Facile synthesis of $C/Fe_3O_4/C$ core-shell nanotubes by a self-templating route and the application as high-performance anode for Li-ion batteries

Y. G. Zhu, J. Xie, G. S. Cao, * T. J. Zhu and X. B. Zhao

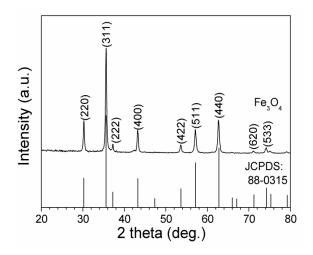


Fig. S1 XRD patterns of bare Fe₃O₄

No obvious impurities are observed. The bare Fe_3O_4 was reduced from Fe_2O_3 under N_2/H_2 mixed gas at 260 $^{\circ}C$ for 2 h.

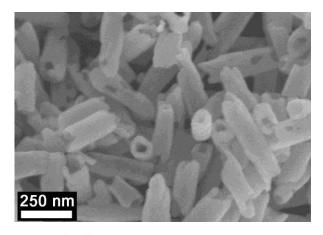


Fig. S2 SEM image of bare Fe₃O₄

^{*}State Key Laboratory of Silicon Materials, Key Laboratory of Advanced Materials and Applications for Batteries of ZhejiangProvince and Department of Materials Science and Engineering, ZhejiangUniversity, Hangzhou, 310027, P. R. China. E-mail: gscao@zju.edu.cn; Fax: +86 571-87951451; Tel: +86 571-87951451

As shown in Fig. S2, the structure of bare Fe_3O_4 is nanotube. However, some of the bare Fe_3O_4 nanotubes have been broken during the heat treatment.