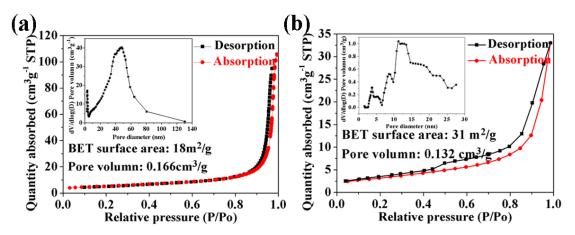
## **Supporting Information**

## Carbonate-assisted hydrothermal synthesis of porous, hierarchical CuO microspheres and CuO/GO for high-

## performance lithium-ion battery anodes

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**Fig. S1** Nitrogen absorption-desorption isotherm curve and BJH pore size distribution plot (inset) of (a) bare CuO MSs and (b) CuO/GO hybrid.

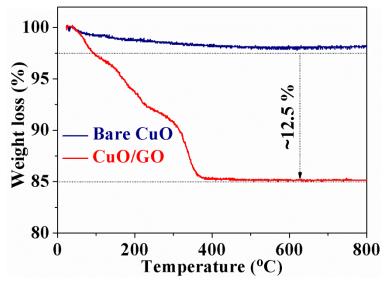
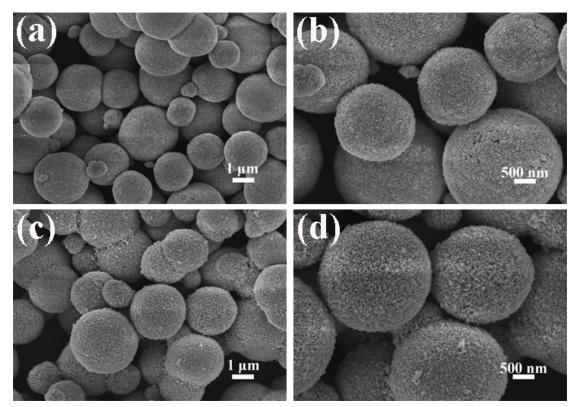
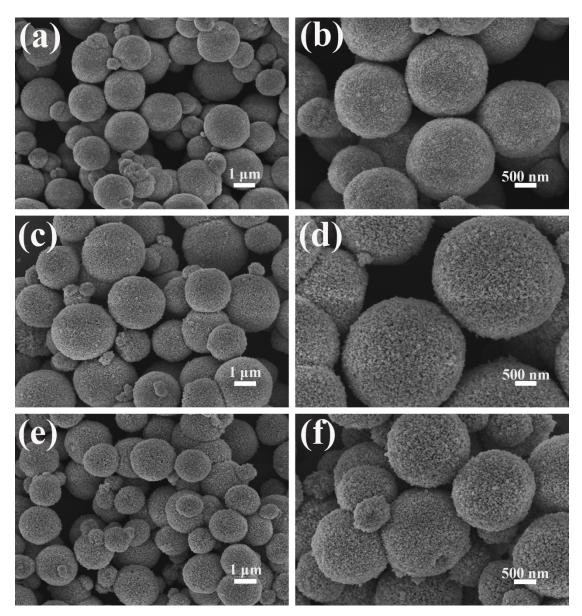


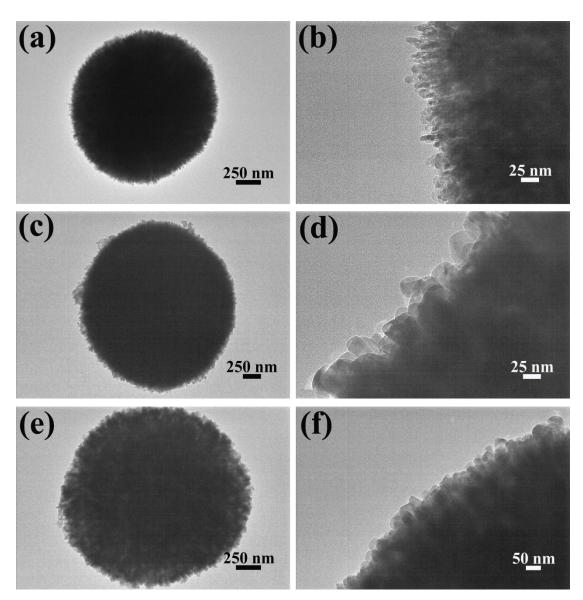
Fig. S2 TGA curves of bare CuO and CuO/GO hybrid from room temperature to 800 °C in air.



**Fig. S3** SEM images of CuO synthesized under different hydrothermal temperature for 4 h: (a, b) 120 °C; (c, d) 160 °C.



**Fig. S4** SEM images of CuO synthesized under 200 °C for different times: (a, b) 0.5 h; (c, d) 1 h; (e, f) 2 h.



**Fig. S5** TEM images of CuO synthesized under 200 °C for different times: (a, b) 0.5 h; (c, d) 1 h; (e, f) 2 h.

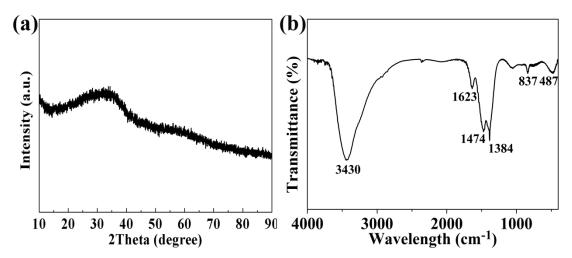
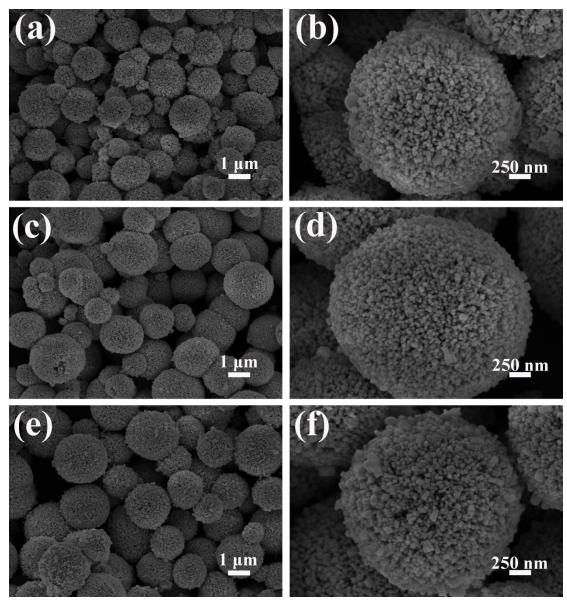


Fig. S6 XRD pattern of the precursor before hydrothermal treatment.



**Fig. S7** SEM images of CuO synthesized from different copper salts: (a, b) CuCl<sub>2</sub>; (c, d) Cu(NO<sub>3</sub>)<sub>2</sub>; (e, f) Cu(CH<sub>3</sub>COO)<sub>2</sub>.