

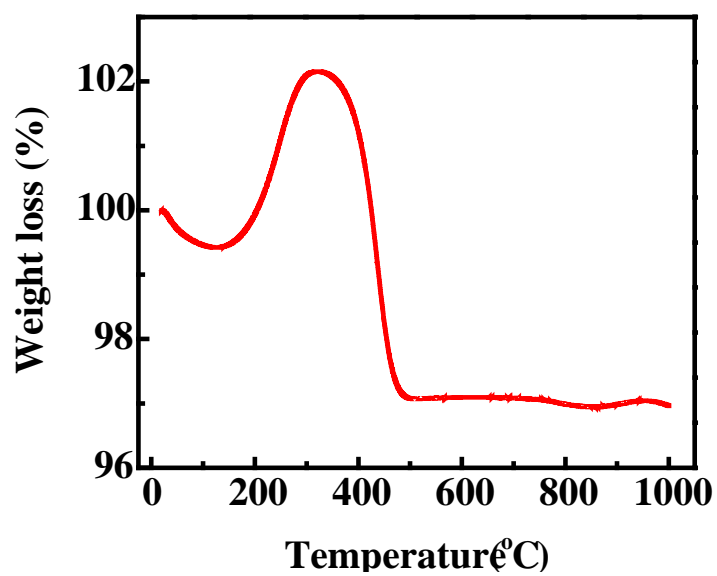
## **Supporting Information for**

### **Fe<sub>3</sub>O<sub>4</sub> nanoparticles integrated graphene sheets for high-performance half and full lithium-ion cells**

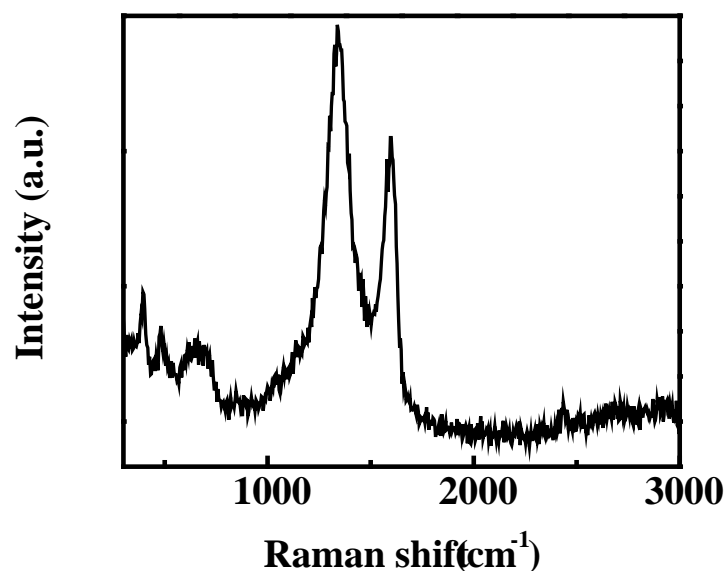
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**Figure S1.** Thermogravimetric result of RGO-Fe<sub>3</sub>O<sub>4</sub> nanocomposite oxidation in air environment with a heating rate of 10 °C/min.



**Figure S2.** Raman spectroscopy of the as-prepared RGO-Fe<sub>3</sub>O<sub>4</sub> nanocomposites.

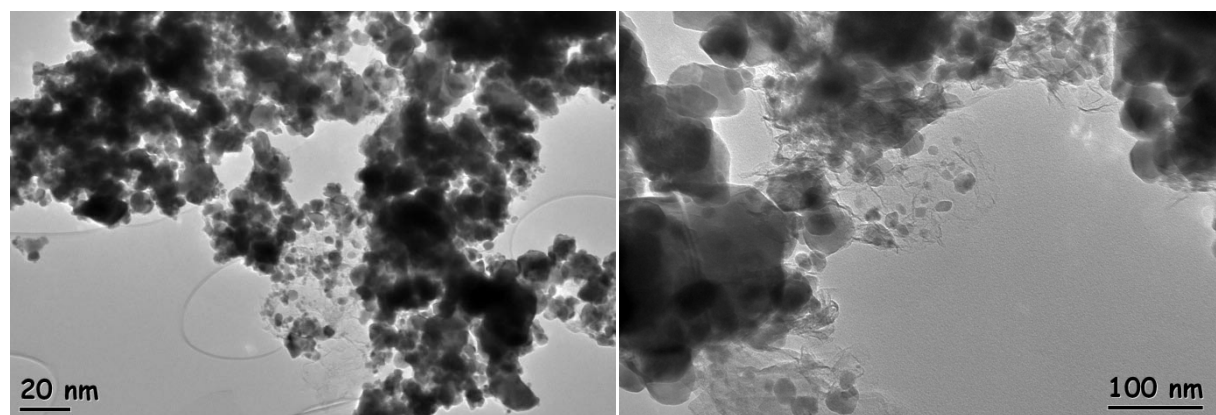


Figure S3. TEM images of the as-synthesized RGO-Fe<sub>3</sub>O<sub>4</sub> nanocomposites.

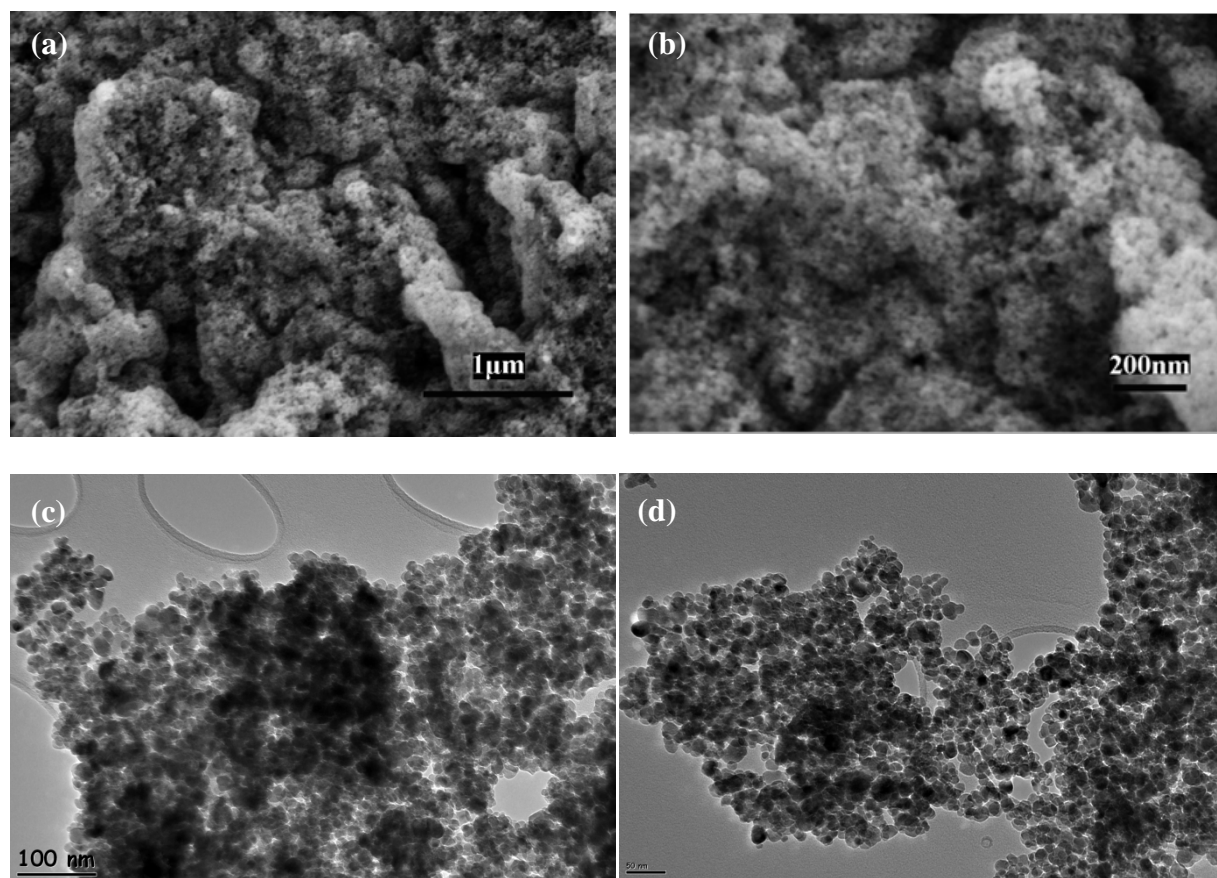
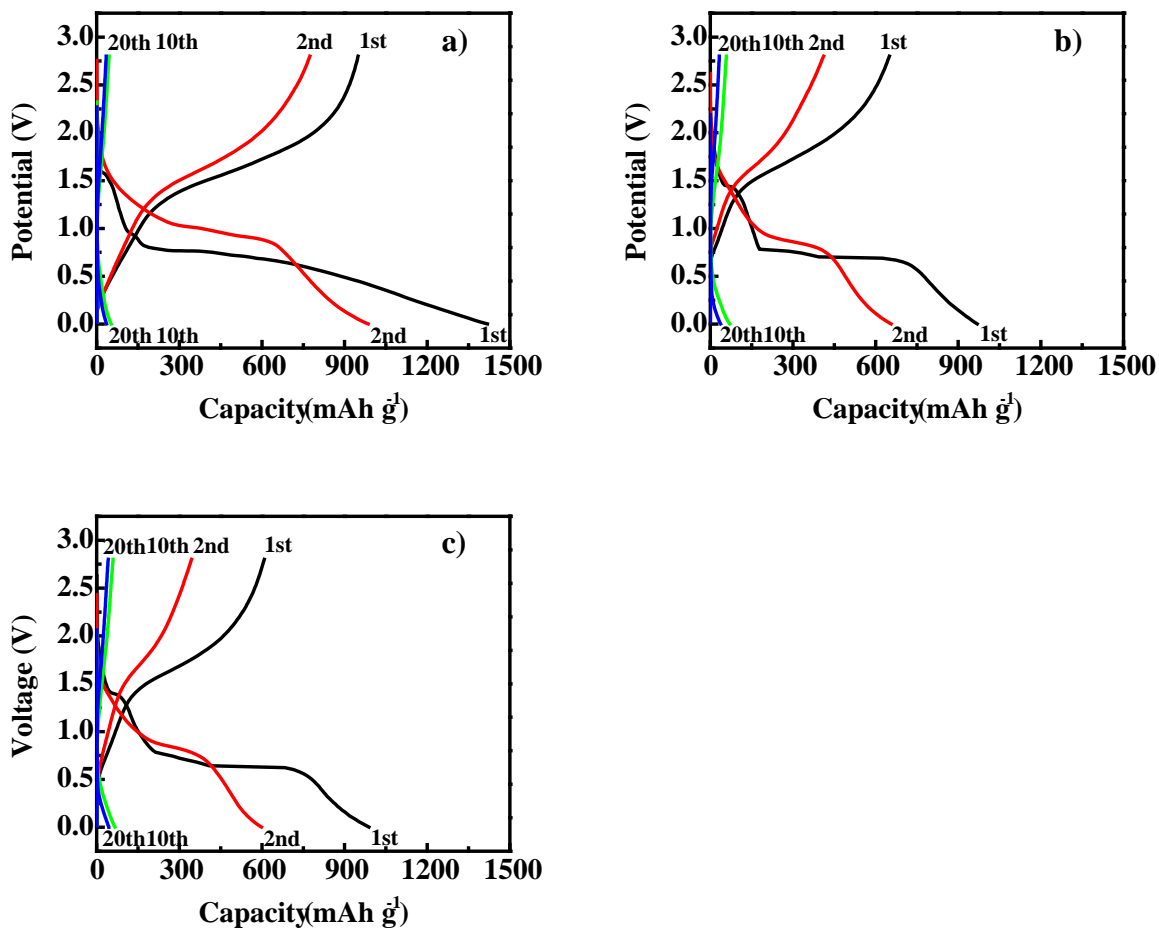


Figure S4. SEM (a,b), and TEM images (c,d) of pure  $\text{Fe}_3\text{O}_4$  nanoparticles.



**Figure S5.** Galvanostatic charge/discharge profiles of pure  $\text{Fe}_3\text{O}_4$  nanoparticles at different cycling rate of (a) 0.2C, (b) 0.5C, (c) 1C, with a cutoff voltage window of 2.8 V to 0.002 V.