Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Hollow TiO_2 Microspheres: Template-Free Synthesis, Remarkable Structure Stability, and Improved Photoelectric Performance

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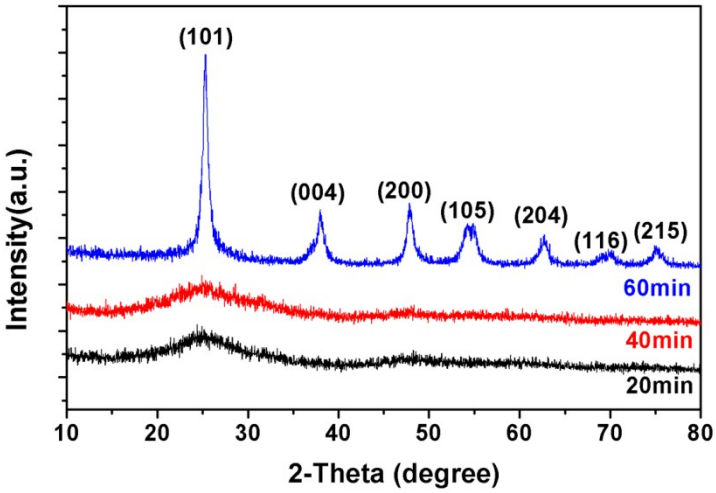

Figure S1 The XRD patterns of products obtained at different reaction interval during the formation of HTS.

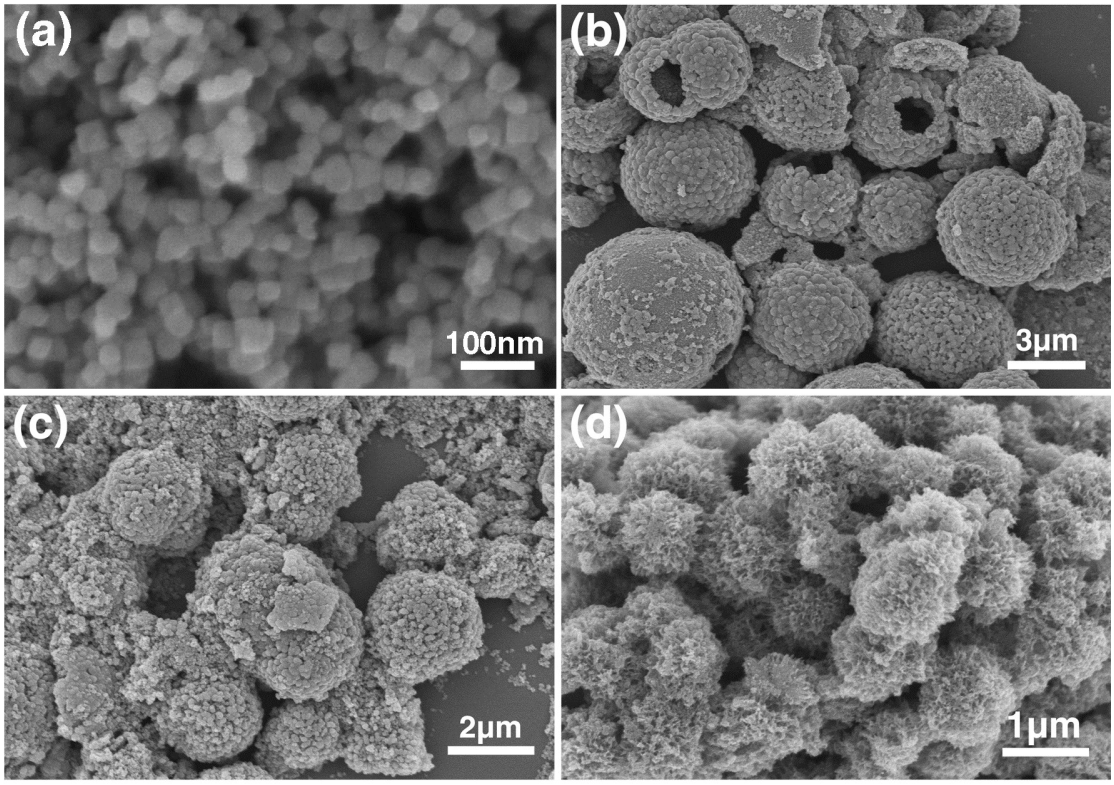

Figure S2 SEM images of products obtained under different reaction solvents. (a) water, (b) isopropanol,(c) ethylene glycol and (d) glycerol

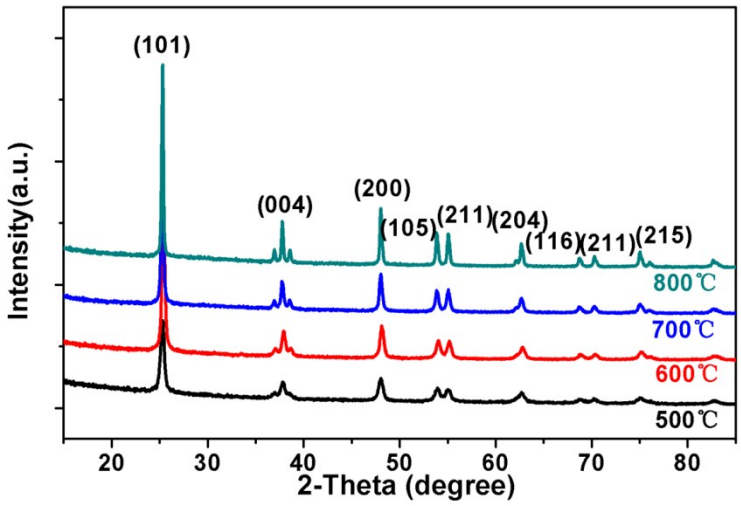

Figure S3 XRD patterns of HTS after different calcination temperatures.

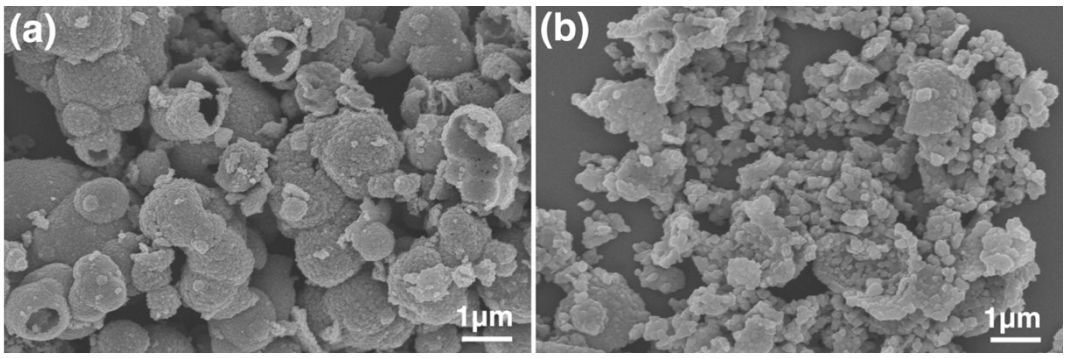

Figure S4 The comparison SEM images before and after calcination of TiO_2 hollow spheres obtained under the condition of without HCl.

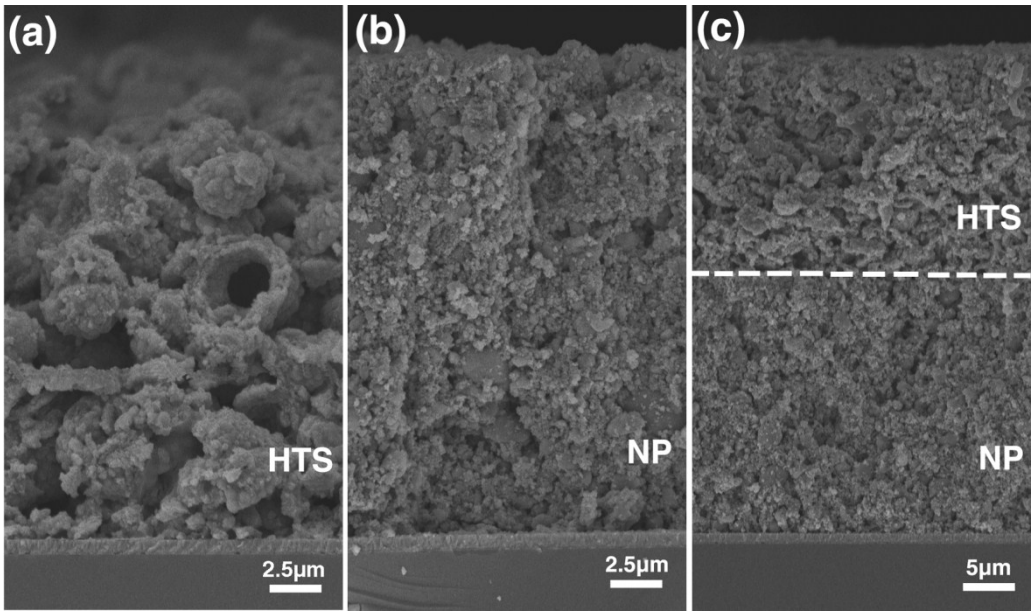

Figure S5 Cross-section SEM images of the three TiO_2 films: (a) THS-film, (b) NP-film and the HTS+NP bilayer film.

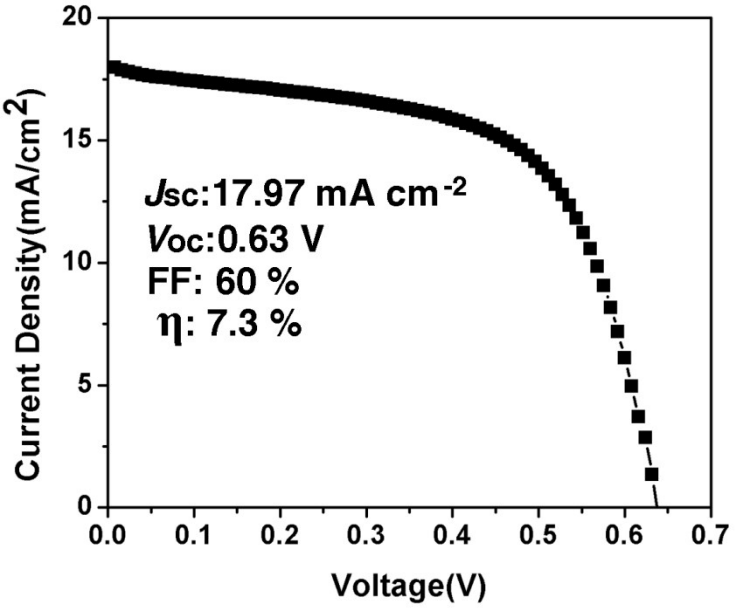

Figure S6 Photocurrent density-voltage curve of a DSSCs based on the bilayer structured photo-anode by introducing HTS as the light scattering layer over the NP film.

Table S1 Photovoltaic performance of DSSCs fabricated from NP and HTS TiO_2 photo-anode (the active area for all the cells is about 0.16 cm^2).

Cells	J_{SC}/mA cm^{-2}	V_{OC}/V	FF	ŋ (%)	Dye absorption/mol cm^{-2}
NP	12.8	0.64	60	5.0	1.9×10^{-7}
HTHS	15.3	0.72	58	6.3	2.3×10^{-7}