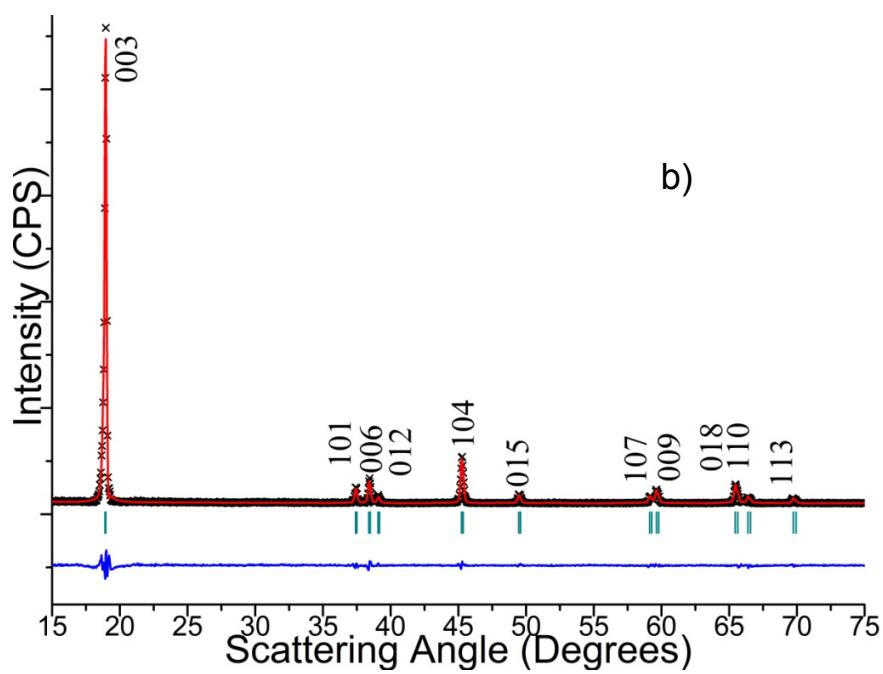
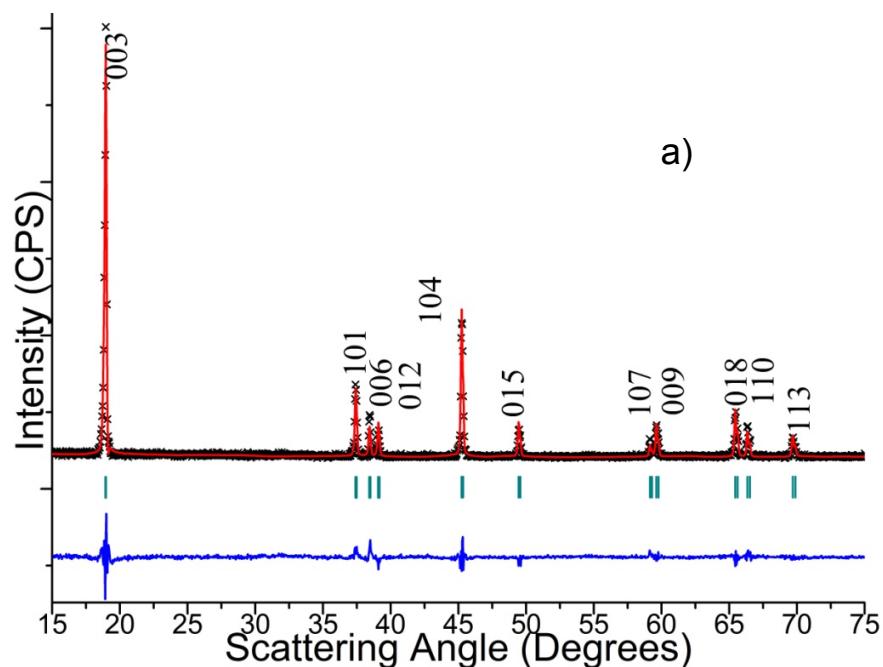
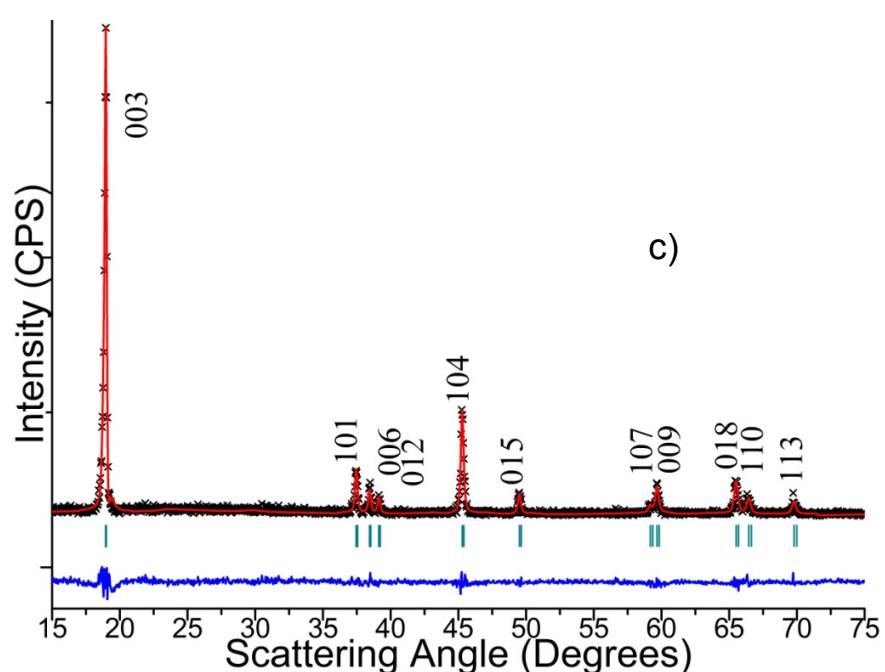
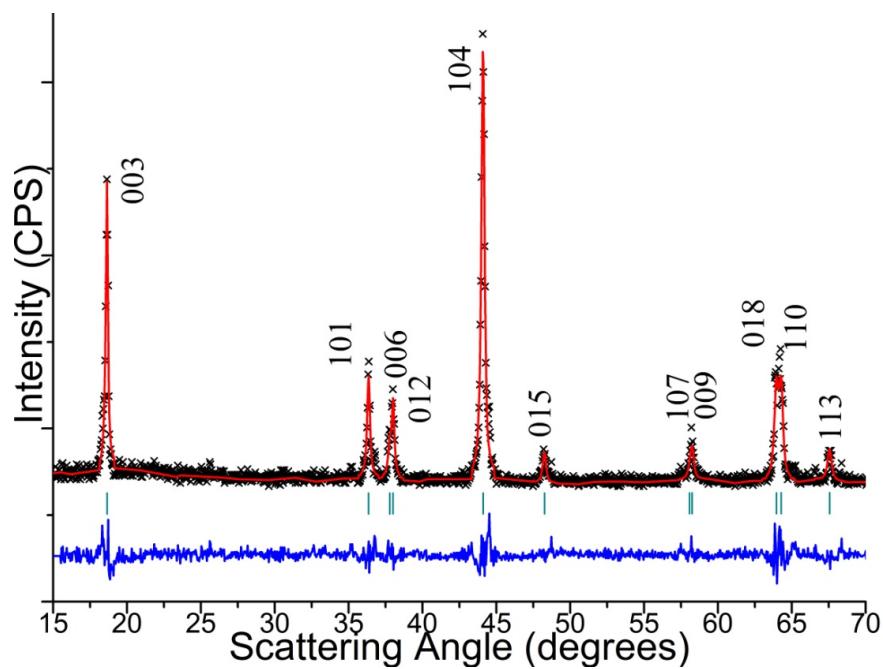


Supplemental Information

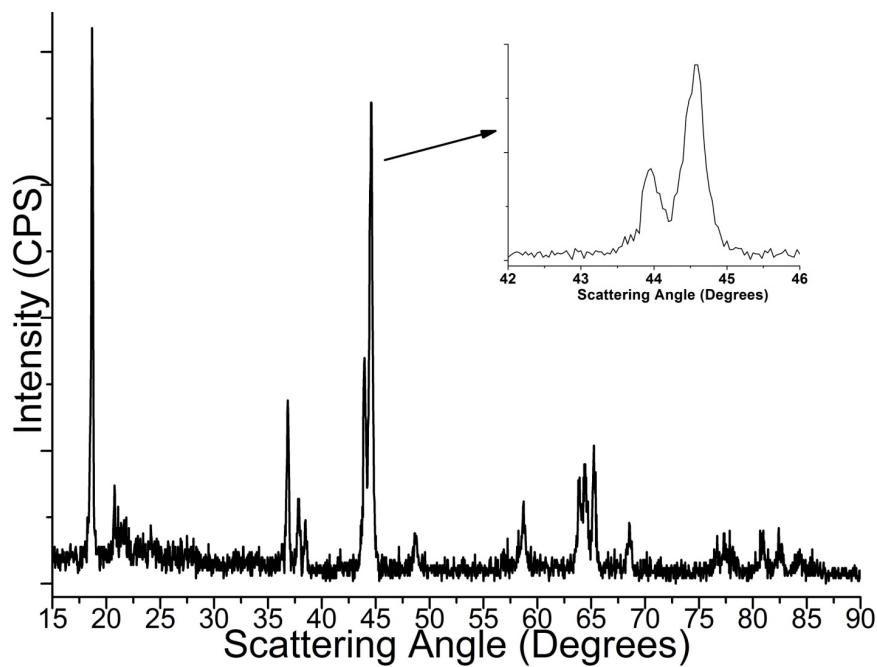




S1. A Comparison of the Rietveld refinement results from x-ray diffraction (XRD) patterns collected from (a) pristine and high pressure high temperature (HP/HT) treated LiCoO₂ (HP-LiCoO₂) at (b) 4.0 GPa and (c) 8.0 GPa at 1000°C. The black crosses represent the observed pattern, the red line corresponds to the calculated diffraction pattern and the blue is the difference pattern. The teal lines correspond to peak positions from the $R\bar{3}m$ space group.



S2. The Rietveld refinement results from XRD patterns collected from $\text{LiNi}_{0.5}\text{Mn}_{0.5}\text{O}_2$ following high pressure/high temperature treatment at 5.2 GPa



S3. XRD pattern collected from $\text{Li}[\text{Li}_{1/6}\text{Ni}_{1/4}\text{Mn}_{7/12}]\text{O}_2$ following high pressure/high temperature treatment at 8.0 GPa.