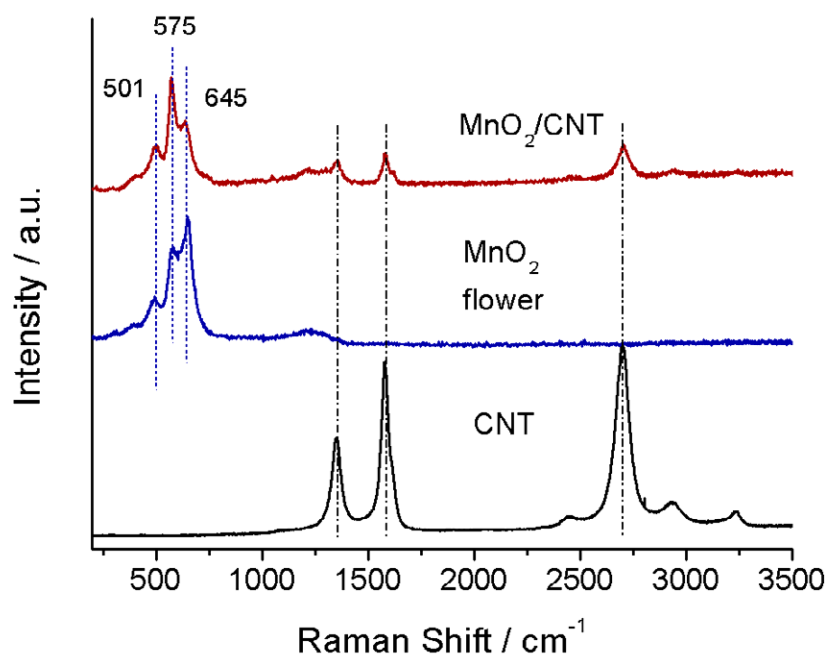


## Supporting Information

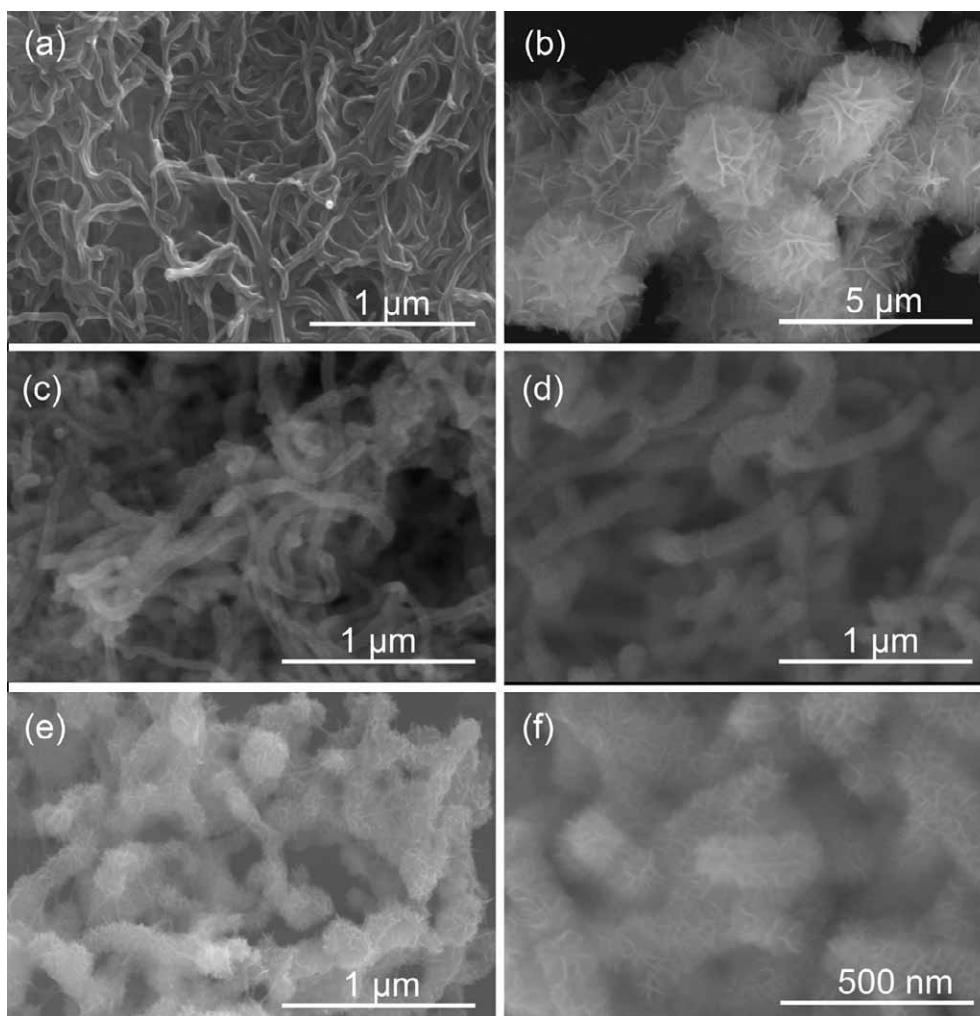
### Nanoflaky MnO<sub>2</sub>/Carbon nanotube nanocomposites as anode material for lithium-ion batteries

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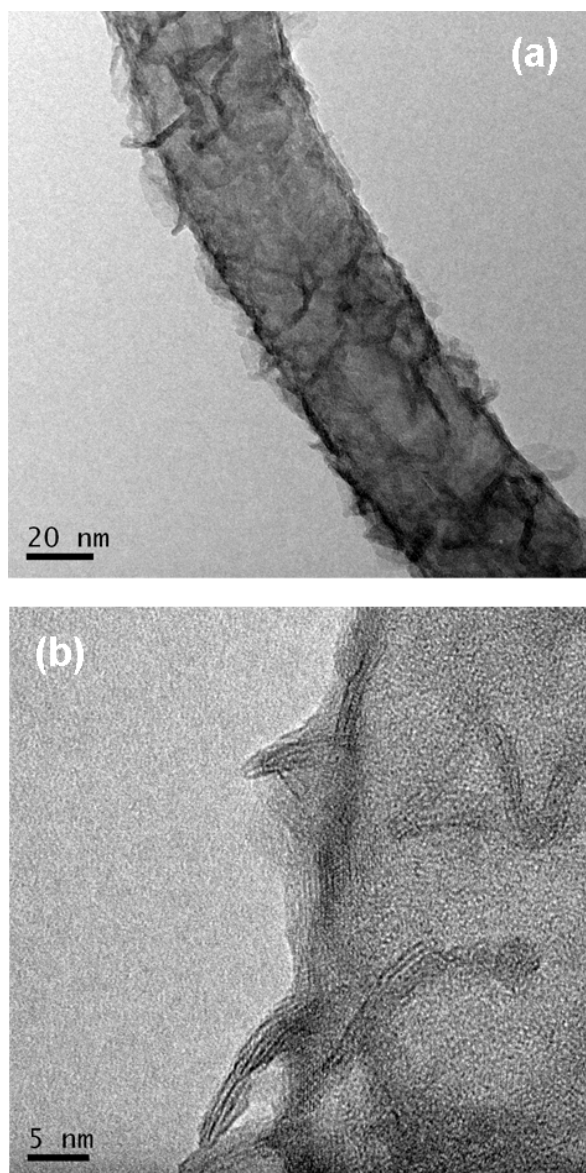
Department of Mechanical Engineering, National University of Singapore, 9 Engineering Drive 1, Singapore 117576, Singapore



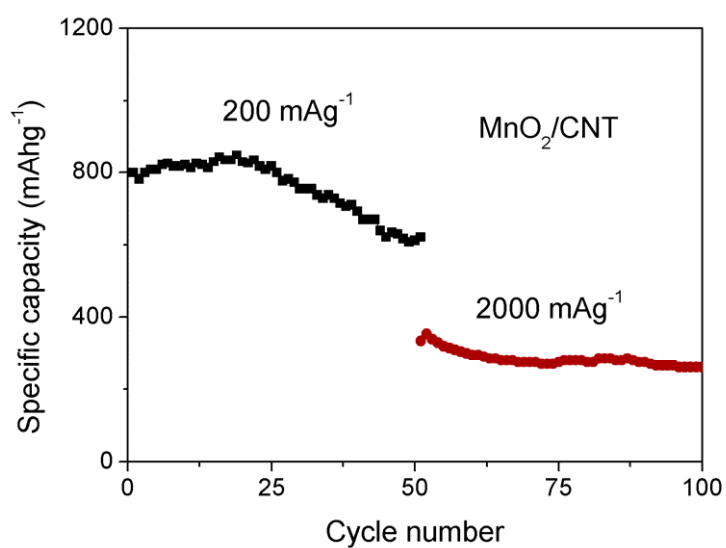
**Fig. S1.** Raman spectra of CNT, flower-like MnO<sub>2</sub> powder, and MnO<sub>2</sub>/CNT nanocomposite (6 h sample).



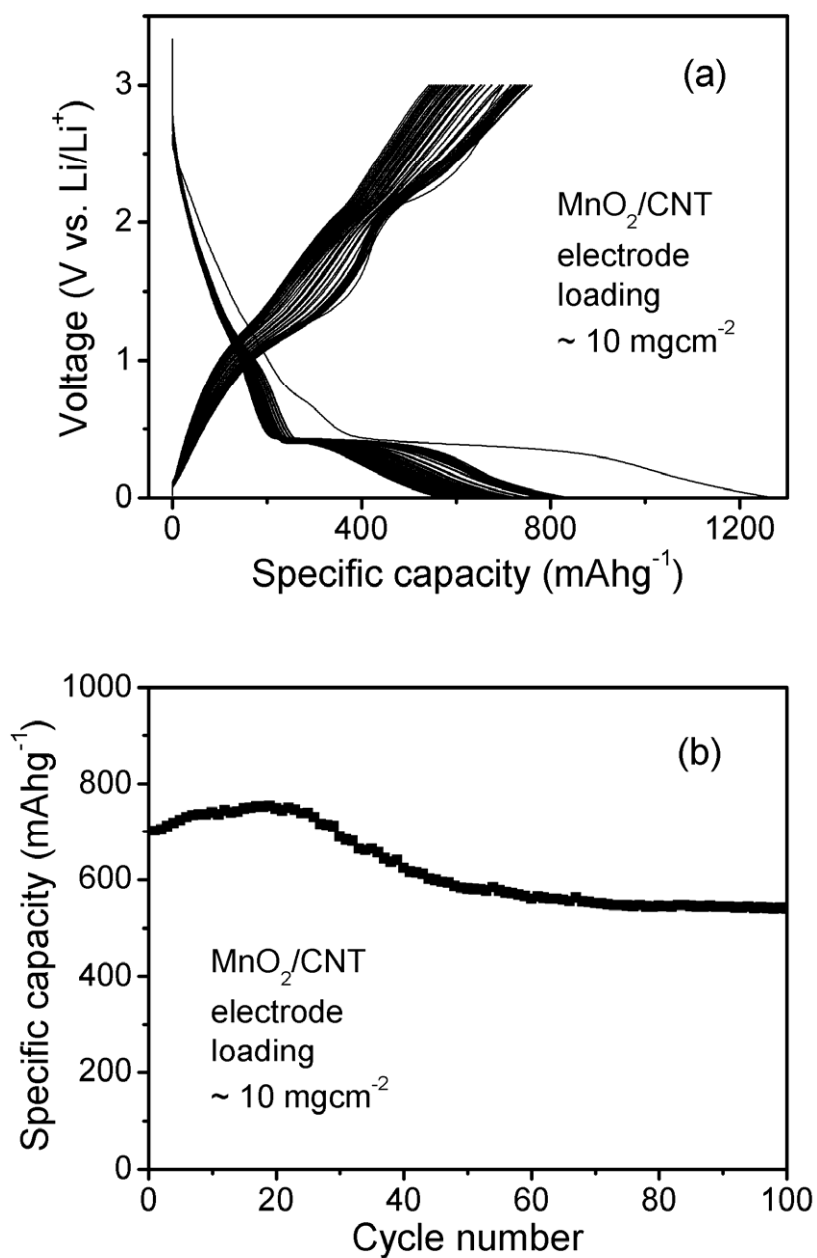
**Fig. S2.** FESEM images of (a) CNT, (b) flower-like  $\text{MnO}_2$  powder synthesized by hydrothermal reaction, (c)  $\text{MnO}_2/\text{CNT}$  nanocomposite synthesized by 3 h hydrothermal reaction, (d)  $\text{MnO}_2/\text{CNT}$  nanocomposite synthesized by 6 h hydrothermal reaction, and (e)  $\text{MnO}_2/\text{CNT}$  nanocomposite synthesized by 12 h hydrothermal reaction. (f) Magnified FESEM image of  $\text{MnO}_2/\text{CNT}$  nanocomposite synthesized by 6 h hydrothermal reaction.



**Fig. S3.** (a) Low magnification TEM image of CNT after mixing with KMnO<sub>4</sub> at room temperature and (b) high magnification TEM image of CNT after mixing with KMnO<sub>4</sub> at room temperature.



**Fig. S4.** Capacity vs. cycle number curve of a MnO<sub>2</sub>/CNT electrode (the first 50 cycles were measured at a current density of 200 mA·g<sup>-1</sup> and the second 50 cycles were measured at a current density of 2000 mA·g<sup>-1</sup>).



**Fig. S5.** (a) 100 cycles' charge-discharge profiles of a MnO<sub>2</sub>/CNT electrode with an electrode loading of 10 mg·cm<sup>-2</sup> and (b) capacity vs. cycle number curve of a MnO<sub>2</sub>/CNT electrode with an electrode loading of 10 mg cm<sup>-2</sup> (current density 300 mA·g<sup>-1</sup>).