Supplementary Information

Flexible free-standing hollow Fe_3O_4/graphene hybrid films for lithium-ion batteries

Ronghua Wang, Chaohe Xu, Jing Sun[*]*, Lian Gao and Chucheng Lin*

The State Key Lab of High Performance Ceramics and Superfine Microstructure, Shanghai Institute of Ceramics, Chinese Academy of Sciences, 1295 Ding Xi Road, Shanghai 200050, China

[*] Corresponding author. Tel: +86 21 52414301. Fax: +86 21 52413122.

E-mail address: jingsun@mail.sic.ac.cn (J. Sun)

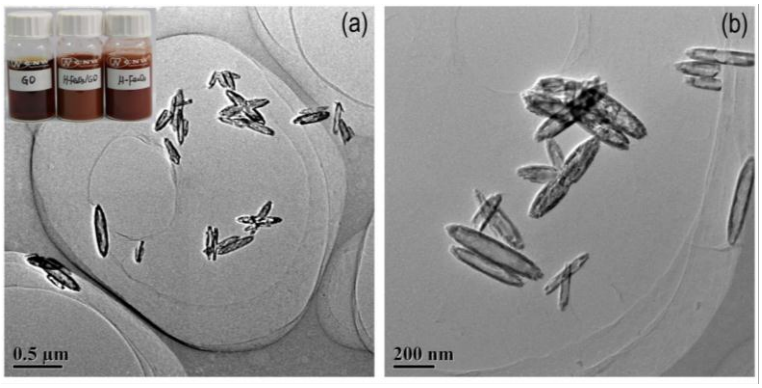

Figure S1. TEM images of the H-Fe_2O_3/GO homogeneous suspension. The inset is a photograph of the GO, H-Fe_2O_3/GO and H-Fe_2O_3 suspensions (from left to right), respectively.

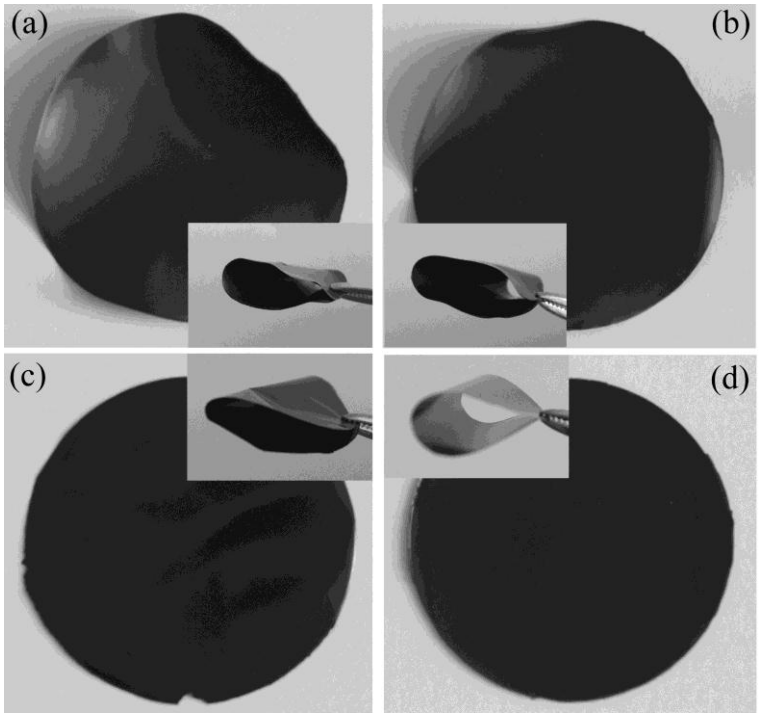

Figure S2. Photographs of the flexible H-Fe_2O_3/GO films (a) H-Fe_2O_3/GO-1, (b) H-Fe_2O_3/GO-2, (c) H-Fe_2O_3/GO-3, (d) H-Fe_2O_3/GO-4.

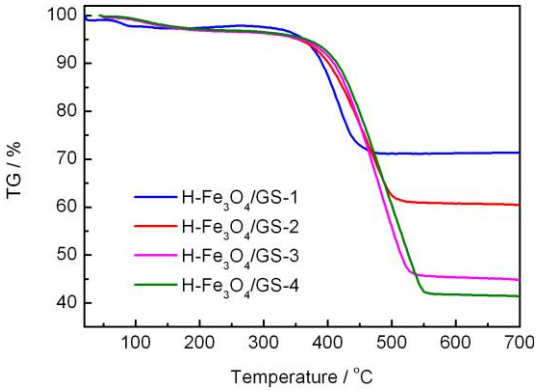

Figure S3. TG curves of H-Fe_3O_4/GS composites.

Figure S4. A photograph of the free-standing H-Fe_3O_4/GS-2 electrode.

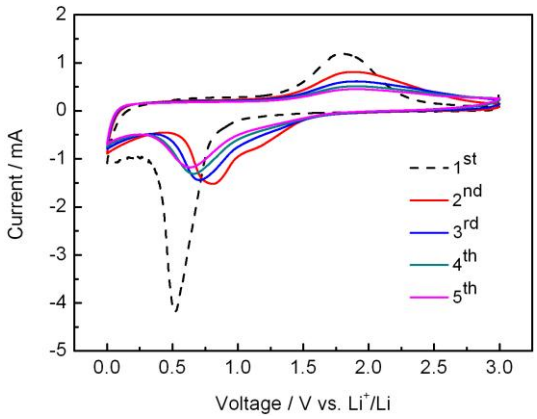

Figure S5. Cyclic voltammograms of pure H-Fe_3O_4 electrode for the first five cycles.

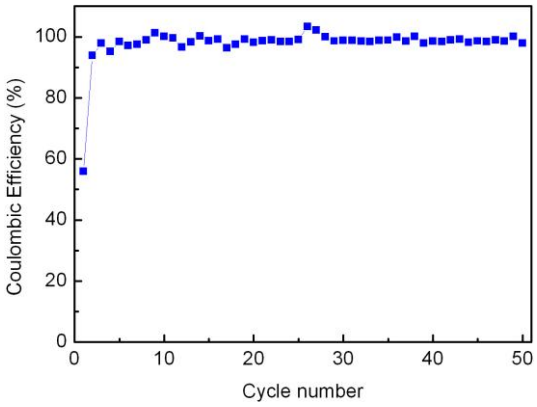

Figure S6. Coulombic efficiency of H-Fe_3O_4/GS-2 free-standing electrode at a current density of 200 mA g^{-1}.

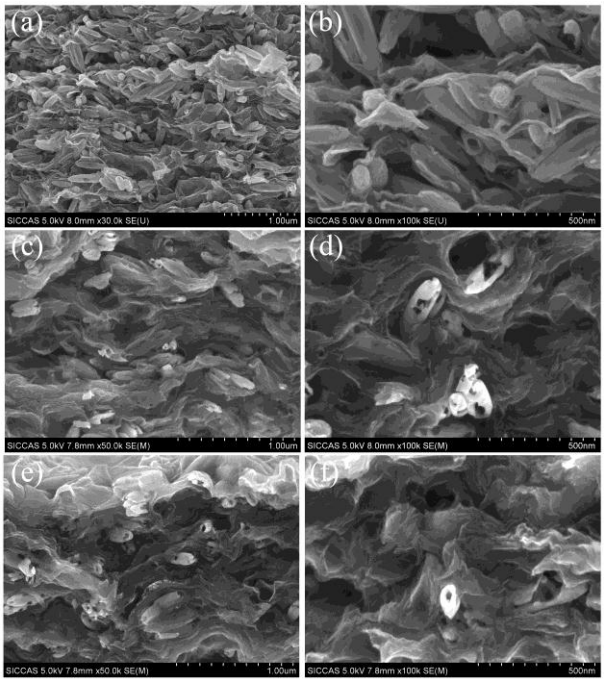

Figure S7. SEM images of H-Fe_3O_4/GS-1(a-b), H-Fe_3O_4/GS-3 (c-d) and H-Fe_3O_4/GS-4 (e-f).

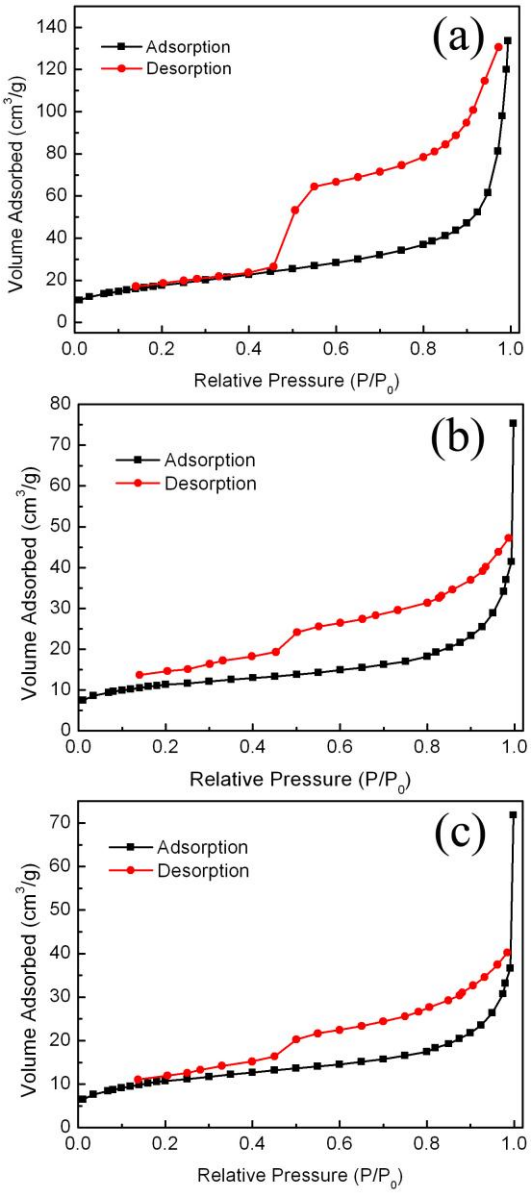

Figure S8. Nitrogen adsorption and desorption isotherms of (a) H-Fe_3O_4/GS-1, (b) H-Fe_3O_4/GS-3 and (c) H-Fe_3O_4/GS-4.