Electronic Supplementary Information (ESI)

Morphology mediated tailoring the performance of porous nanostructured Mn_2O_3 as anode material

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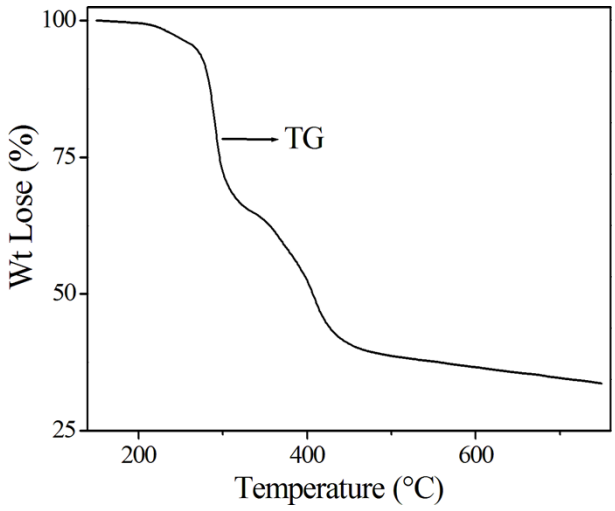

Figure S1 *TG analysis curve of the synthesized lotus shaped $MnCO_3$ in air at a rate of 5°C min^{-1}.*

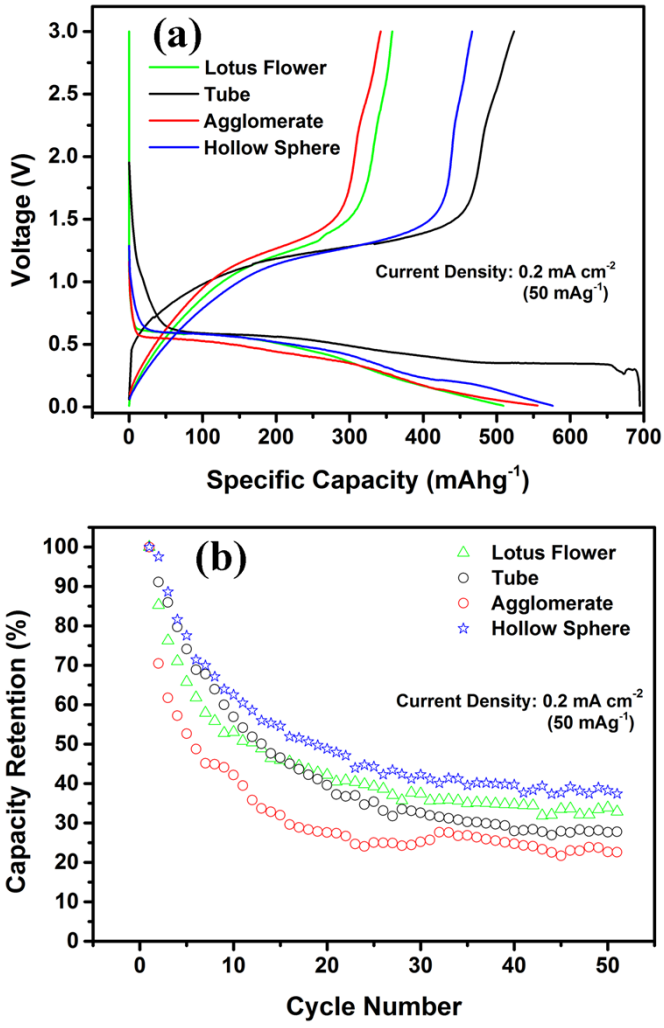

Figure S2 (a) *Discharge-charge profiles of Mn2O3//Li cells for the 2nd cycle (b) capacity retention plots for of the synthesized Mn_2O_3 with different shapes*

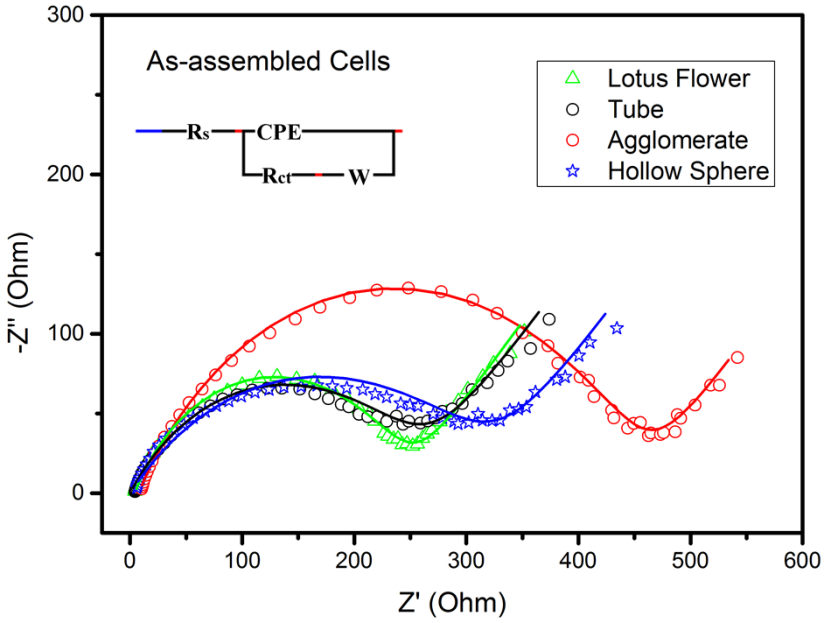

Fig. S3. *Impedance spectra of as-assembled Mn_2O_3//Li cells. Solid lines represent fitted plot using the equivalent circuit shown in the inset.*

Table S1: *Fitted impedance data for as-assembled Mn_2O_3//Li cells*

Sample	**R_s (Ω)**	**R_{ct} (Ω)**	**CPE (μF)**	**W (Ω)**
Lotus Flower	4.1	242	35	82
Tube	4.4	263	85	87
Agglomerate	7.3	450	26	63
Hollow Sphere	4.6	327	83	86

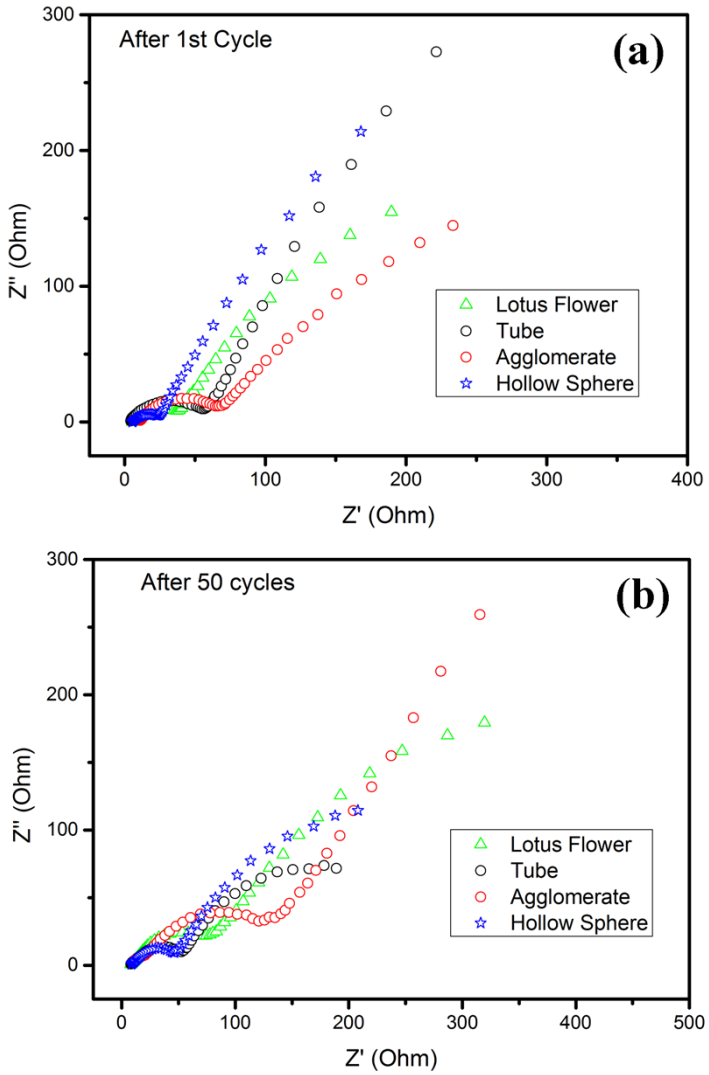

Fig. S4. *Impedance spectra of Mn_2O_3//Li cells at different cycling intervals (a) after the 1st cycle and (b) after the 50th cycle.*