

## Supplementary information

### Unexpected Large Capacity of Ultrafine Manganese Oxide as Sodium-Ion Battery Anode

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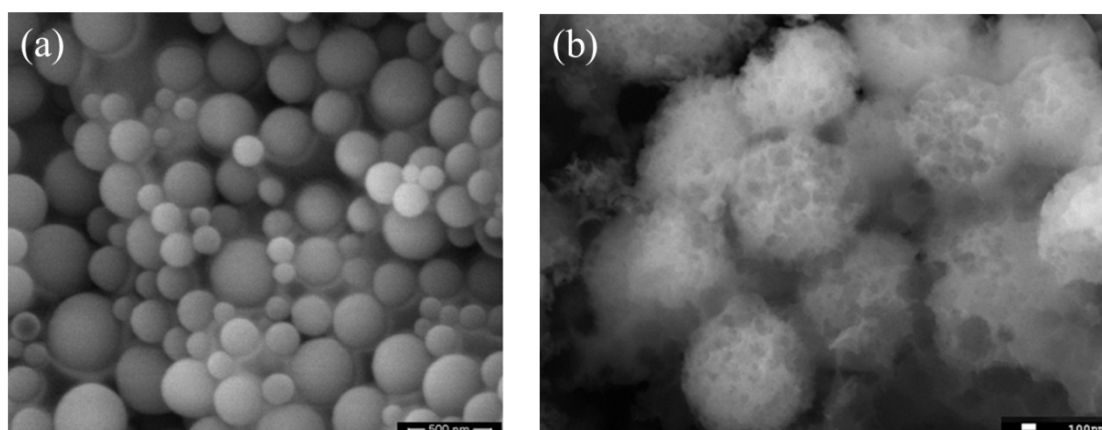


Figure S1. Low magnification micrographs of (a) the SiO<sub>2</sub> template particle; (b) MnO<sub>2</sub>/SiO<sub>2</sub> composite particles after etching.

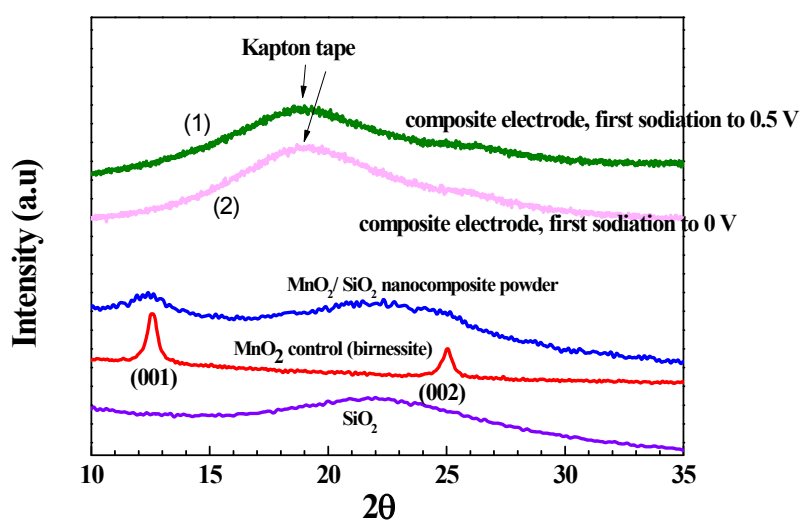


Figure S2. Ex-situ XRD study on electrodes discharged to potentials below 1.0 V (curves 1 and 2) shows no crystalline reflection, indicating that birnessite turned into amorphous MnO<sub>2</sub>.

amorphous phases upon the first sodiation cycle.