Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting Information

Hollow Titanium Dioxide Spheres as Anode Material for Lithium Ion Battery with Largely Improved Rate Stability and Cycle Performance by Suppressing the Formation of Solid Electrolyte Interface Layer

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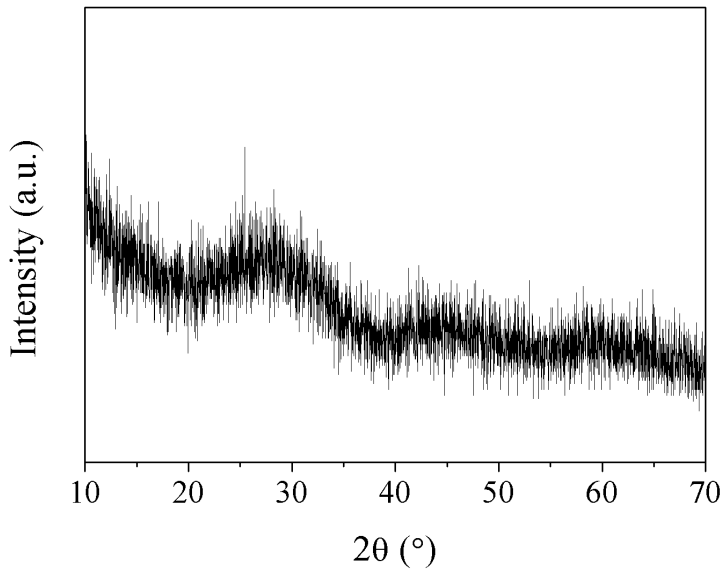

Figure S1. XRD patterns of as-prepared colloidal TiO_2 nanoparticles.

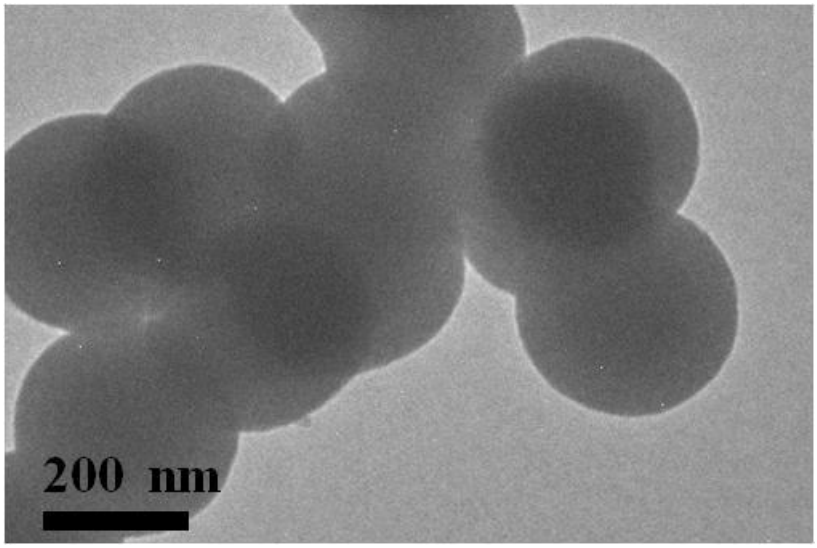

Figure S2. TEM image of as-prepared colloidal TiO_2 nanoparticles.

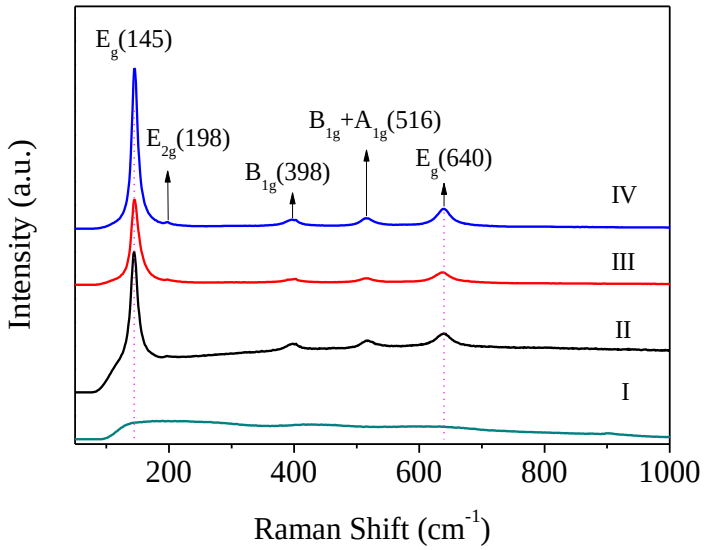

Figure S3. Raman spectra of (I) as-prepared colloidal TiO_2 nanoparticles, (II) annealed TiO_2 solid nanoparticles, (III) TiO_2 hollow spheres after hydrothermal treatment, and (IV) annealed TiO_2 hollow spheres.

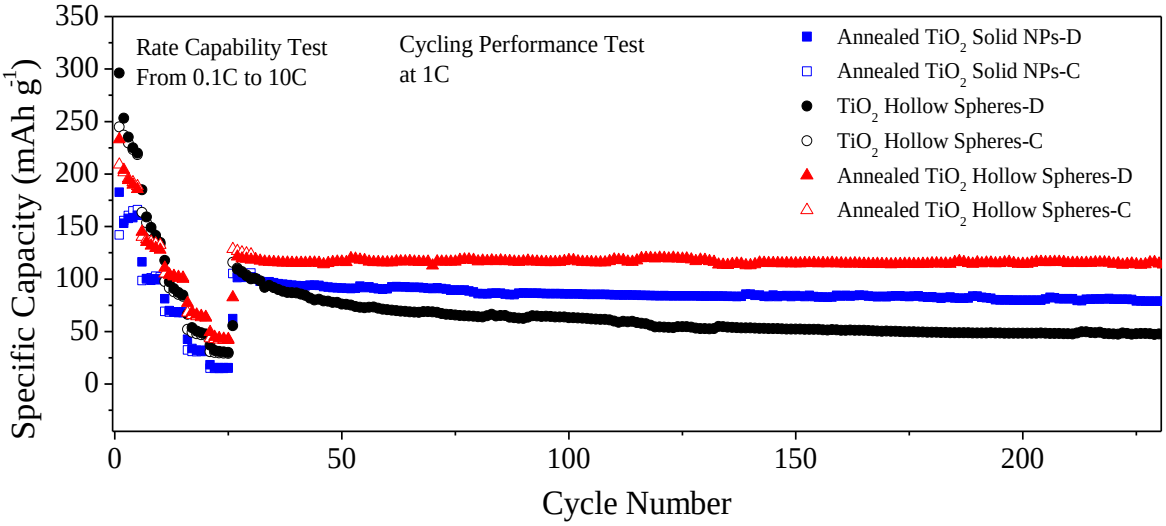

Figure S4. Rate capability and cycling performance tests as demonstrated in Figure 6. Note that the figure is divided into Figure 6a and 6b for a better comparison.

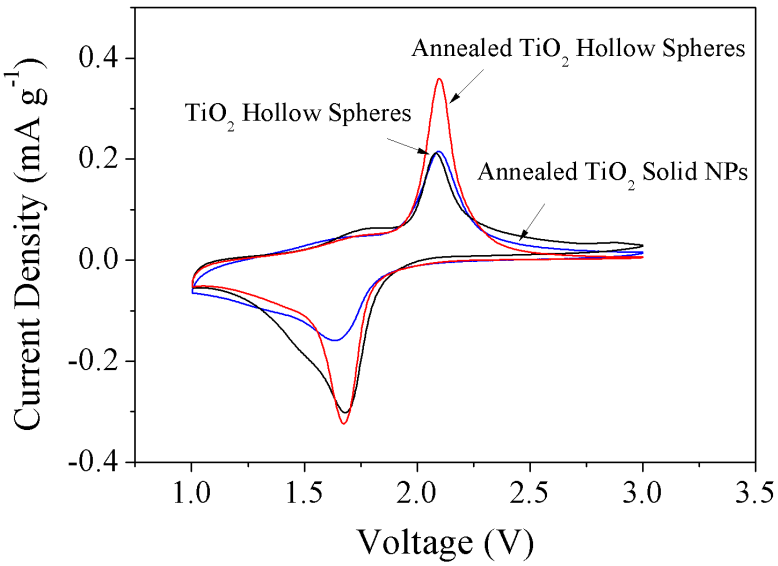

Figure S5. CV characteristics of annealed TiO_2 solid nanoparticles, TiO_2 hollow spheres, and annealed TiO_2 hollow spheres at a scanning rate of $0.2mVs^{-1}$.

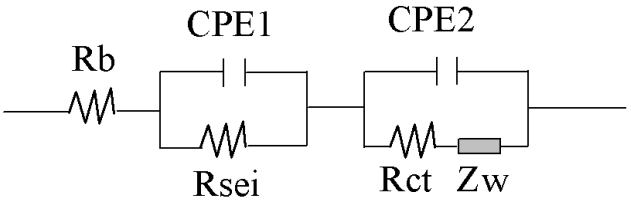

Figure S6. The equivalent circuit used for the EIS simulation in Figure 6.