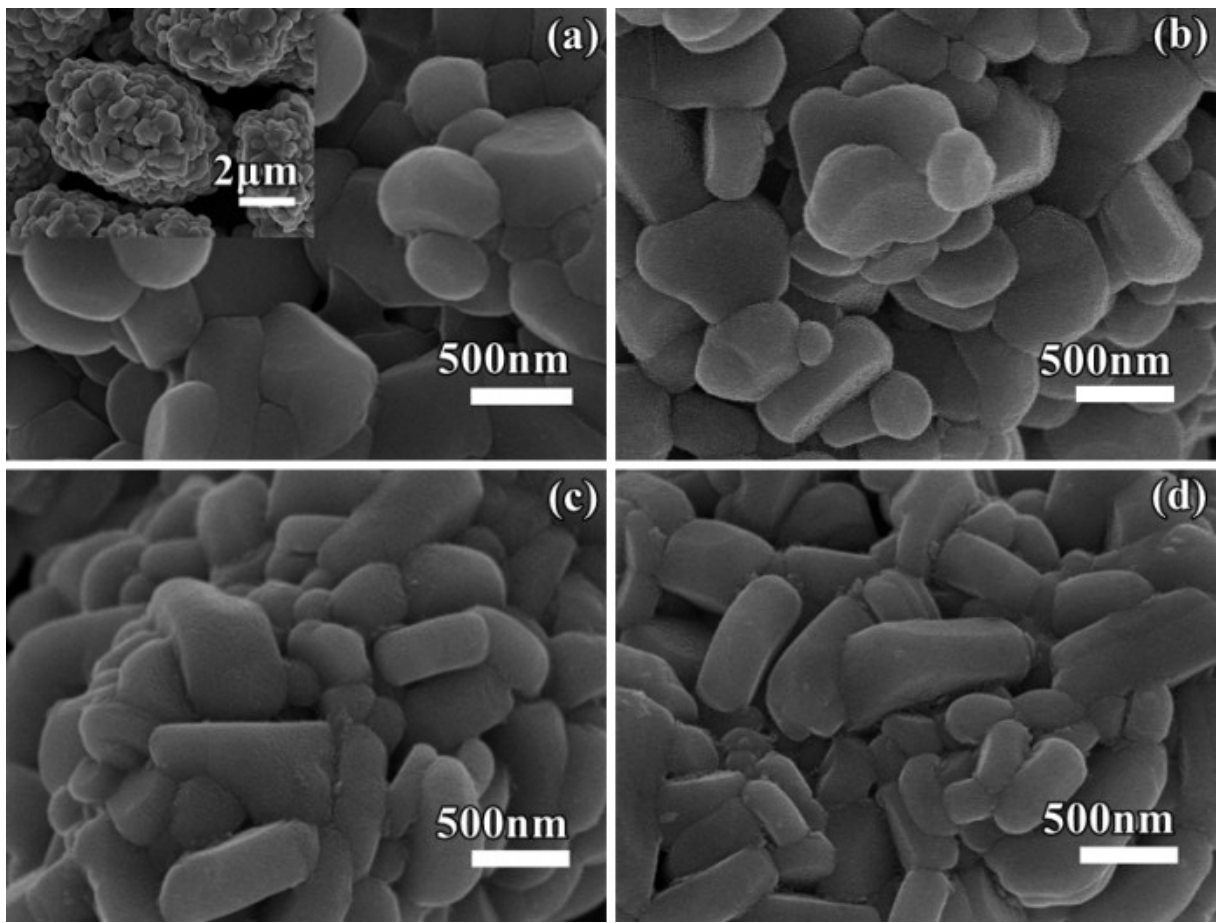


Fig. S3 SEM images of the bare $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ sample (a); 3 wt.% (b), 6 wt.% (c) and (d) 8 wt.% Li_2TiO_3 -modified $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ samples.

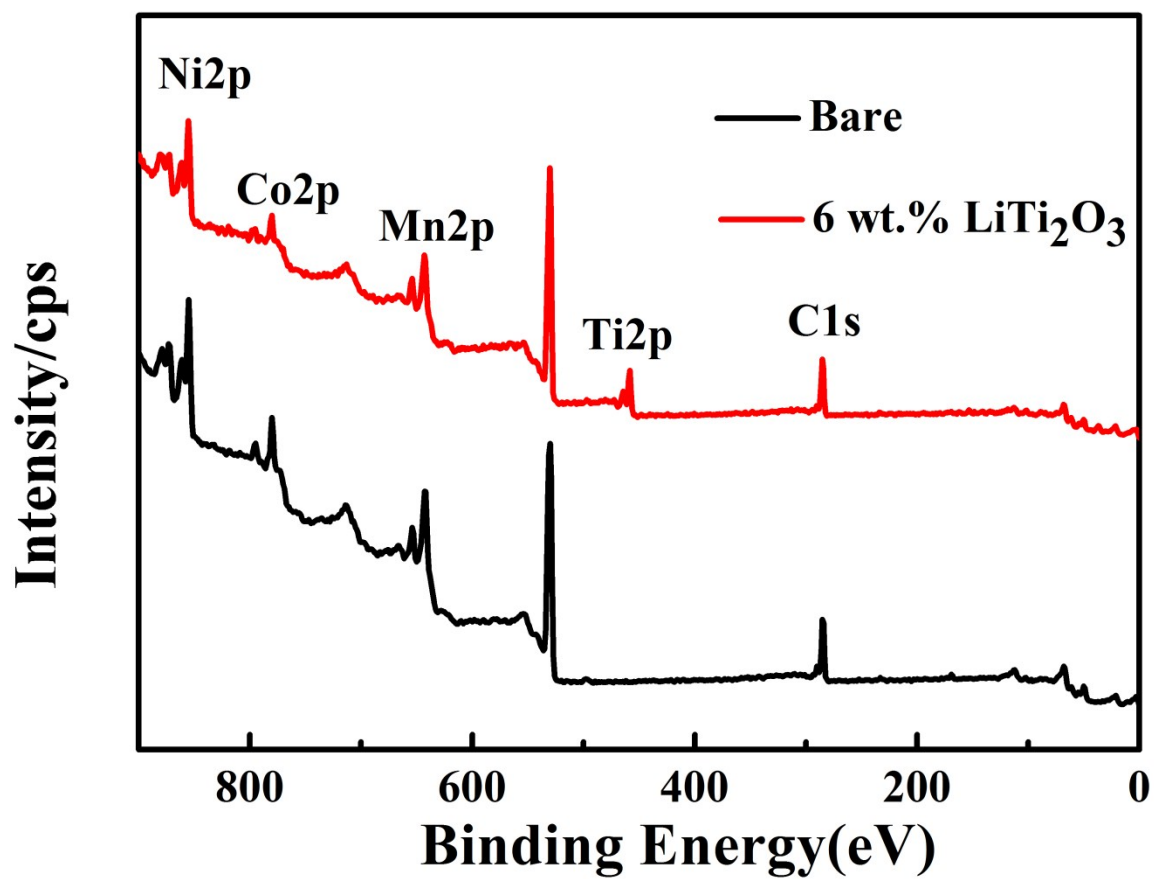


Fig. S4. XPS wide-scan spectra of the bare and 6 wt.% Li₂TiO₃-modified LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂ sample.

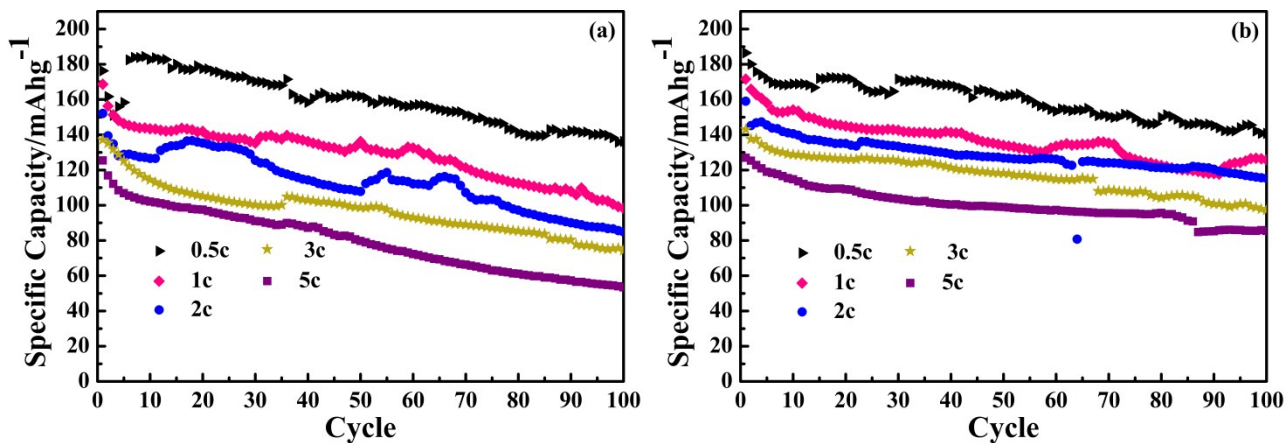


Fig. S5 Cycleability of the $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ (a) and 6 wt.% Li_2TiO_3 -modified $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ sample (b) between 2.8-4.6 V at 25 °C

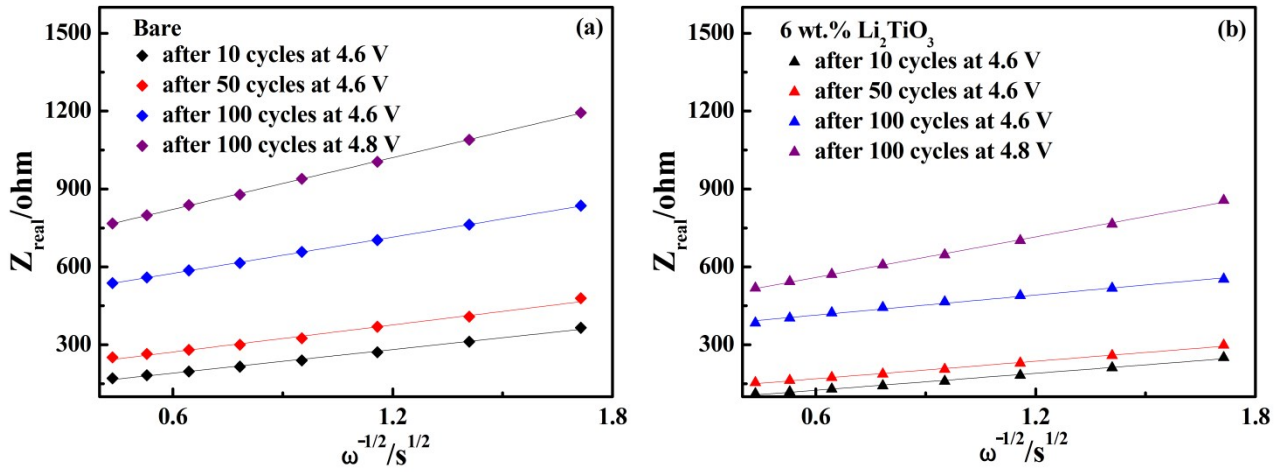


Fig. S6 the plots of Z_{real} as a function of $\omega^{-1/2}$ of the (a) $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ and (a) 6 wt.% Li_2TiO_3 -modified $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ sample.