

Figure S1 Observed, calculated and difference SXRD pattern for  $\text{SrIr}_{0.8}\text{Co}_{0.2}\text{O}_3$  at room temperature.

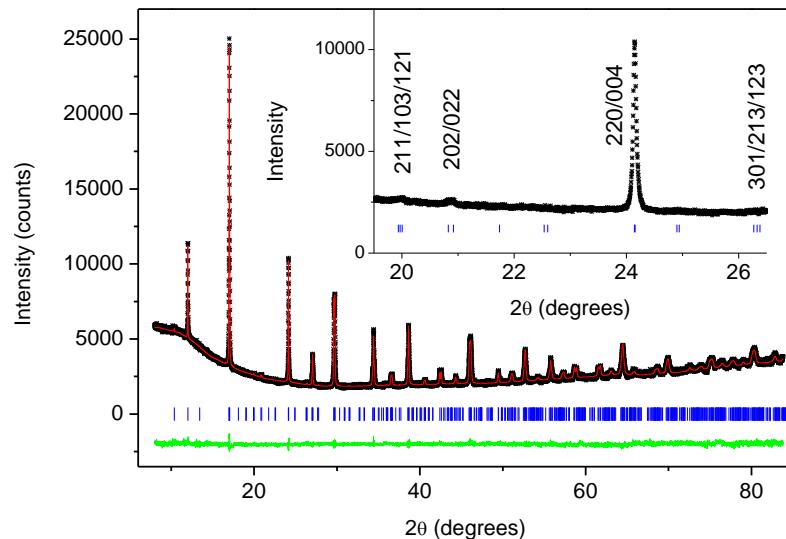


Figure S2 Observed, calculated and difference SXRD pattern for  $\text{SrIr}_{0.75}\text{Co}_{0.25}\text{O}_3$  at room temperature.

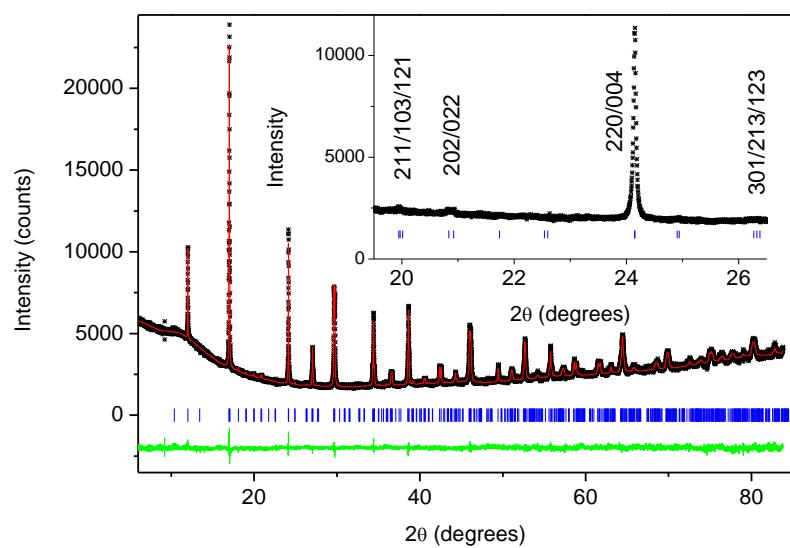


Figure S3 Observed, calculated and difference SXRD pattern for  $\text{SrIr}_{0.78}\text{Ni}_{0.22}\text{O}_3$  at room temperature.

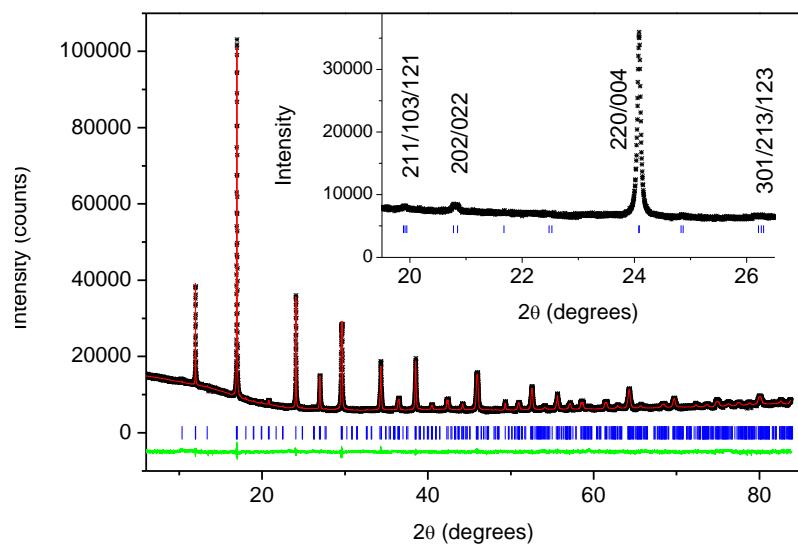


Figure S4 Observed, calculated and difference SXRD pattern for  $\text{SrIr}_{0.80}\text{Zn}_{0.20}\text{O}_3$  at room temperature.

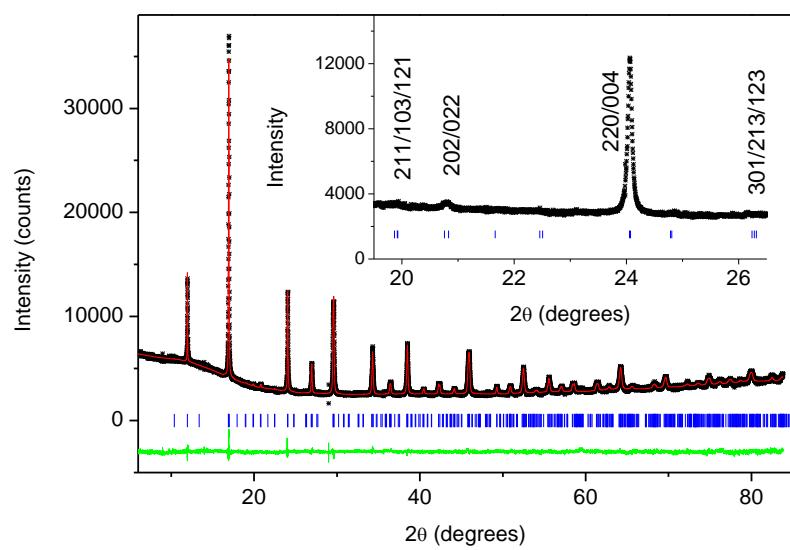


Figure S5 Observed, calculated and difference SXRD pattern for  $\text{SrIr}_{0.75}\text{Zn}_{0.25}\text{O}_3$  at room temperature.

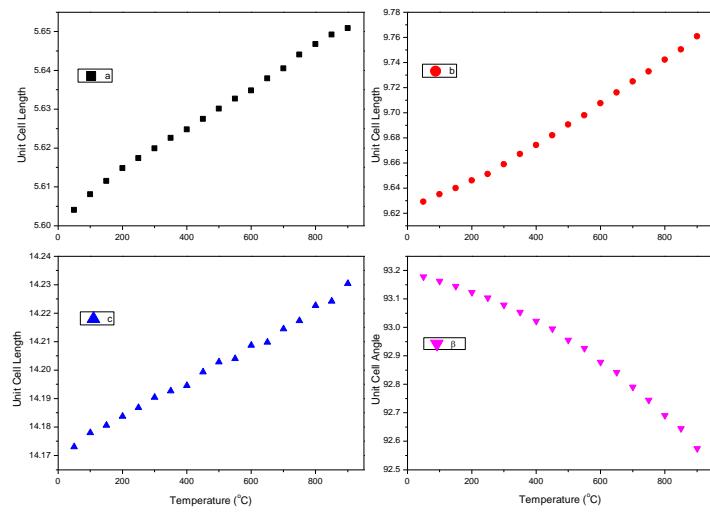


Figure S6 Temperature dependence of the unit cell parameters for  $\text{SrIrO}_3$  obtained from conventional X-ray diffraction data.