Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

Supporting Information

Hierarchical SnO_2/Fe_2O_3 Heterostructures as Lithium-Ion Battery Anodes

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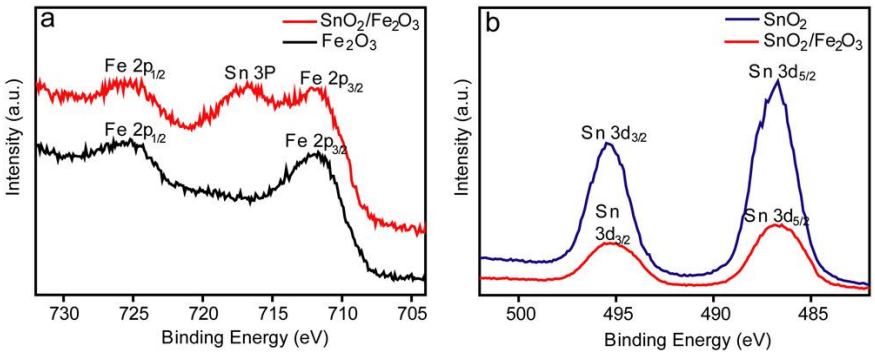

Figure S1. (a) Fe 2p XPS spectra collected for the SnO_2/Fe_2O_3 heterostructures (upper) and the pure Fe_2O_3 nanorods (lower). (b) Sn 3d xps spectra collected for the SnO_2/Fe_2O_3 heterostructures (lower) and the pure SnO_2 nanosheets (upper). The Sn 3p spectrum of SnO_2/Fe_2O_3 heterostructures was also shown in (a).

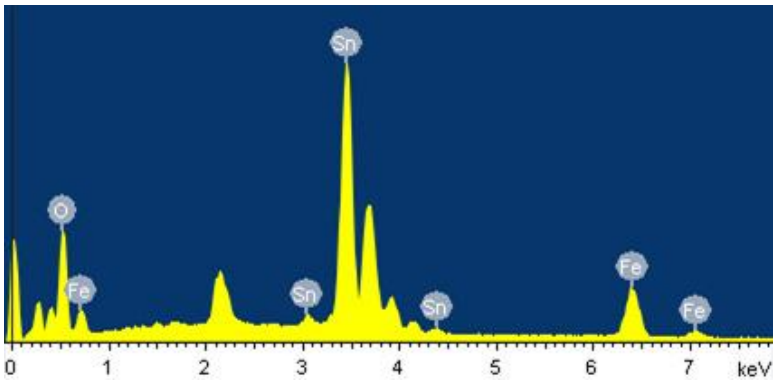

Figure S2. The EDX spectrum of SnO_2/Fe_2O_3 heterostructures showing a Sn/Fe ratio as 2.3 : 1.

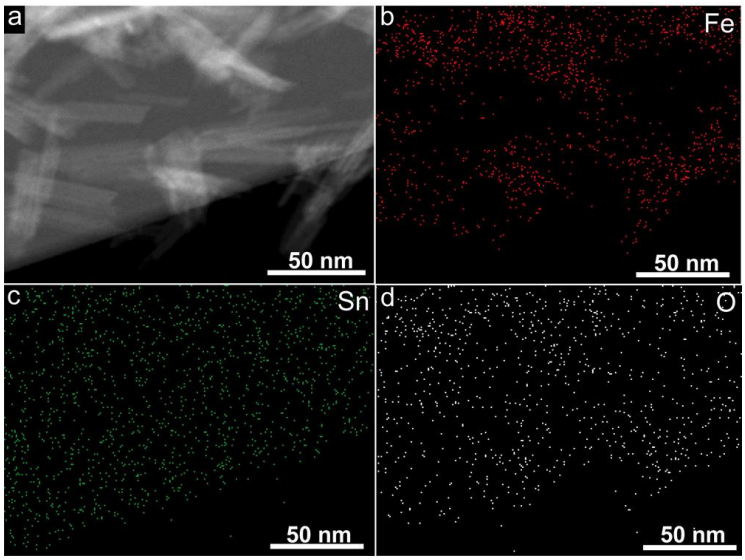

Figure S3. TEM images of (a) single branched nanosheet, and (b-d) the corresponding elemental mapping of Fe, Sn and O.

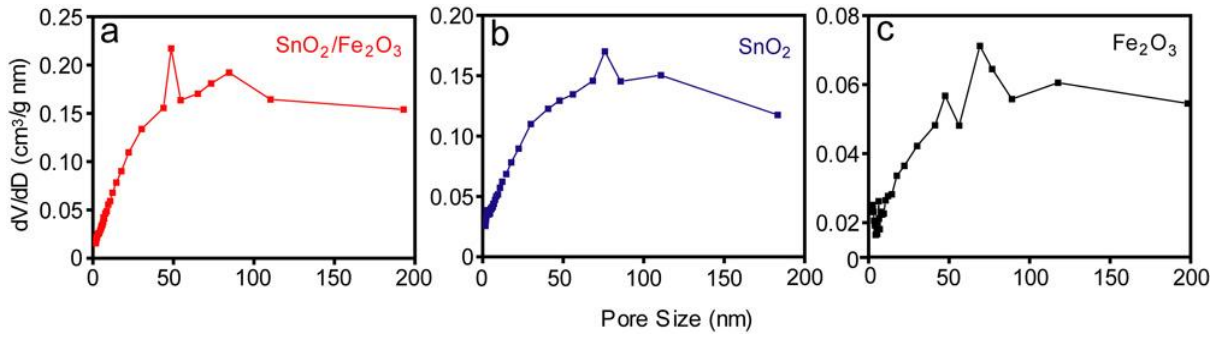

Figure S4. Pore size distributions calculated by the BJH method from the adsorption branch of in Figure 3: (a) SnO_2/Fe_2O_3 heterostructures; (b) SnO_2 nanosheets; (c) Fe_2O_3 nanorods.

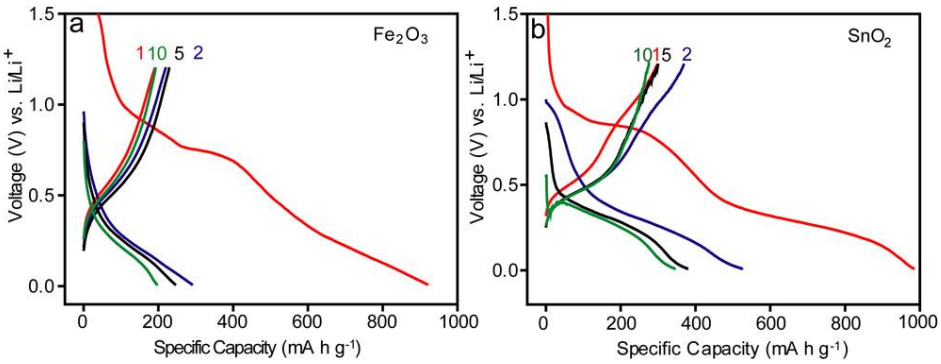

Figure S5. Charge-discharge profiles at a current rate of 400 mA g^{-1} for the first, second, fifth and tenth cycles: (a) Fe_2O_3 nanorods; (b) SnO_2 nanosheets.