

Cite this: DOI: 10.1039/c0xx00000x

www.rsc.org/xxxxxx

ARTICLE TYPE

Electronic Supplementary Information (ESI)

## Enhanced High Rate Performance of $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> Nanotubes with Alginate Binder As Conversion Anode

P. S. Veluri,<sup>\*a</sup> and S. Mitra<sup>b</sup>

Received (in XXX, XXX) Xth XXXXXXXXXX 20XX, Accepted Xth XXXXXXXXXX 20XX

DOI: 10.1039/b000000x

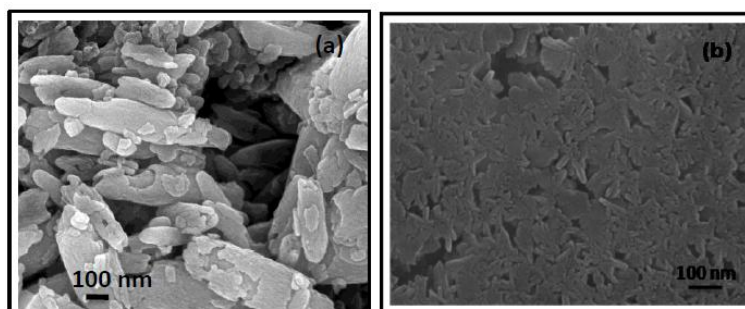


Fig. S1 FE-SEM images of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanotube electrodes (a) before cycling and (b) after 50 charge-discharge cycles with alginate binder at 503 mA g<sup>-1</sup>.

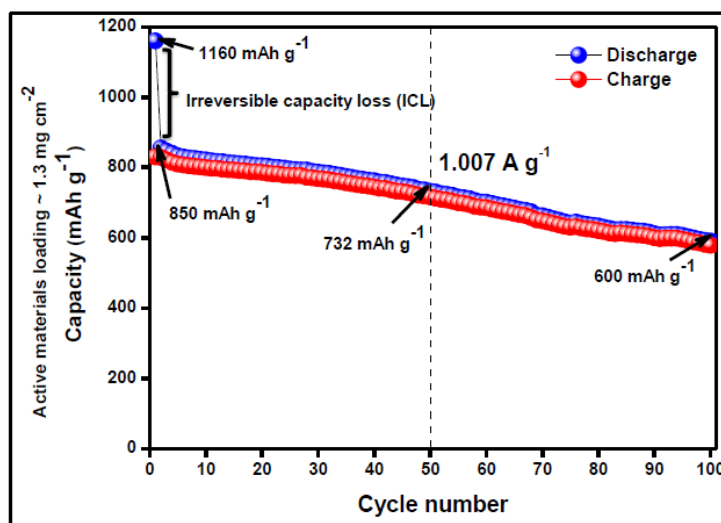
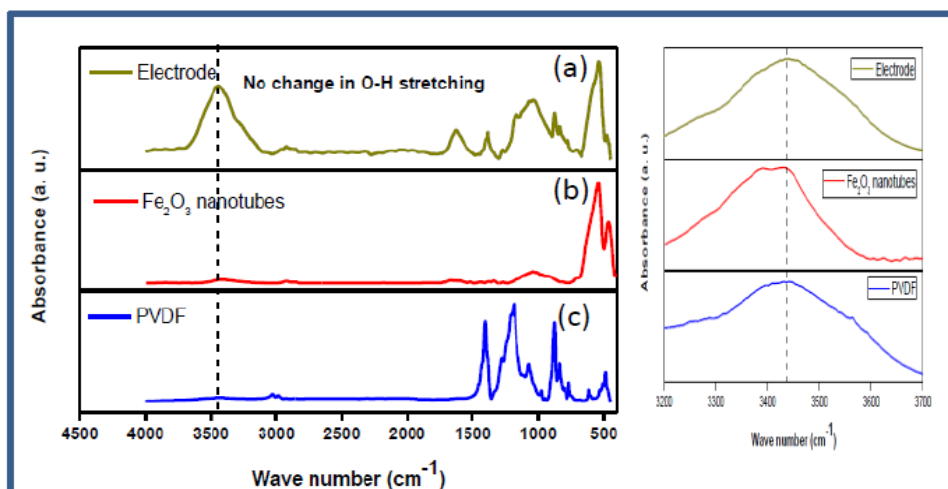


Fig. S2 Cycling performance of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanotubes at 1007 mA g<sup>-1</sup> with alginate binder at 20 °C.



**Fig. S3** FT-IR spectrum of the (a) Electrode, (b) Fe<sub>2</sub>O<sub>3</sub> nanotubes and (c) PVDF [right side represents the absorbance in the range of 3200-3700 cm<sup>-1</sup>]