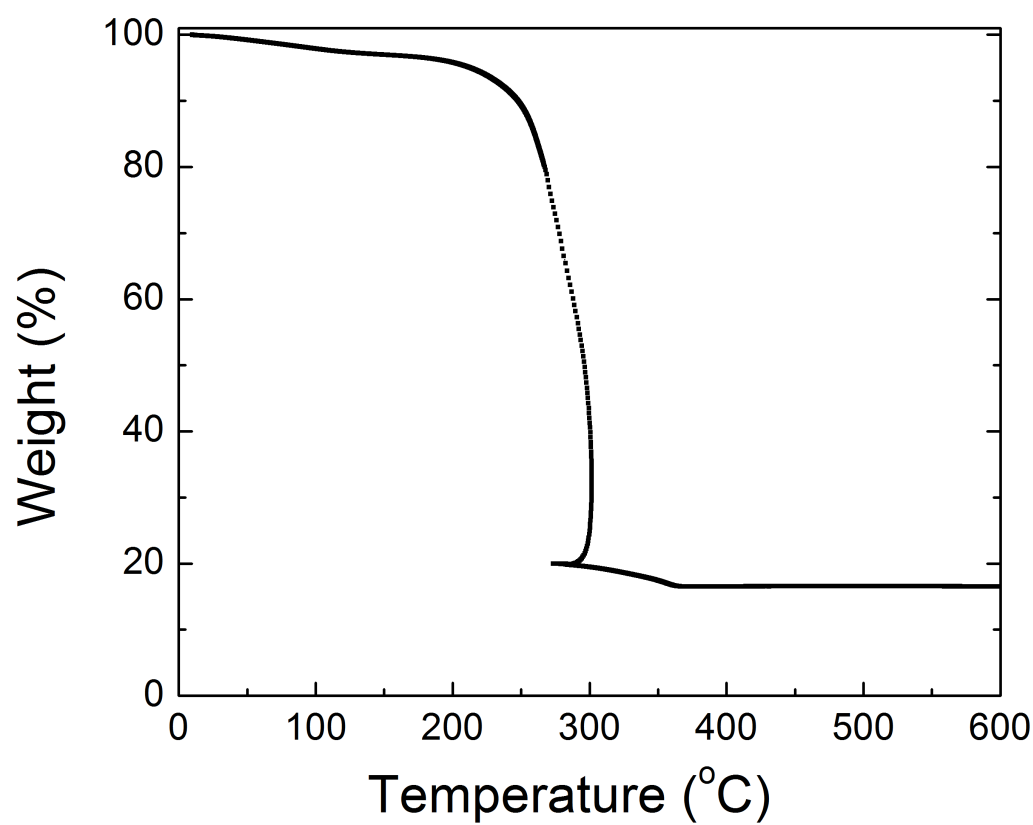
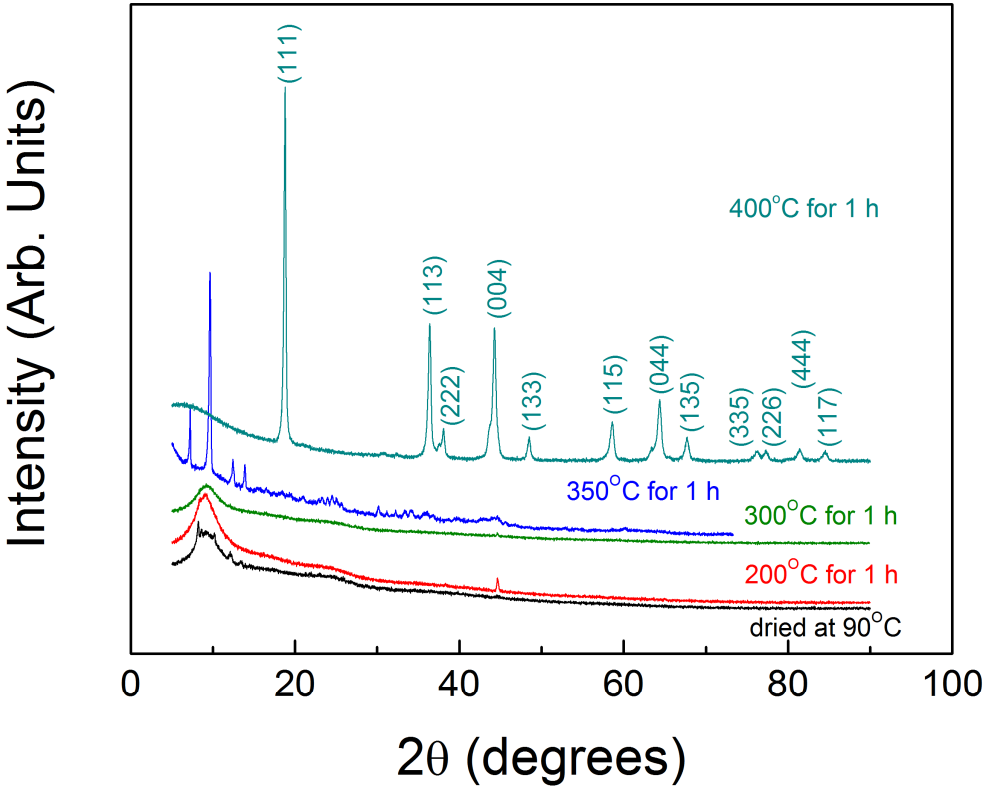
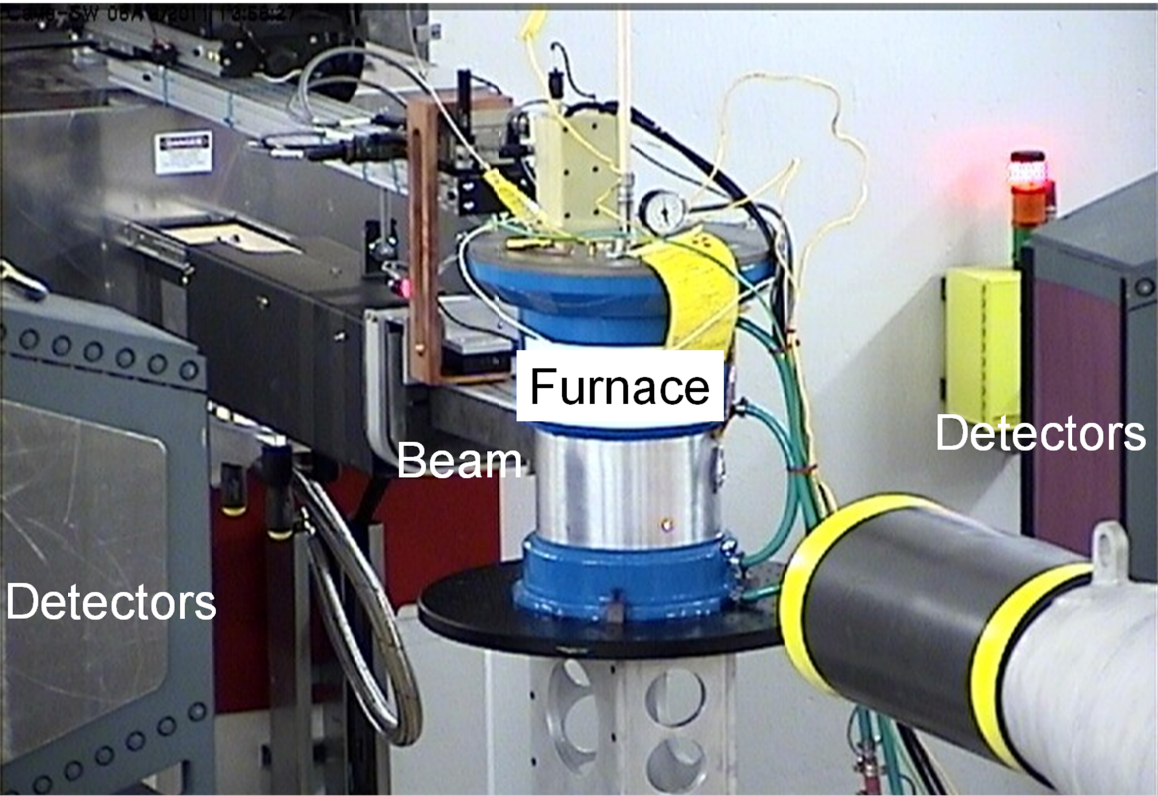




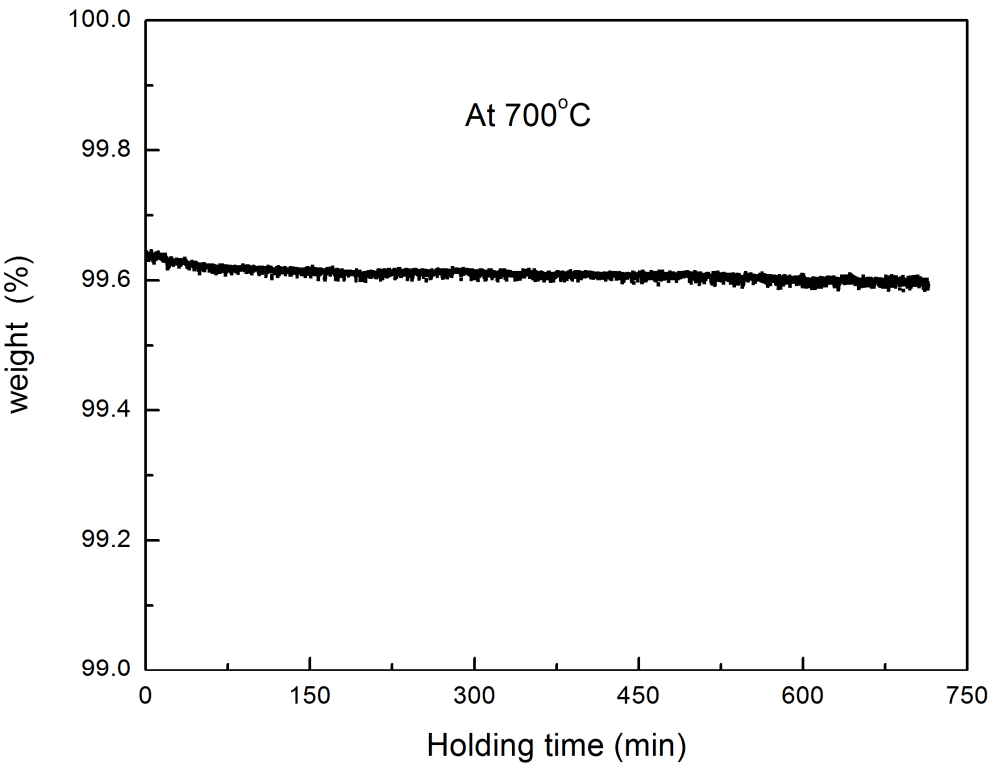
S 1. TGA of $\text{LiCH}_3\text{COO}\cdot 2\text{H}_2\text{O}$, $\text{Ni}(\text{CH}_3\text{COO})_2\cdot 4\text{H}_2\text{O}$ and $\text{Mn}(\text{CH}_3\text{COO})_2\cdot 4\text{H}_2\text{O}$ mixed precursors.



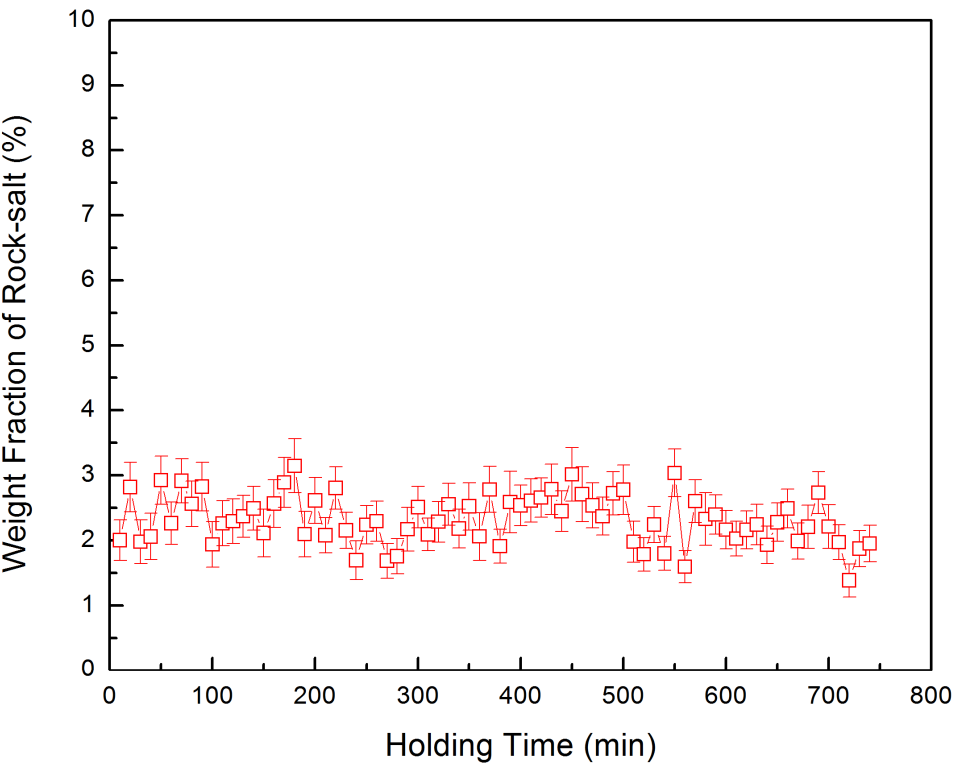
S 2. Ex-situ XRD after heat treatment at 90oC, 200oC, 300oC, and 400oC.



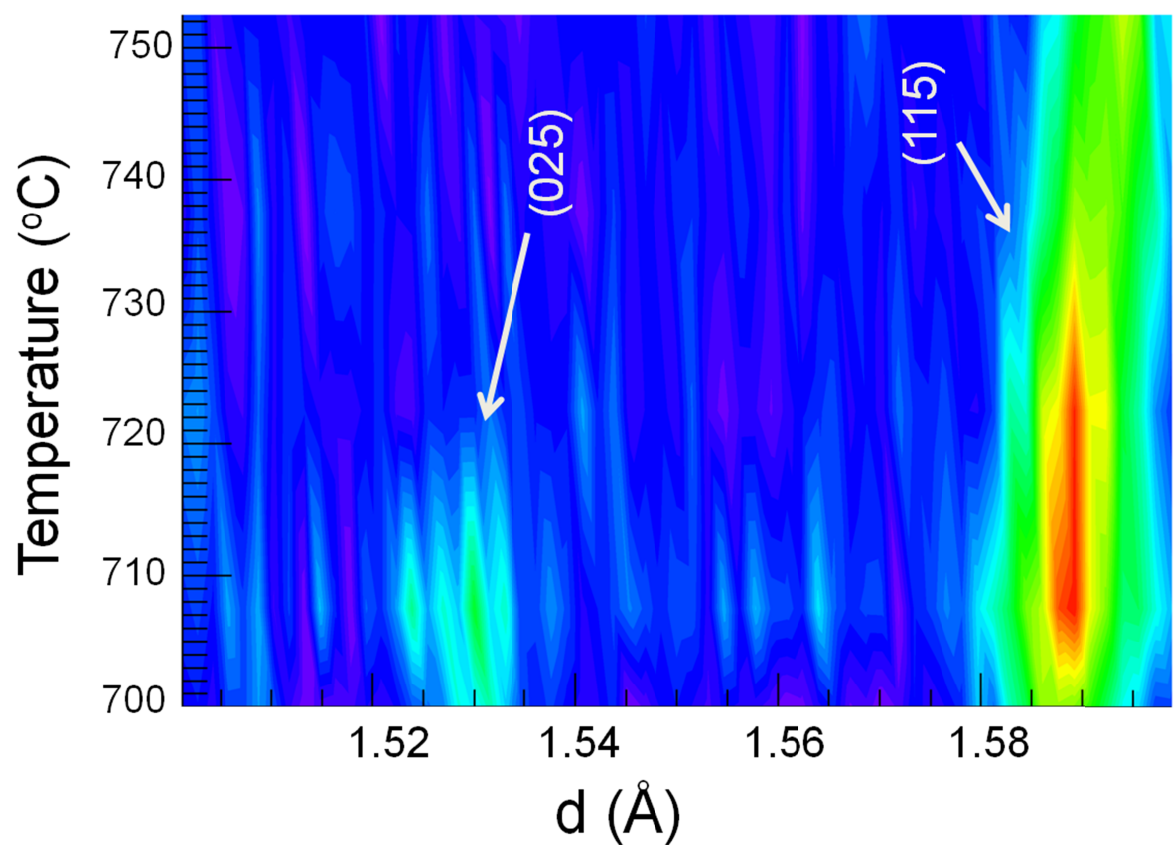
S3. Neutron experiment set-up.



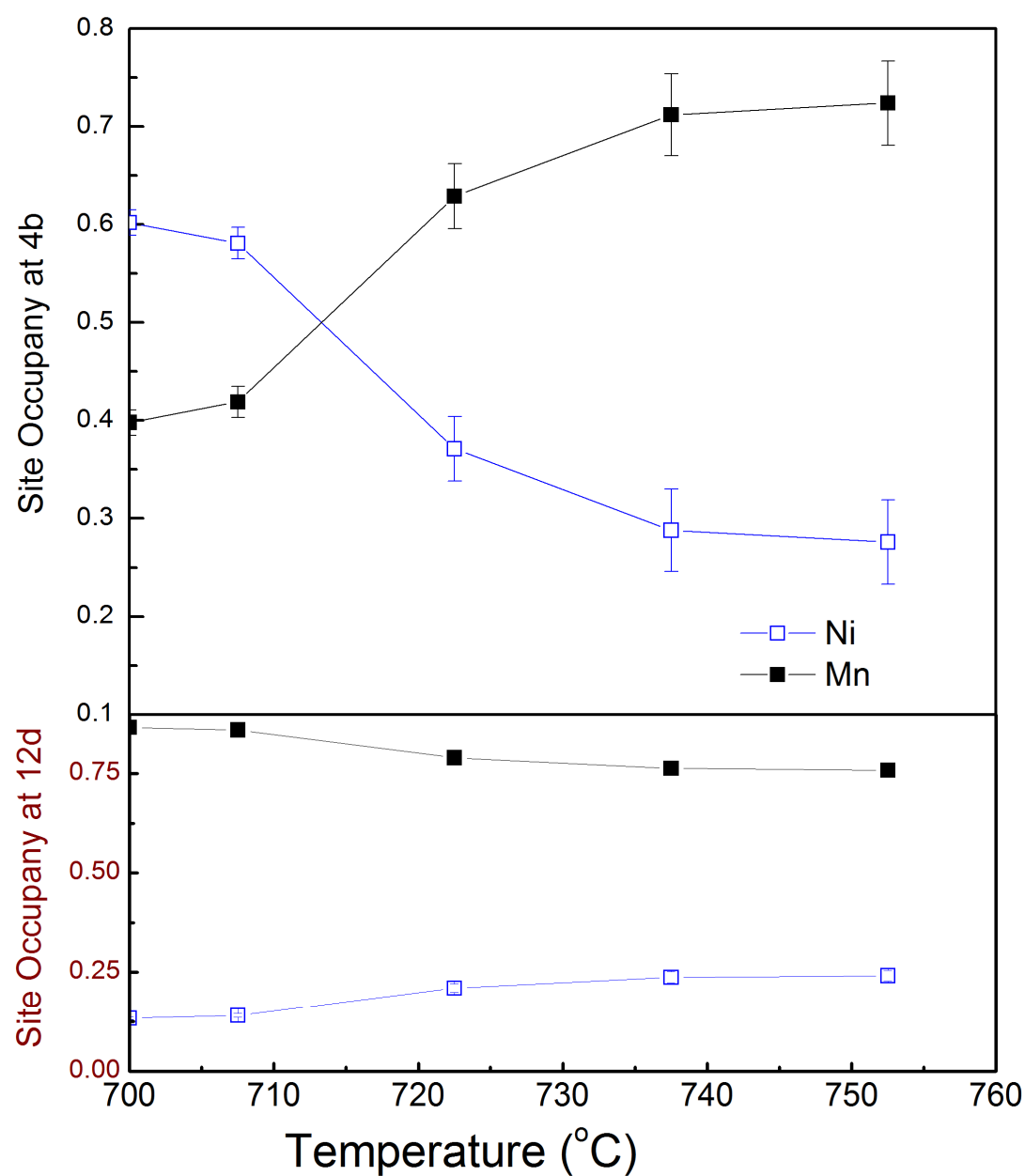
S4. The TGA data of the sample holding at 700oC for 12 h.



S5. The weight fraction of the rock-salt phase at 700oC.



S6. (a) Neutron diffraction patterns during continuous heating from 700oC to 750oC between 1.5 and 1.6 Å.



S 6. (b) 4b-site occupancy and 12d-site occupancy for Ni and Mn during continuous heating from 700oC to 750oC.