Electronic Supplementary Information (ESI) for

# Thermal evaporation-induced anhydrous synthesis of $Fe_3O_4$-graphene composite with enhanced rate performance and cyclic stability for lithium ion batteries

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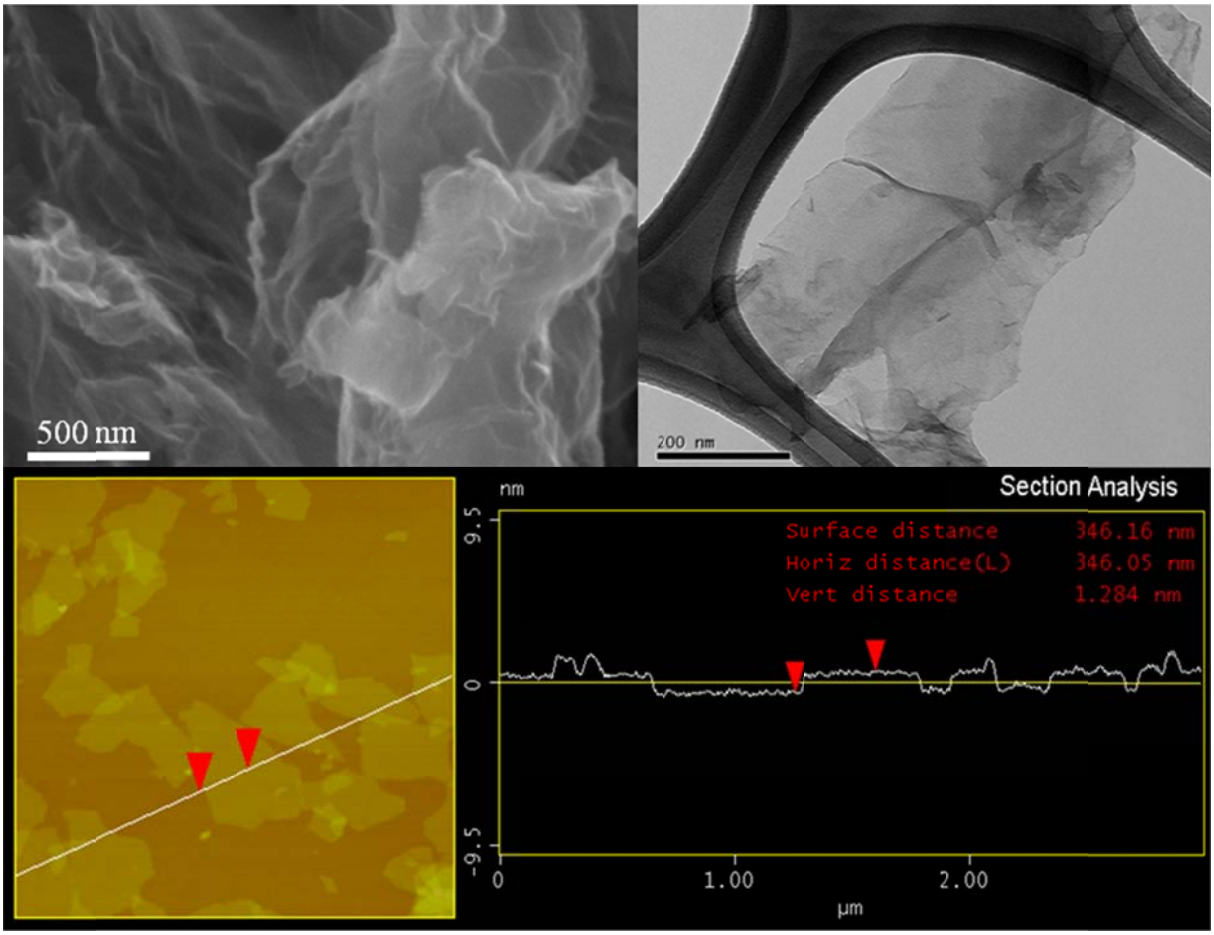


Fig. S1 SEM, TEM and AFM images of GO.

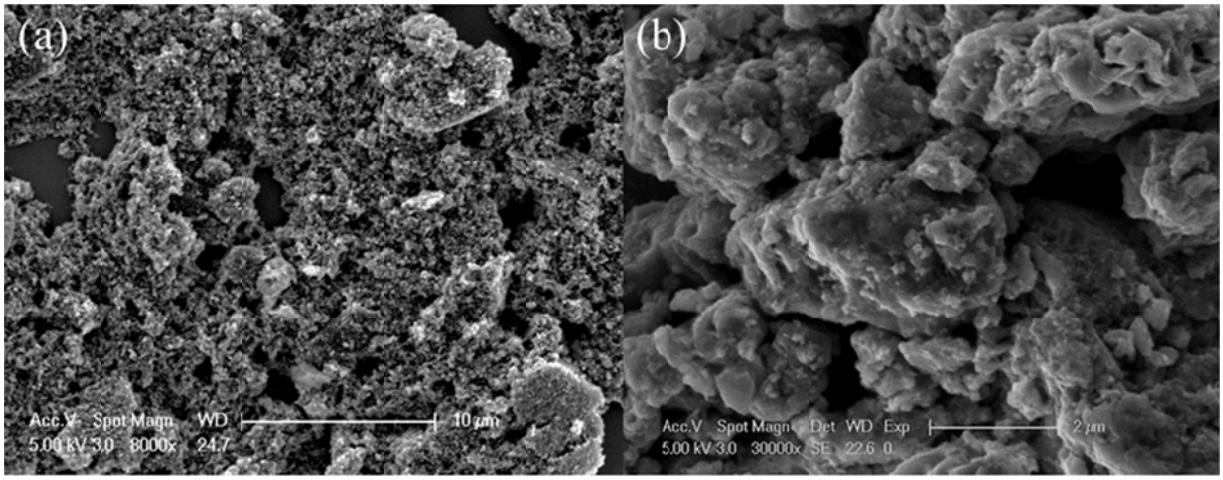


Fig. S2 SEM images of $Fe_3O_4$-graphene composite with different magnification.

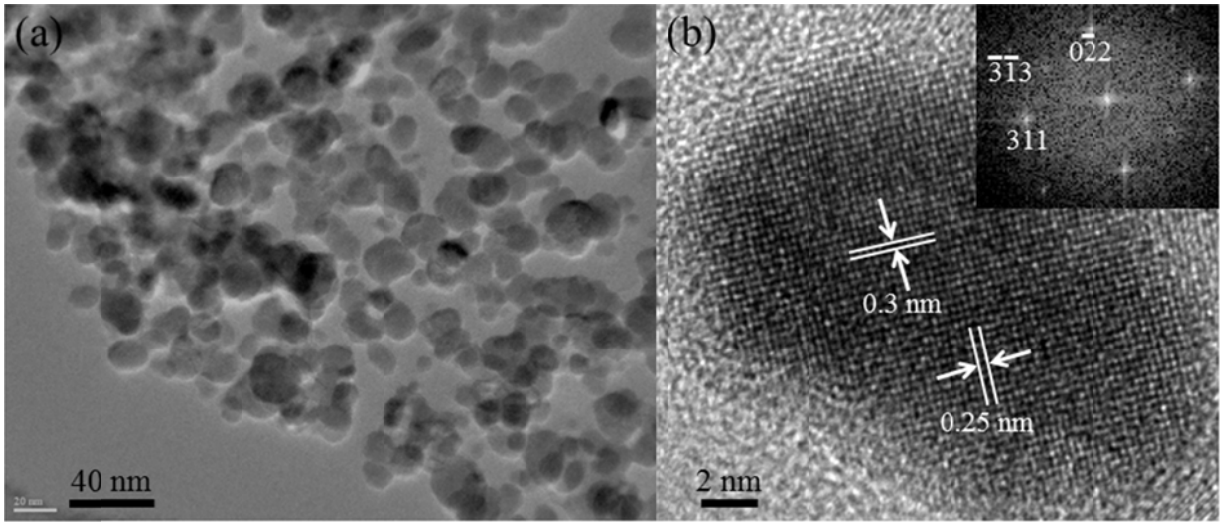


Fig. S3 TEM (a) and HRTEM (b) image of $Fe_3O_4$. The corresponding Fourier transform of the high-resolution image is shown in the inset of (b).

The TEM image of $Fe_3O_4$ in Fig. S3 (a) revealed the size distribution of these particles to be in the 5 to 20 nm. The HRTEM image of an individual $Fe_3O_4$ nanoparticle is shown in Fig S3 (b) and the inset shows the corresponding Fourier transform image. The lattice spacing are 0.3 and 0.25 nm which are in good agreement with the d-spacing of $(0\bar{2}2)$ and (311) planes, respectively.