Structure-tunable supraparticle assemblies of hollow cupric oxide sheathed with nanographenes

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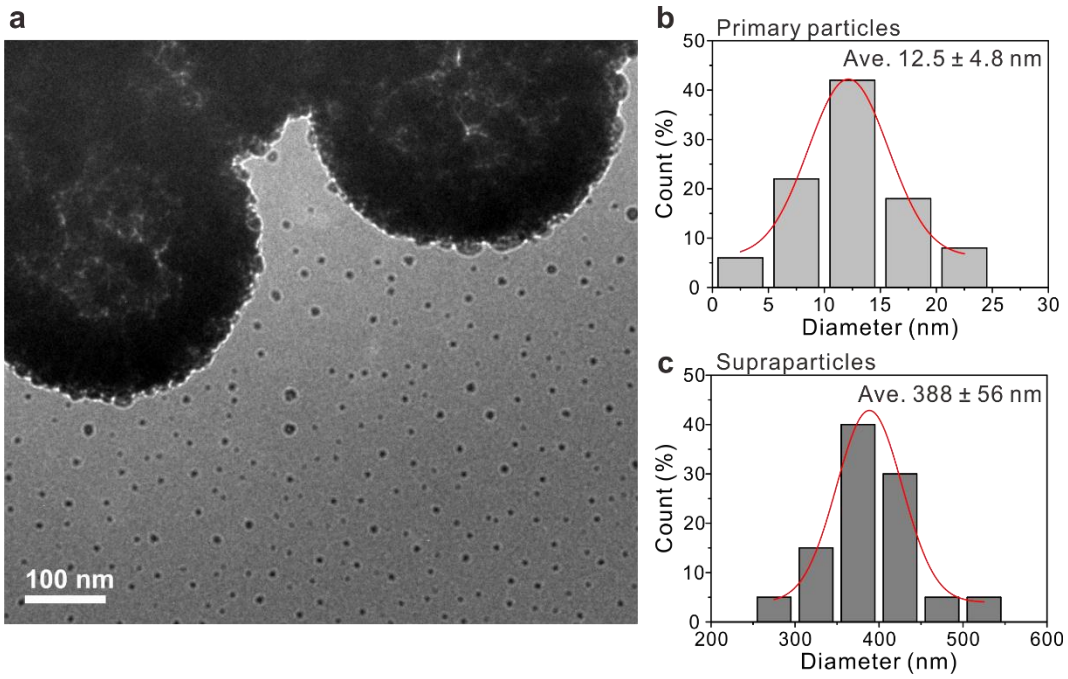

Figure S1. (a) TEM image of hollow Cu_2O SPs with the corresponding size distribution histograms of Cu_2O for (b) primary particles and (c) supraparticles (SPs).

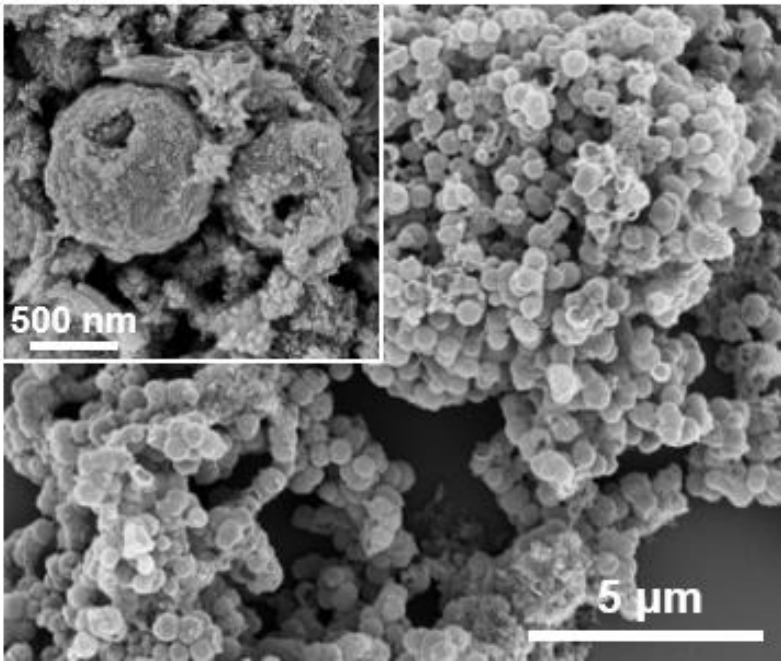

Figure S2. SEM images of NGO coated Cu_2O SPs.

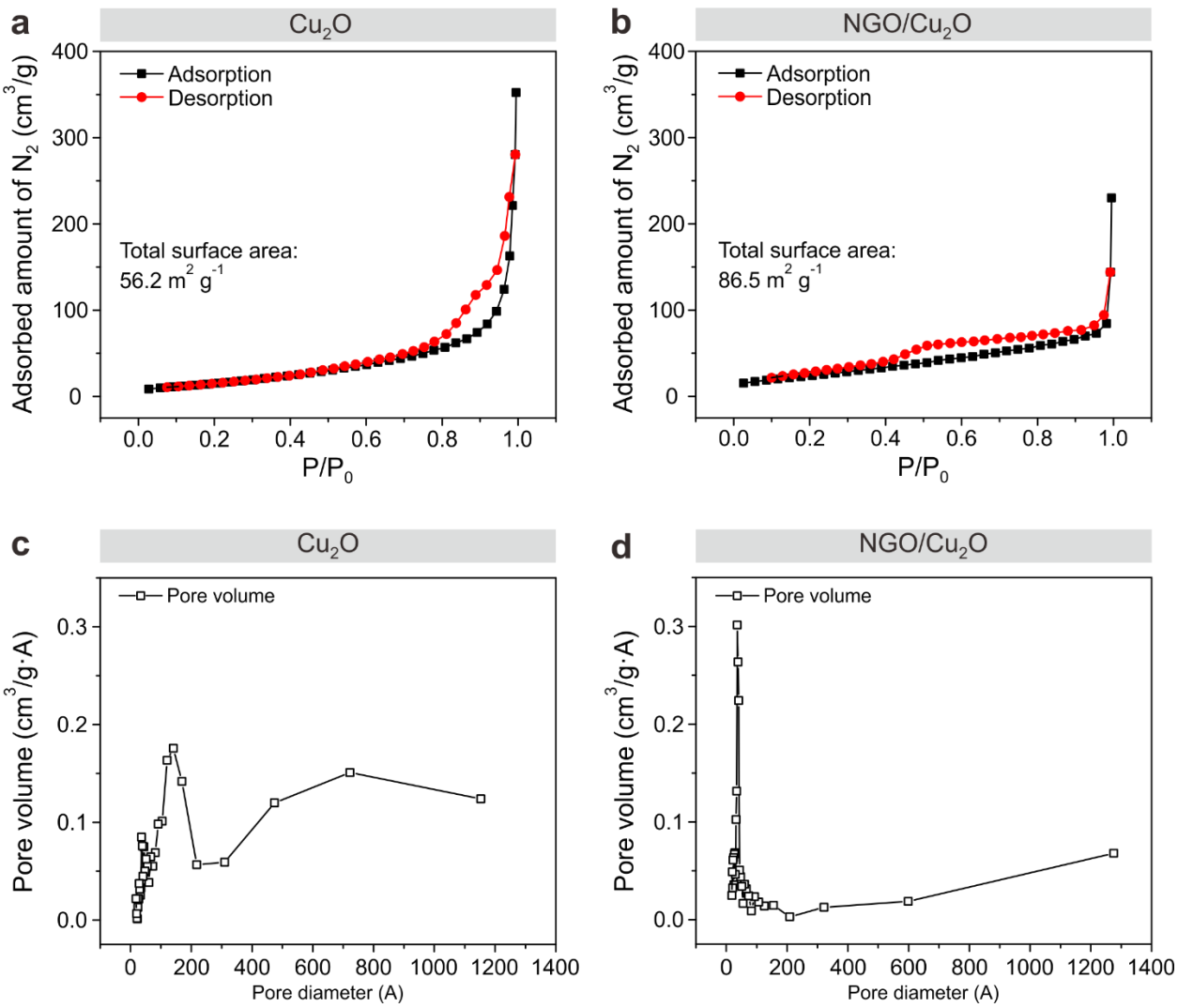

Figure S3. Nitrogen adsorption-desorption isotherms of (a) bare Cu_2O SPs and (b) NGO/Cu_2O composites and the corresponding pore size distribution plots of (c) bare Cu_2O SPs and (d) NGO/Cu_2O nanocomposites.

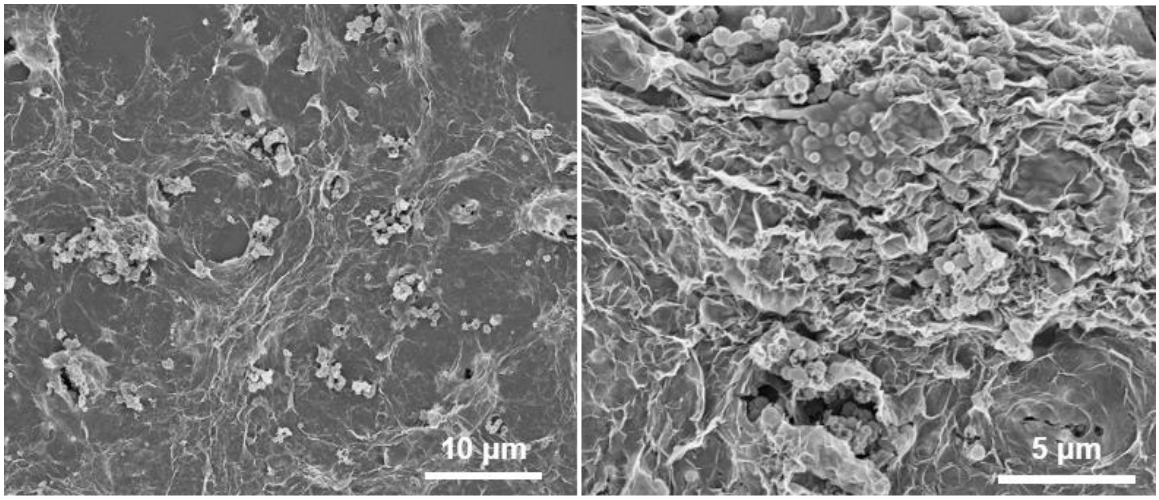

Figure S4. SEM images of bulk GO coated Cu_2O SPs.

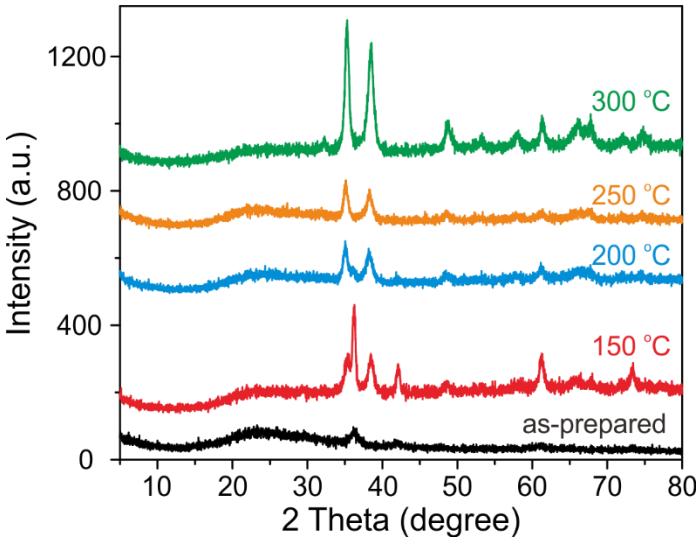

Figure S5. XRD of NGO/Cu_2O composites after thermal treatments at various temperatures.

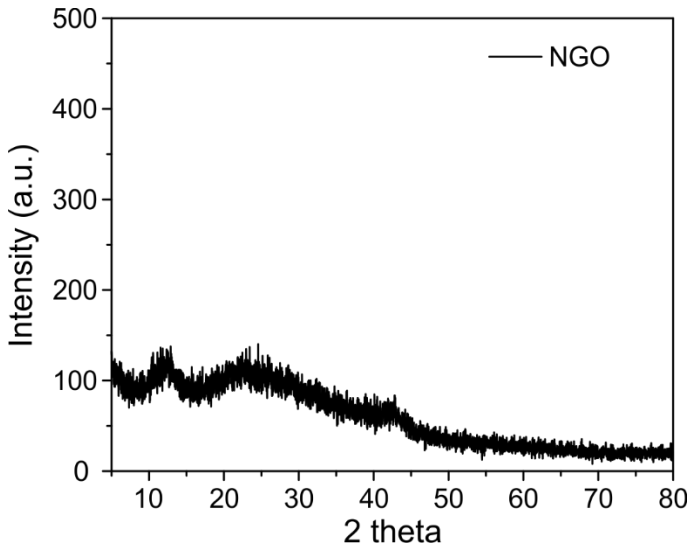

Figure S6. XRD of NGO.

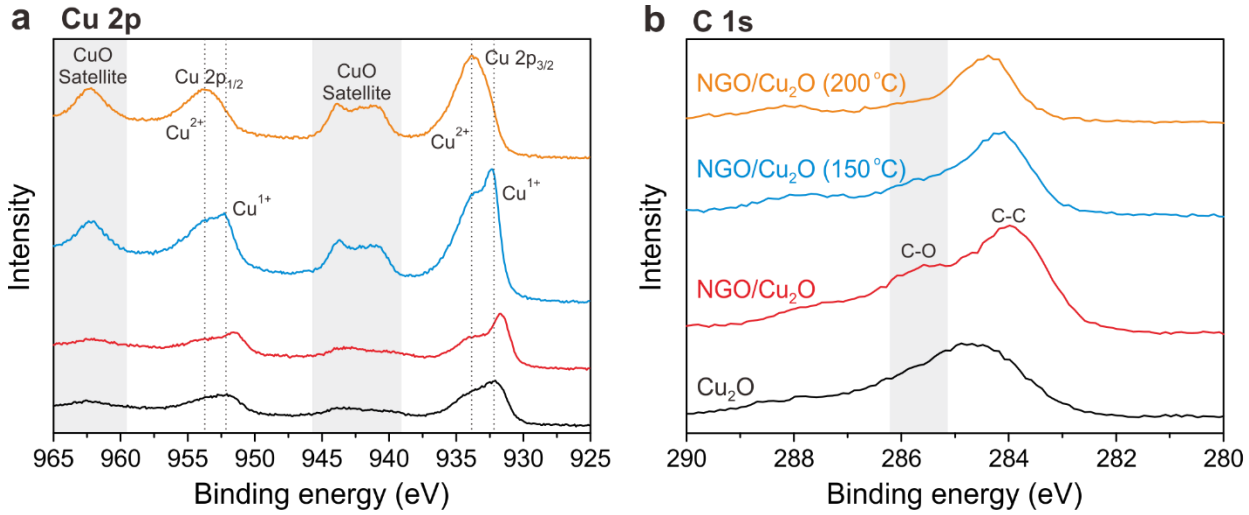

Figure S7. High-resolution XPS spectra of (a) Cu 2p and (b) C 1s for Cu_2O and NGO/Cu_2O composites after thermal treatment.

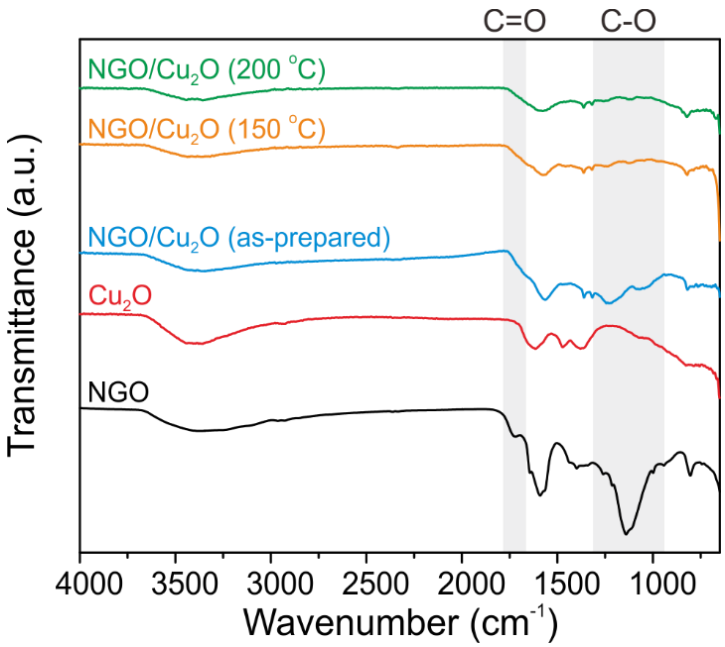

Figure S8. FT-IR of NGO/Cu_2O composites after thermal treatment at various temperatures.

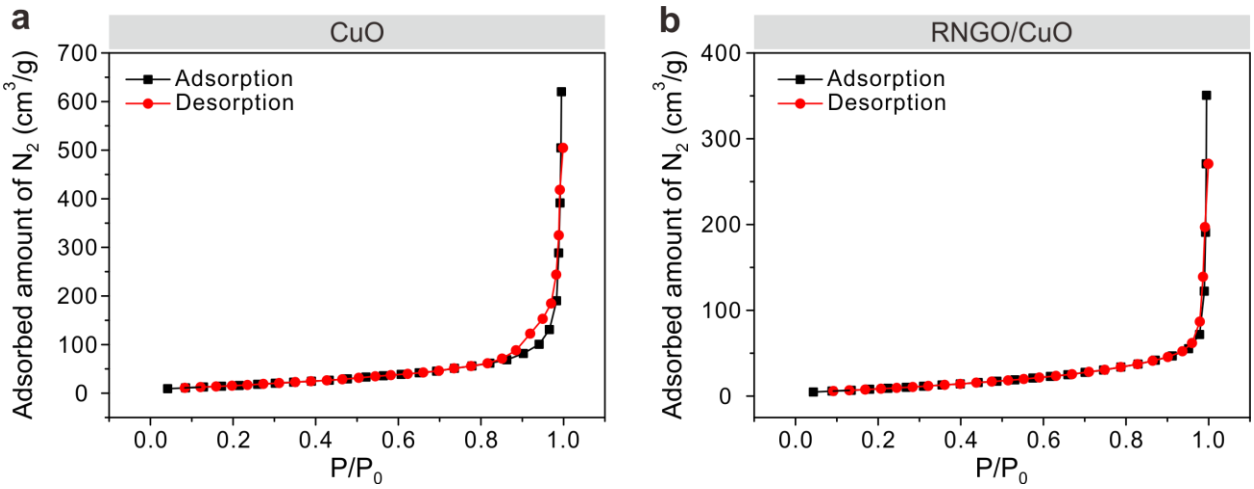

Figure S9. Nitrogen adsorption-desorption isotherms of (a) bare CuO SPs and (b) RNGO/CuO composites.

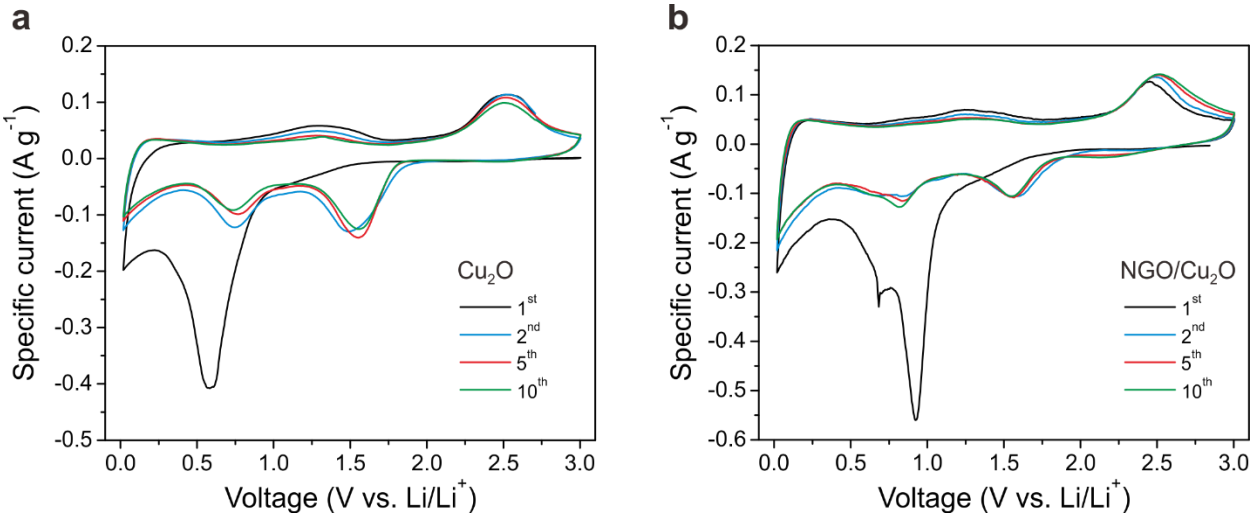

Figure S10. CV curves of (a) Cu_2O and (b) NGO/Cu_2O at various cycles.

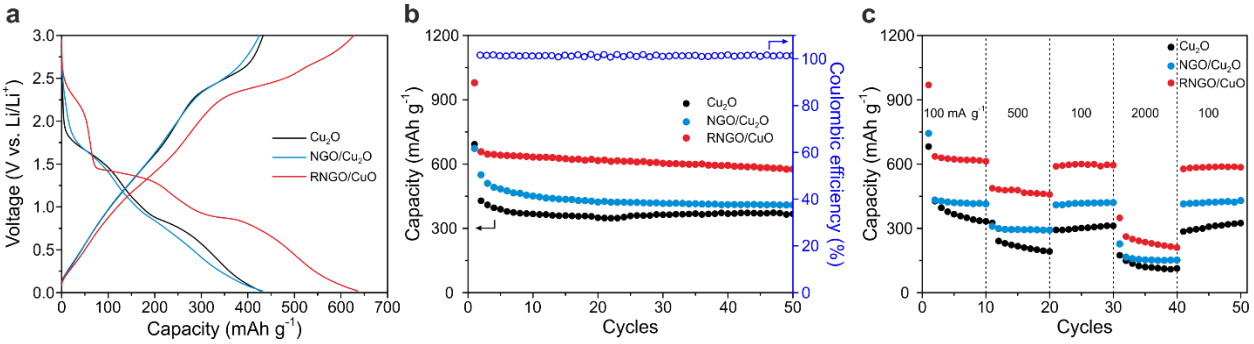

Figure S11. (a) Galvanostatic charge/discharge voltage profiles of Cu_2O, NGO/Cu_2O, and RNGO/CuO SPs for the 2nd cycle at a current rate of 100 mA g^{-1} between 0.02 – 3.0 V vs. Li/Li^+. (b) Discharge capacities and coulombic efficiency of RNGO/CuO at a current rate of 100 mA g^{-1}, and (c) rate capabilities of Cu_2O, NGO/Cu_2O, and RNGO/CuO SPs at varying current densities.

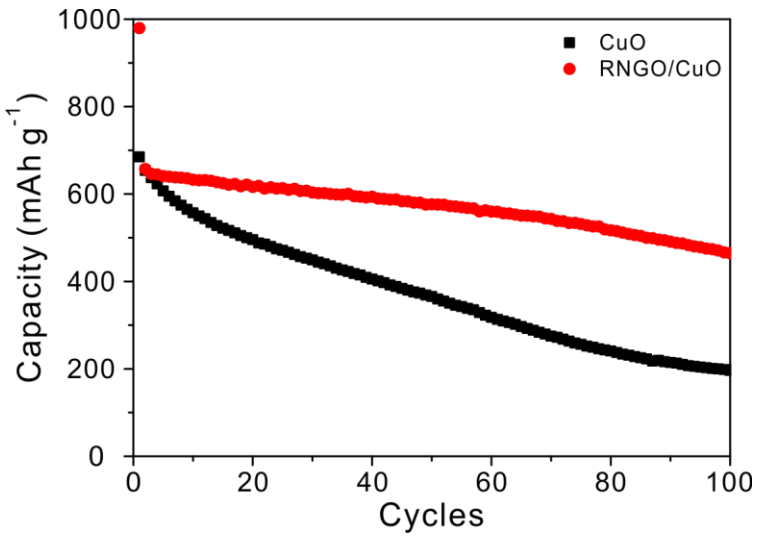

Figure S12. Discharge capacities of CuO and RNGO/CuO at a current rate of 100 mA g^{-1}.