

Supplementary information for Reduction of graphene oxide in Li-ion batteries

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The preparation of XRD and TEM samples: We opened the cycled cells and took the GO electrodes out. The RGO electrodes were dipped in the acetonitriles 3 times to wash away the electrolyte. And the RGO was dried in the air at room temperature for 1 hours. Then we characterized this sample with XRD and TEM.

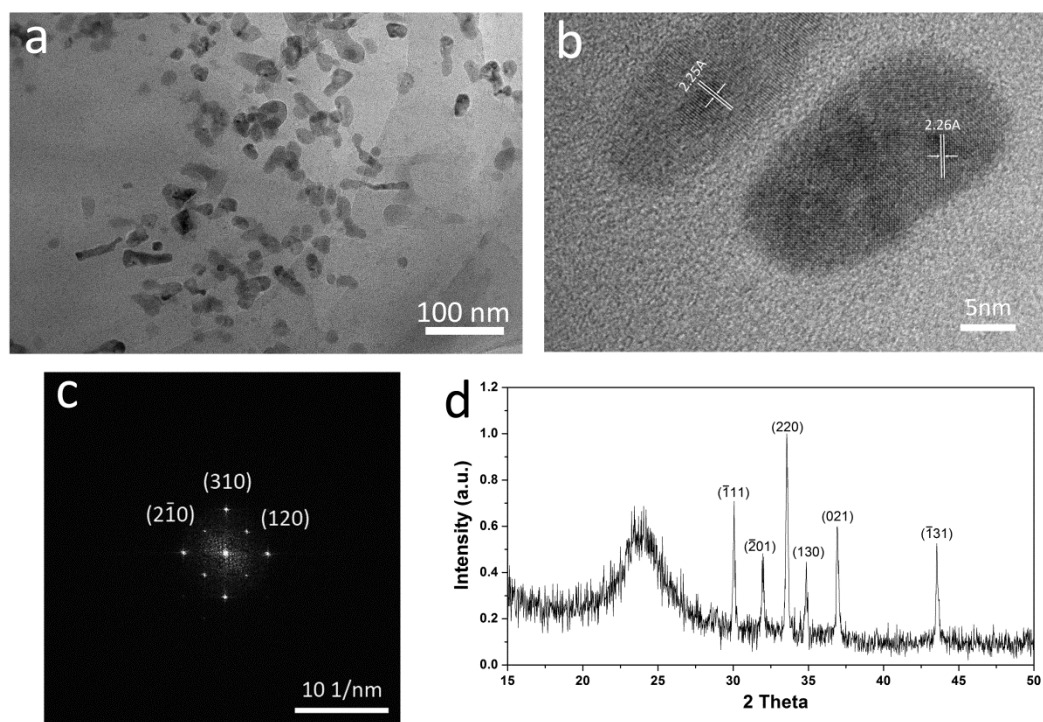


Figure S1 TEM and XRD characterizations of RGO shows there was $\text{LiOH}\cdot\text{H}_2\text{O}$ on the RGO. (a) TEM image showed many particles on the RGO. (b) The high resolution transmission electron microscope (HR-TEM) image of two particles. (c) The corresponding fast Fourier transform (FFT) image. (d) XRD result showed there was $\text{LiOH}\cdot\text{H}_2\text{O}$ on the RGO.

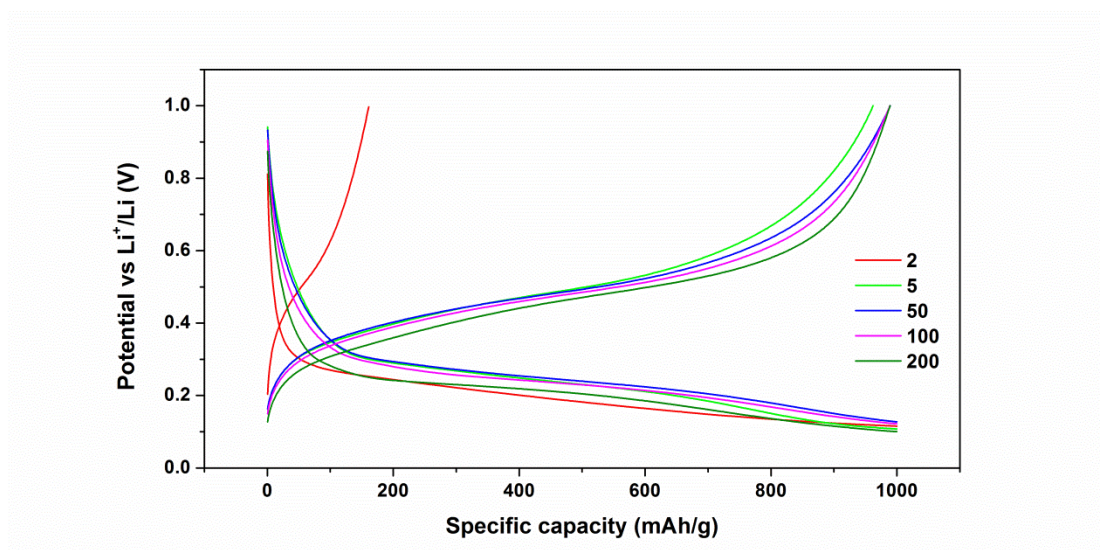


Figure S2 The galvanostatic charge/discharge curves of the GO/Si electrodes in the 2nd, 5th, 50th, 100th and 200th cycles.