**Supporting Information**

Energy dispersive X-ray analysis was conducted (EDX) by using field emission scanning electron microscope (FESEM, JEOL 7600F), equipped with a spectrometer of energy dispersion of X-ray (EDX) from Oxford instruments. The operating conditions were used as following: acceleration voltage of 20 kV and measuring time of 60 s. EDX data of both ZFO-NR and ZFO-NF are in complete agreement with the XRD data, no impurity was found.

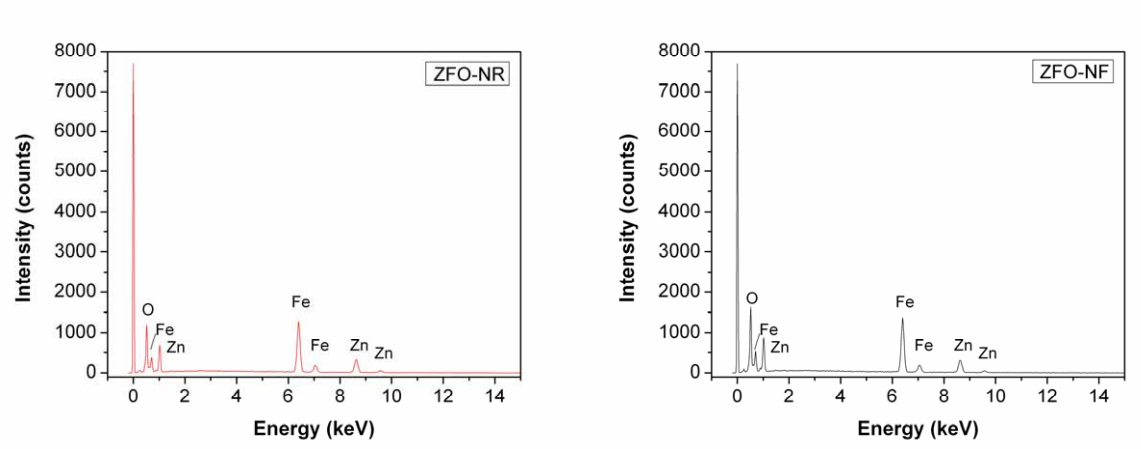


**Figure S1** EDX spectrum of $ZnFe_2O_4$ nanorods (ZFO-NR) and nanofibers (ZFO-NF).

The electrochemical performance of $ZnFe_2O_4$ nanowebs (sample ZFO-NR) was evaluated by galvanostatic discharge/charge cycling between 0.005 – 3.0 V at the current density of 60 mA $g^{-1}$. The discharge/charge behavior at 1st, 2nd and 5th cycles was studied (**Figure S1**). As compared to sample ZFO-NF, the capacity retention is obviously poorer. It is due to the absence of electronic wiring in nanorods, so the electron/ion cannot effectively diffuse in the system.

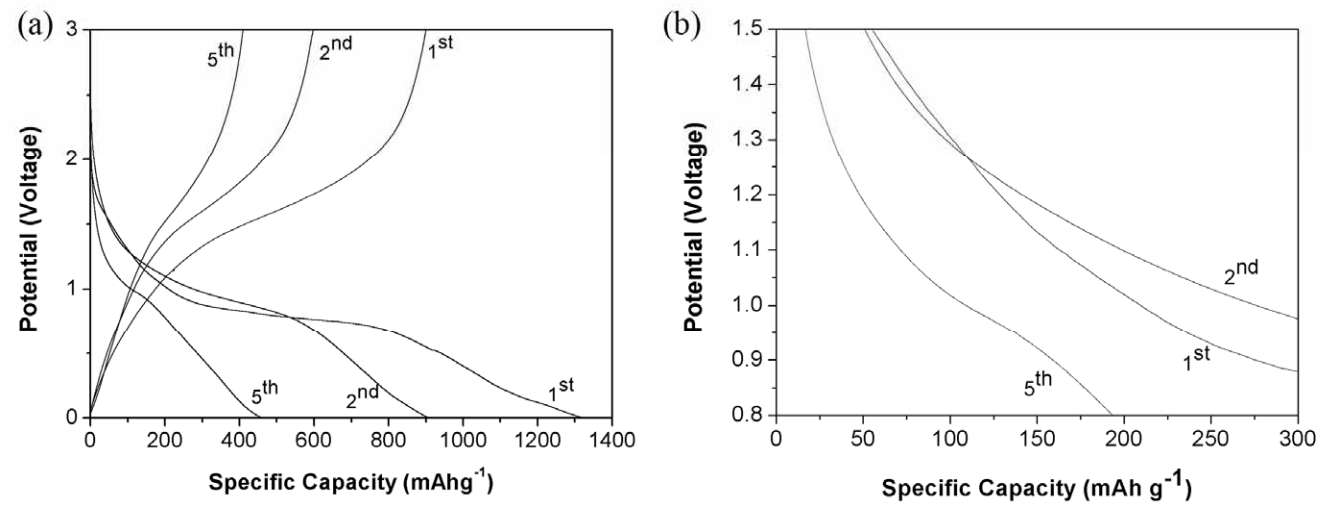


**Figure S2** (a) Discharge/charge behavior of sample ZFO-NR at 1st, 2nd and 5th cycle, in the voltage range of 0.005 – 3.0 V. (b) Magnified discharge/charge patterns between 0.8 – 1.5 V. Intercalation at 1.4 V and 0.95 V were hardly seen, indicating diffusion framework for lithium ions is better in ZFO-NF than in ZFO-NR.