

## Supplementary Information for

### **Improving the performance of LiFePO<sub>4</sub> cathode based on the electrochemical cleavage graphite oxide with high hydrophilicity and good conductivity**

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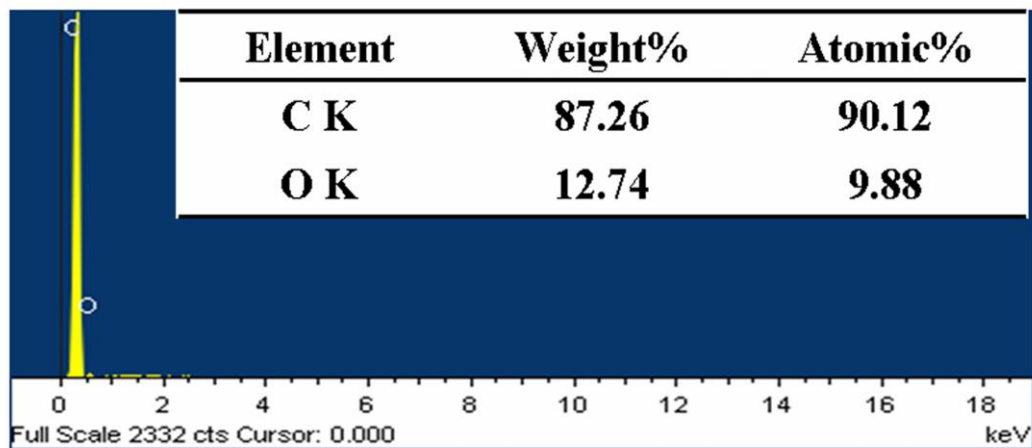
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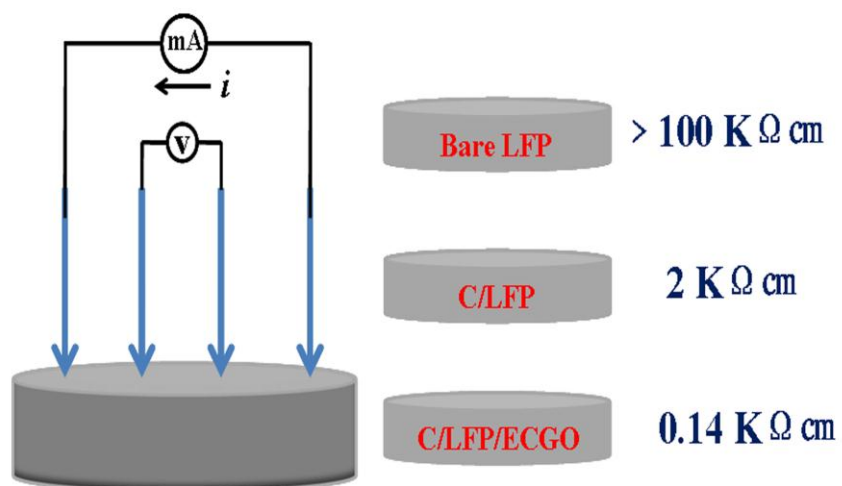
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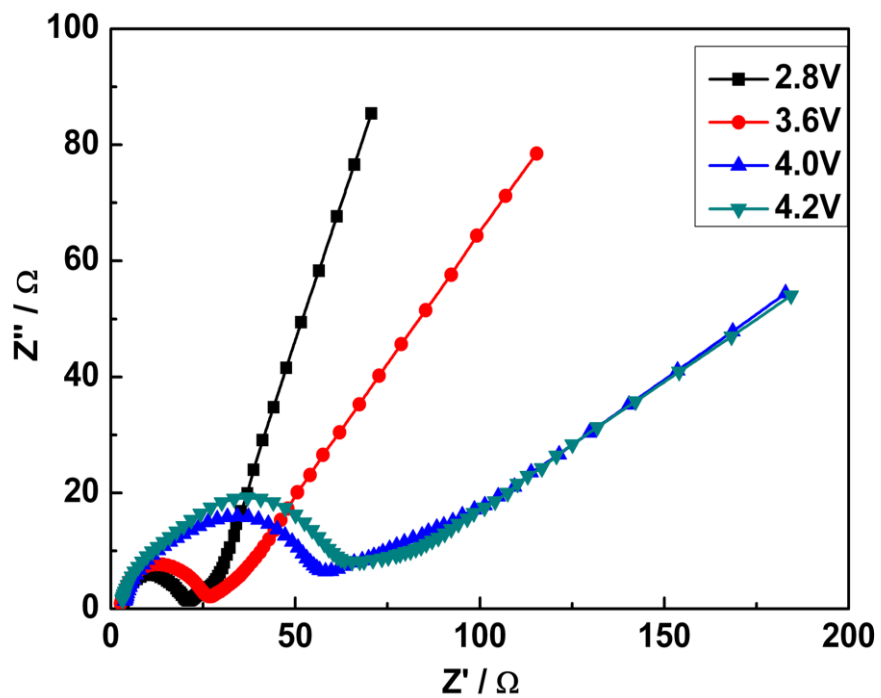
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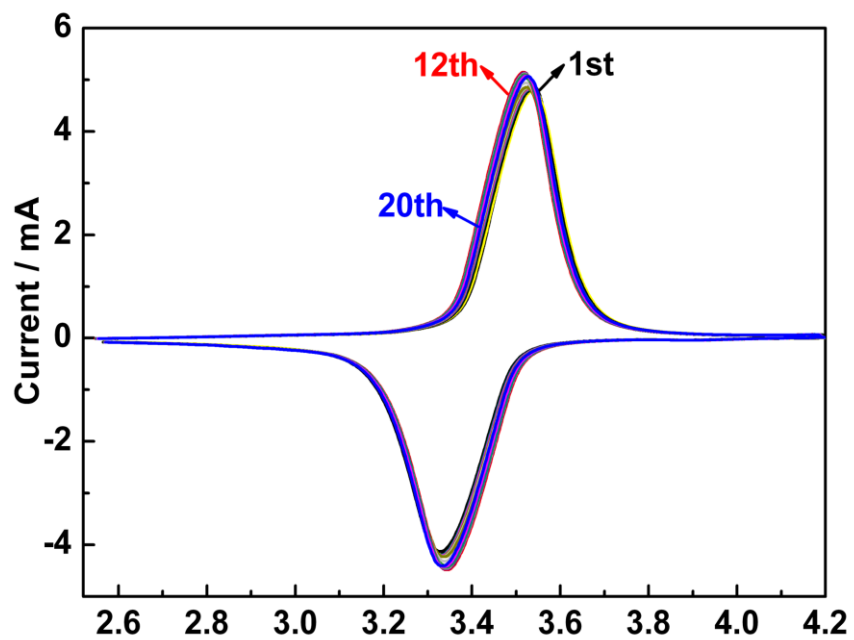
**Fig. S1** EDS of ECGO, the table (inset) displays the relative content of carbon and oxygen.



**Fig. S2** Schematic diagram of bulk conductivity of bare LFP, C/LFP and C/LFP/ECGO measured by four point probe.



**Fig. S3** Impedance spectra of C/LFP/ECGO vs Li at various voltages during the 10th charge-cycle in the range of 2.2 - 4.2 V at 0.2C



**Fig. S4** Cyclic voltammograms of C/LFP/ECGO at a scan rate of 0.1 mV s<sup>-1</sup> from the 1<sup>st</sup> to the 20<sup>th</sup> cycle.