

Electronic Supplementary Information

Facile Synthesis of Nanocrystalline-Assembled Bundle-like CuO Nanostructure with High Rate Capacities and Enhanced Cycling Stability as an Anode Material for Lithium-ion Batteries

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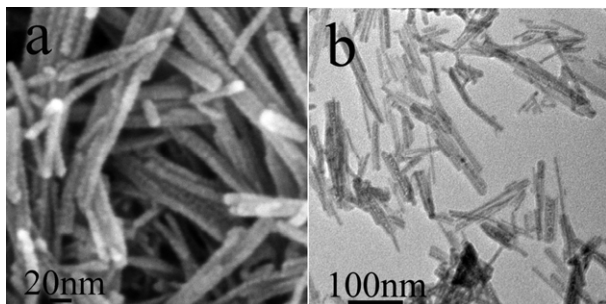


Fig. S1. SEM and TEM images of the precursor synthesized without $C_6H_8O_7 \cdot H_2O$: (a) SEM image; (b) TEM image.

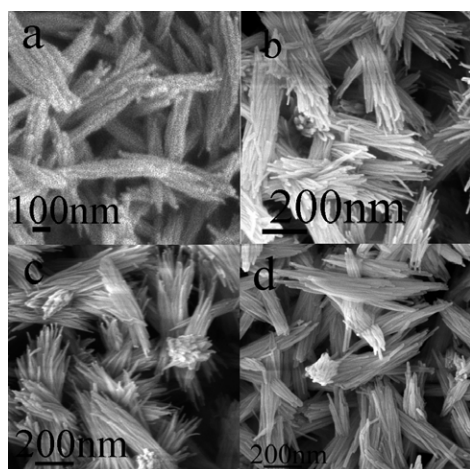


Fig. S2. SEM images of bundle-like $\text{Cu}(\text{OH})_2$ obtained with different amounts of NaOH:

(a) 5.0 mmol; (b) 9.0 mmol; (c) 12.5 mmol; (d) 50.0 mmol.

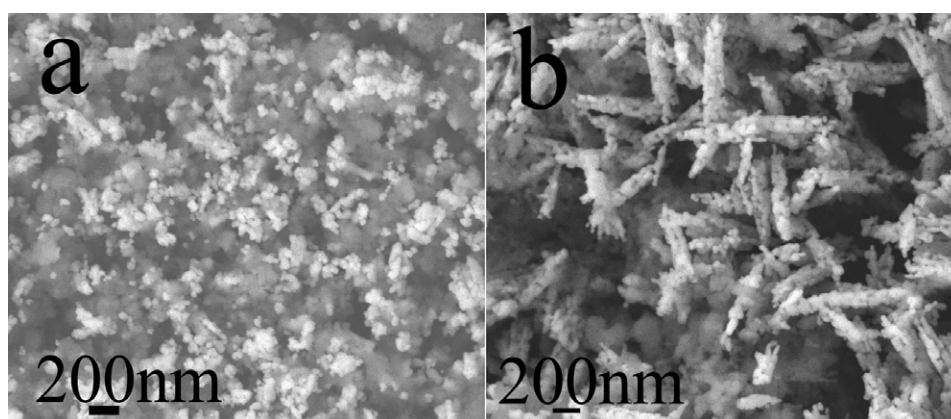


Fig. S3. The SEM image of the both electrodes: (a) after grinding; (b) without grinding.

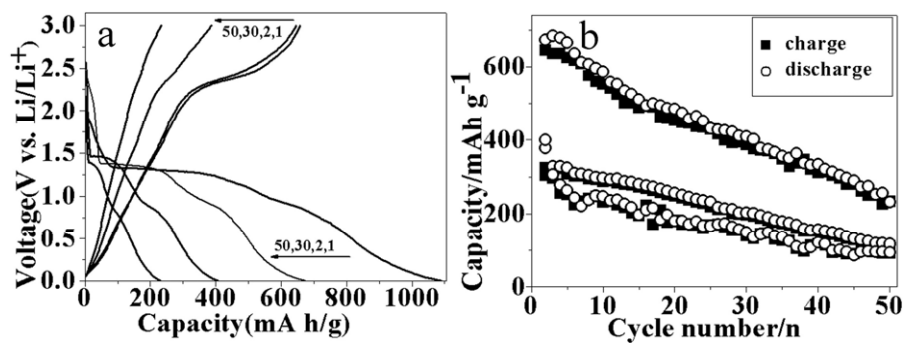


Fig. S4. (a) Selected discharge/charge profiles for the bundle-like CuO at a current rate at 0.3 C; (b) Cycling performances of CuO electrode at current rate at 0.3 C, 1 C and 2 C, respectively. (From the 2nd cycle to the 50th cycle).

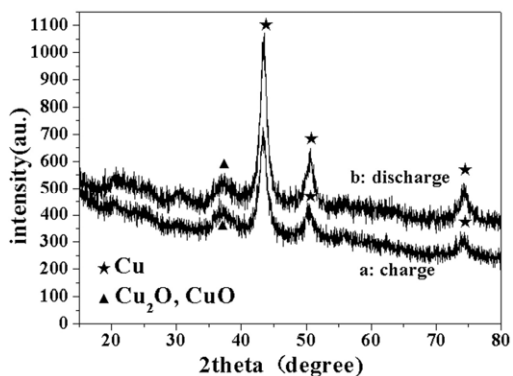


Fig. S5. The XRD patterns for the CuO electrodes with structure destruction after discharge to 0.001 V and charged to 3.0 V: (a) Charge (14th cycle); (b) Discharge (15th cycle).

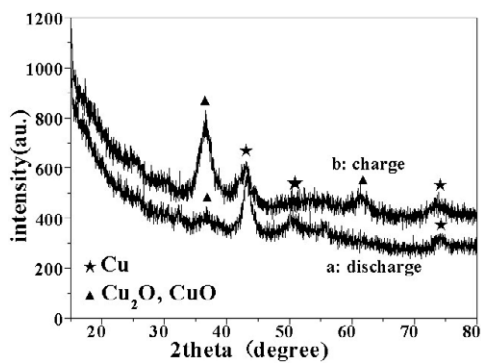


Fig. S6. The XRD patterns for the CuO electrodes with bundle-like structure after discharge to 0.001 V and charged to 3.0 V: (a) Discharge (41th cycle); (b) Charge (24 th cycle).

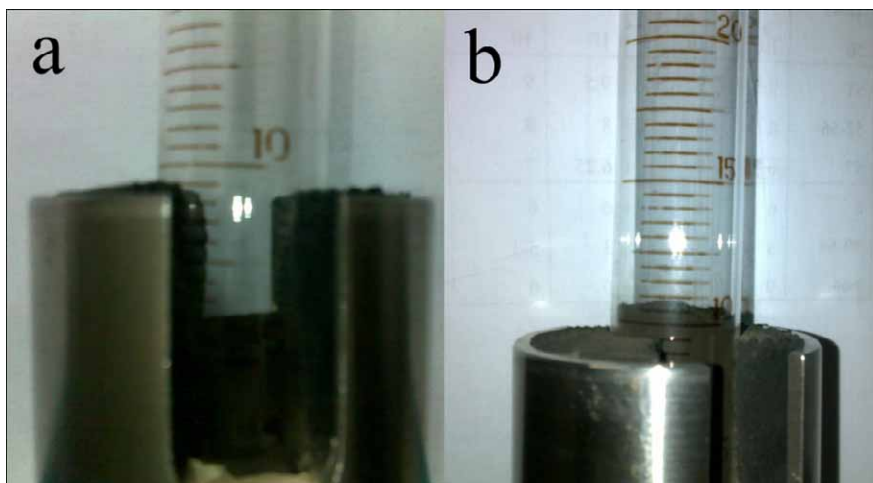


Fig. S7. (a) CuO nanoparticles obtained from grinding the bundle-like CuO (disassembled) : $V \sim 6$ mL, $m = 6.310$ g, $\rho = 1.05$ g cc^{-1} ; (b) the bundle-like CuO(assembled) : $V \sim 10.5$ mL, $m = 6.324$ g, $\rho = 0.602$ g cc^{-1} .