

Supporting Information

for

Ultra-small Fe₃O₄ nanoparticles decorated graphenes with superior cyclic performance and rate capability

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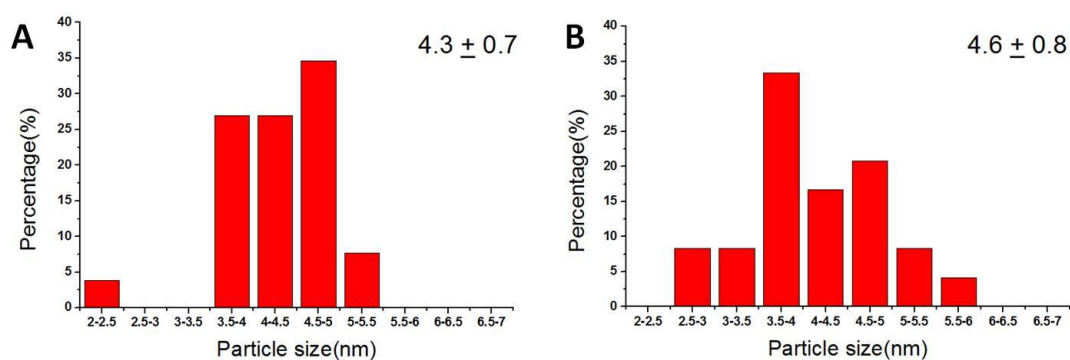


Figure S1. Size distribution of Fe₃O₄ particles (A) before and (B) after annealing.

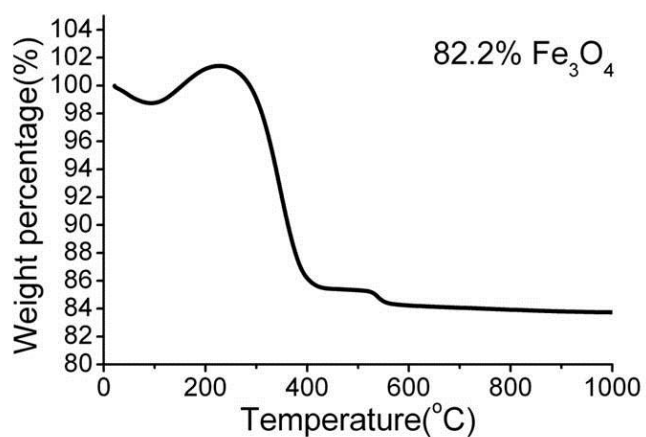


Figure S2. Thermogravimetric curve of the annealed USIO/G composite.

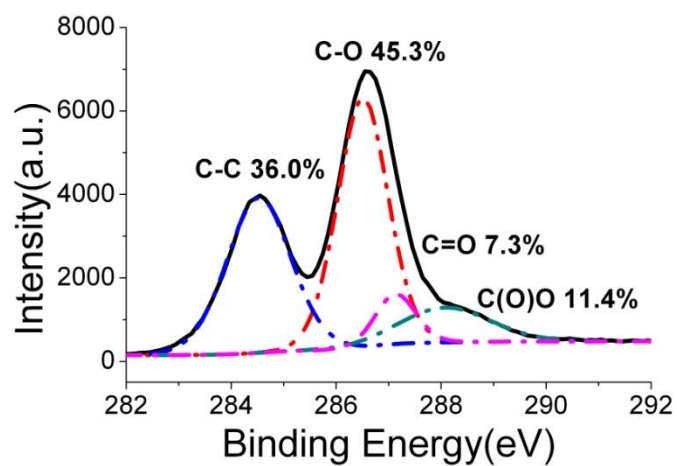


Figure S3. High resolution XPS spectrum of Fe2p from USIO/G.

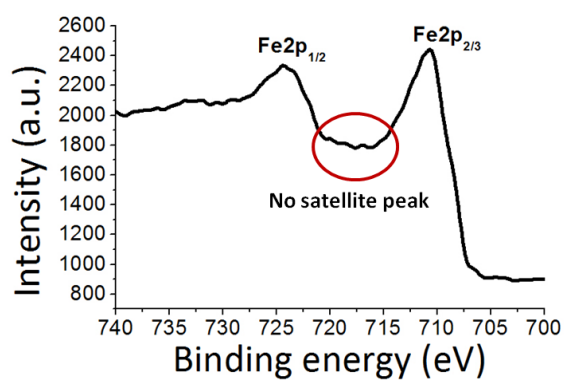


Figure S4. Cyclic voltammogram of USIO/G at 1800 mA g⁻¹.

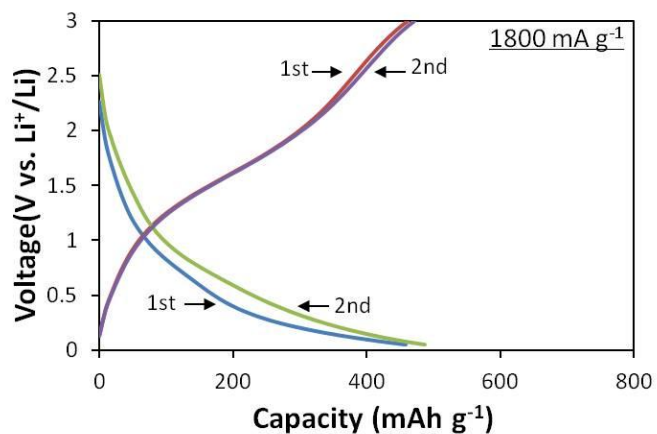


Figure S5. Charge-discharge profiles of the annealed USIO/G composites at first two cycles after current density restored to 1800 mA g^{-1} (corresponding to total cycle numbers of 921st and 922nd).

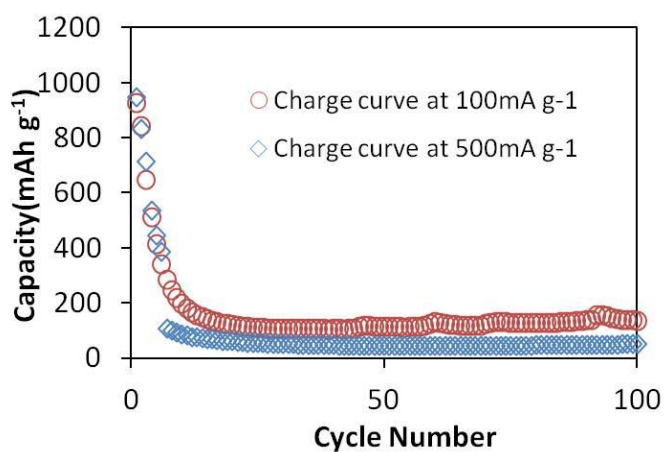


Figure S6. Cycling performance of pure ultra-small iron oxide (USIO) under different current densities. Red circle: 100 cycle under current density of 100 mA g^{-1} . Blue diamond: first 3 cycles at 50 mA g^{-1} , subsequent 3 cycles at 100 mA g^{-1} , followed by 94 cycles at 500 mA g^{-1} .