Supporting Information

Hierarchical Core-Shell α-Fe_2O_3@C Nanotubes as a High-Rate and Long-life Anode for Advanced Lithium Ion Batteries

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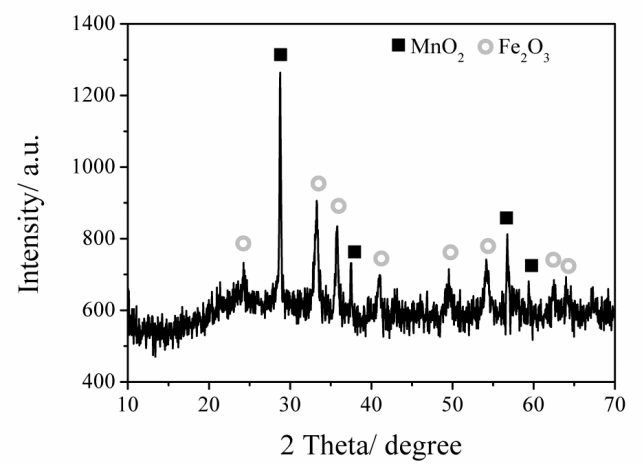

Fig. S1XRD pattern of the β-MnO_2/α-Fe_2O_3nanorods.

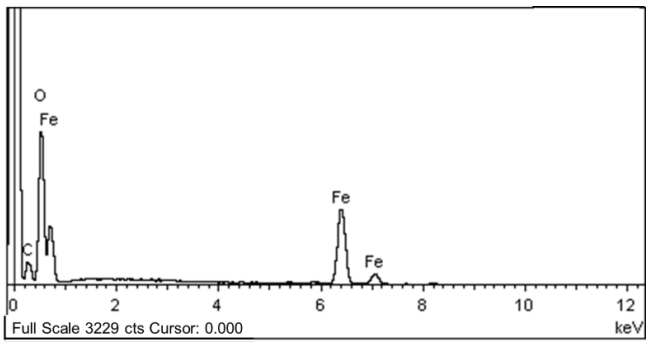

Fig. S2 EDS spectra of branched core-shell α-Fe_2O_3@C nanotubes.

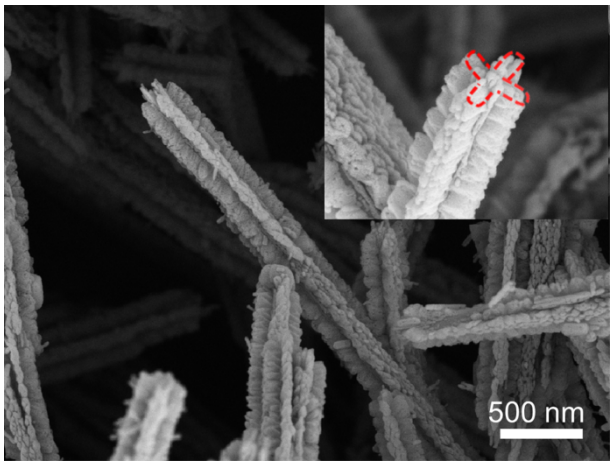

Fig. S3 SEM image of branched β-MnO_2/α-Fe_2O_3 nanostructures.

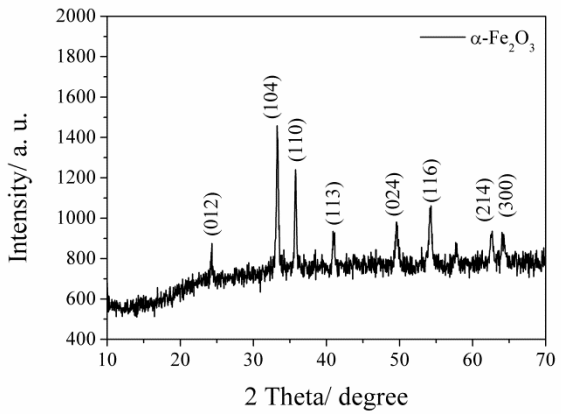

Fig. S4 XRD pattern of α-Fe_2O_3 obtained from α- Fe_2O_3@C nanotubes treated at 600 °C in air.

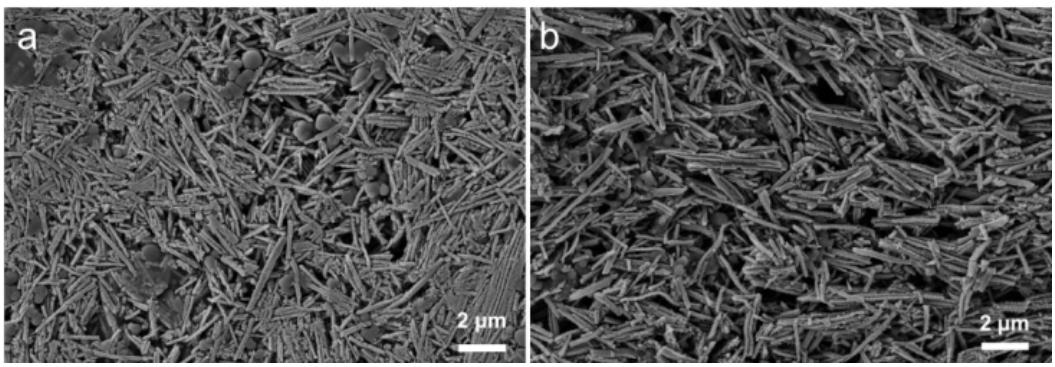

Fig. S5 SEM images of the electrode based on the branched core-shell α-Fe_2O_3@C nanotubes (a) before and (b) after 10 cycles of cycling at a current density of 1 A g^{-1}.

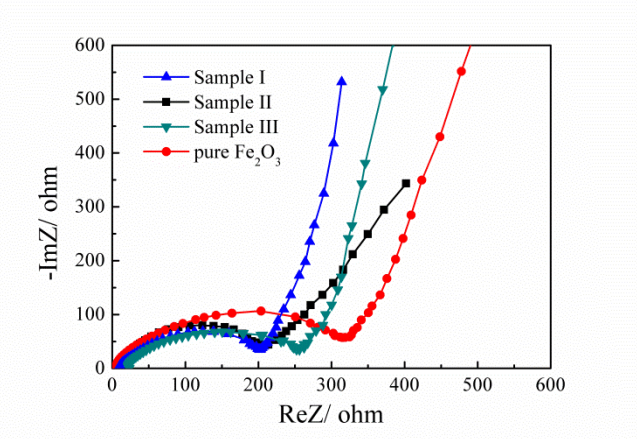

Fig.S6 Nyquist plots of the AC impedance spectra for the carbon-contained samples and carbon-free sample.