Supporting Information

Layer-stacked cobalt ferrite ($CoFe_2O_4$) mesoporous platelets for high-performance lithium ion battery anodes

*Zhenyu Zhang, Wenyue Li, Rujia Zou, Wenpei Kang, Ying San Chui, Muk Fung Yuen, Chun-Sing Lee ,and Wenjun Zhang**

Table S1. Summary of the electrochemical performances of previous works on $CoFe_2O_4$-based anodes and our work.

Paper cited	Structure and composition	Electrochemical performance
J. Power Sources (2014) 260: 205-210	$CoFe_2O_4$ in carbon nanofibres	705 mAh g^{-1} at 0.1 C for 250 cycles
Nano. Research (2014) 7: 1116-1127	$CoFe_2O_4$ porous ball-in-ball hollow spheres	895 mAh g^{-1} at 0.1C for 70 cycles
J. Power Sources (2014) 256: 153-159	$CoFe_2O_4$ flower-like microspheres	733.5 mAh g^{-1} at 0.2 C for 50 cycles
J. Phys. Chem. C (2014) 118: 11234-11243	$Co_3O_4/CoFe_2O_4$ Nanocomposite	896.4 mAh g^{-1} at 0.07 C for 60 cycles, 328.1 mAh g^{-1} at 6.6 C
J. Power Sources (2014) 247: 163-169	$CoFe_2O_4$ nanorods	800 mAh g^{-1} at 1C for 300 cycles
Carbon (2013) 65: 112-123	$CoFe_2O_4$/CNT composite	910 mAh g^{-1} at ~0.15 C for 50 cycles
Part. Part. Syst. Charact. (2013) 30: 893-904	$CoFe_2O_4$/N doped Graphene	800 mAh g-1 at 0.1 C for 240 cycles
J. Mater. Chem. A (2013) 1: 7444-7450	Mesoporous $CoFe_2O_4$ nanospheres/CNT	1045.6 mA h g^{-1} at 0.2 C for 100 cycles
Nanotechnology (2012) 23: 055402	Hollow $CoFe_2O_4$ nanospheres	1266 mA h g^{-1} at 0.1 C for 50 cycles
J. Mater. Chem. (2012) 22: 19738	$CoFe_2O_4$/graphene sandwich	1047 mAh g^{-1} at 0.2 C for 160 cycles
Chem. Commun. (2012) 48: 410-412	$CoO/CoFe_2O_4$ nanocomposites	603 mAh g^{-1} at 1 C for 100 cycles
J. Power Sources (2007) 172: 379-387	$CoFe_2O_4$ nanoparticles from sol-gel method	739 mAh g^{-1} at 1 C for 75 cycles
Nanoscale (2014) 6: 15168-15174	Hollow porous $CoFe_2O_4$ nanocubes	1115 mA h g^{-1} at 1C after 200 cycles
Our work	**$CoFe_2O_4$ mesoporous platelets**	**1720 mAh g^{-1} at ~1 C for 500 cycles, 580 mAh g^{-1} at ~ 5 C for 2000 cycle**

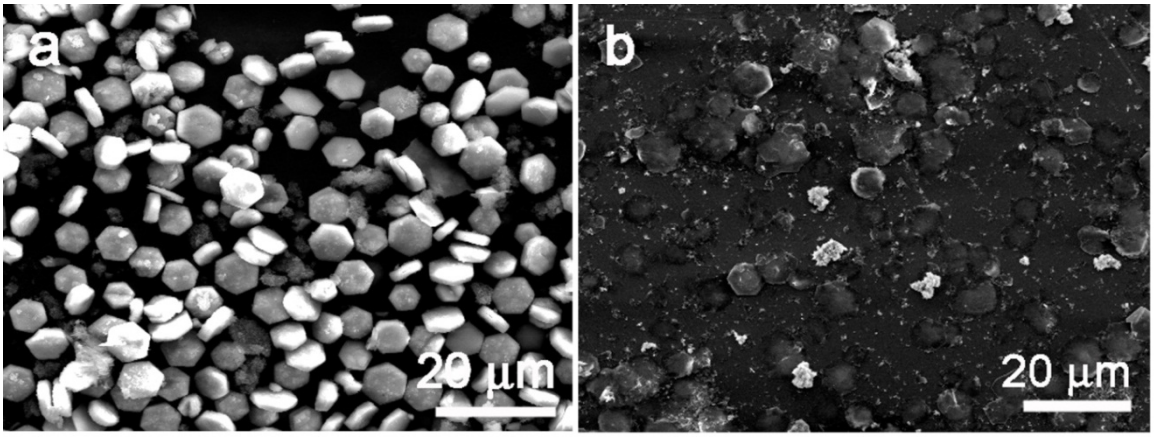

Fig. S1 Low magnification SEM images of (a) thick and (b) thin $Co_xFe_{1-x}(OH)_2$ sheets. The images were obtained by dispersing the sheets in ethanol and dropping the suspension onto silicon wafer.

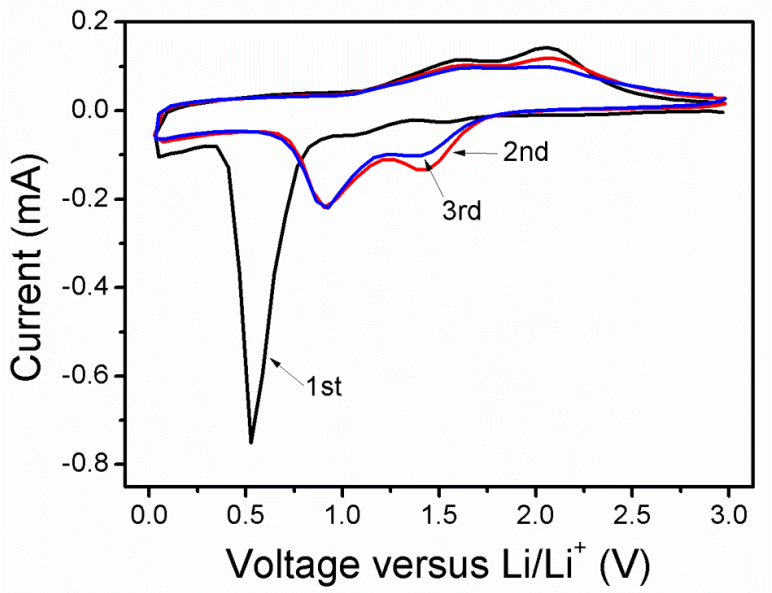

Fig. S2 CV curves of the cell with thin $CoFe_2O_4$ platelets.

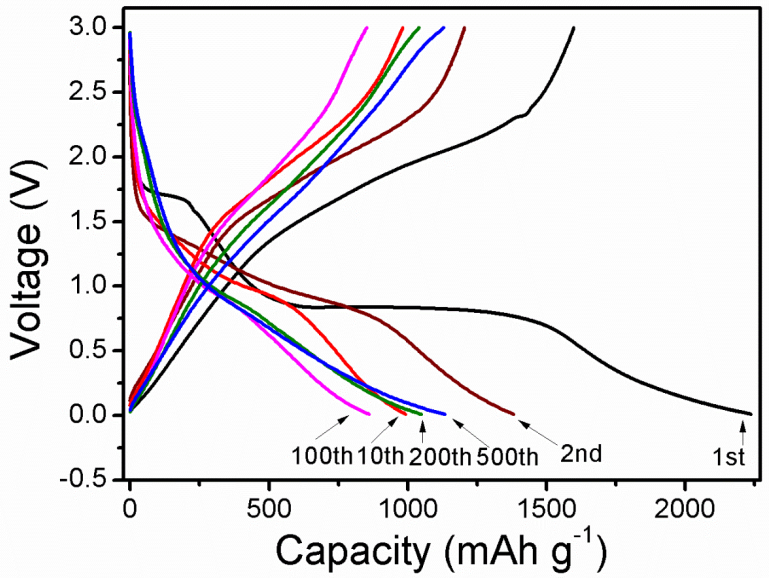

Fig. S3 Galvanostatic charge-discharge curves for the cell with thin $CoFe_2O_4$ platelets.

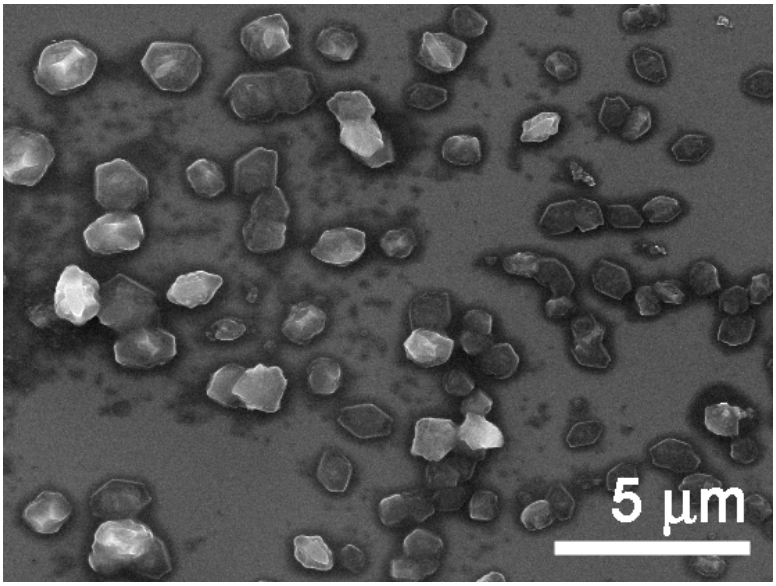

Fig. S4 The SEM morphology of the thin $CoFe_2O_4$ platelets after 2000 cycles at 5 A g^{-1}. The images are obtained by dispersing the platelets in ethanol and dropping the suspension onto silicon wafer.

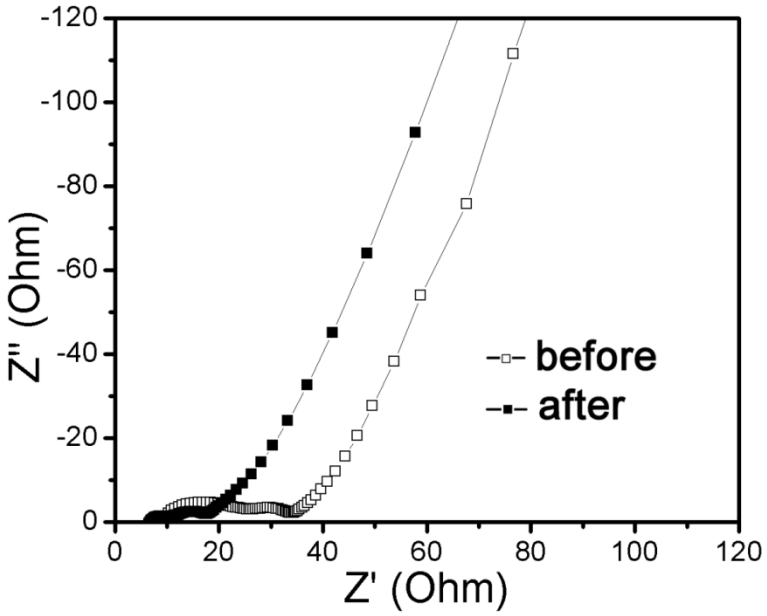

Fig. S5 EIS interceptions of the cell with thin $CoFe_2O_4$ platelets before and after 2000 cycles at 5 A g^{-1}.