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Supplementary Information

for

Carbon quantum dot-sensitized hollow TiO_2 spheres for high-performance visible light photocatalysis

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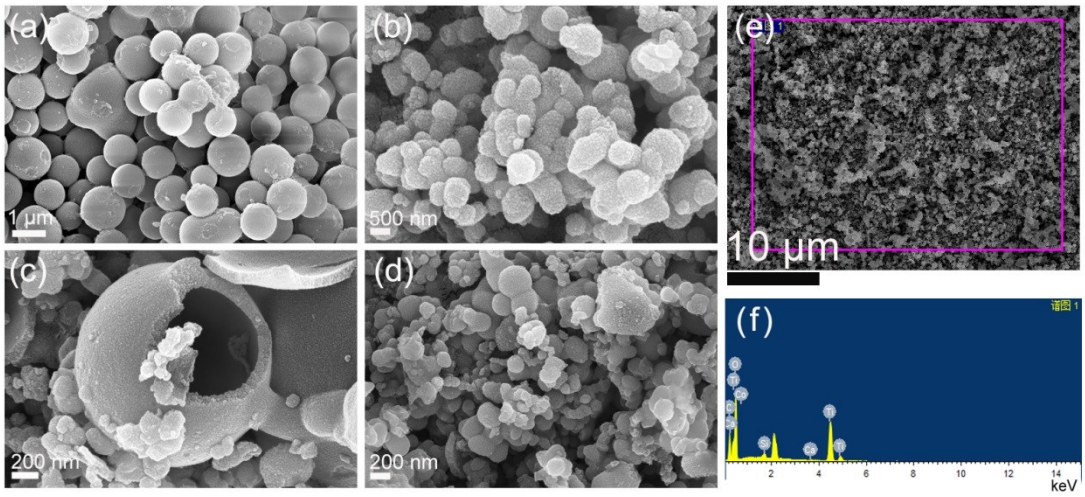

Figure S1. SEM images of the carbon spheres (a), TiO_2-wrapped carbon spheres (b), hollow TiO_2 (c), and CQD-modified TiO_2 composite (d). SEM image of the TiO_2/CQD composite used for Energy-dispersive X-ray spectroscopy (EDX) analysis (e); EDX energy spectrum of the TiO_2/CQD composite (f).

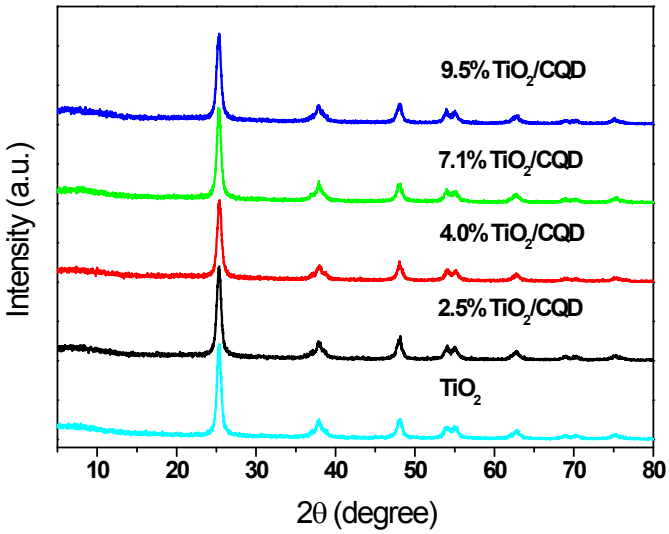

Figure S2. XRD patterns for the hollow TiO_2 spheres and the TiO_2/CQD composites with various CQD ratios.

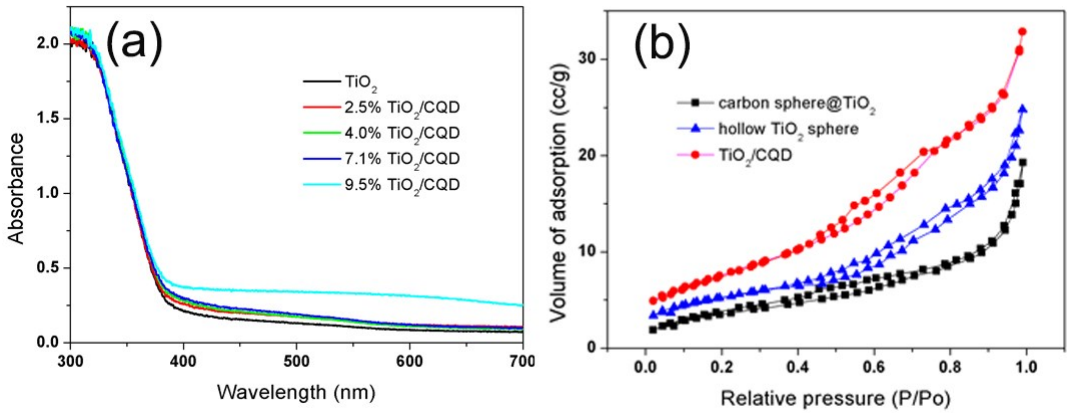

Figure S3. (a) UV-vis absorption spectra of TiO_2 and the TiO_2/CQD nanocomposite with various CQD ratios; (b) N_2 adsorption-desorption isotherms for the carbon spheres, hollow TiO_2, and TiO_2/CQD composite.

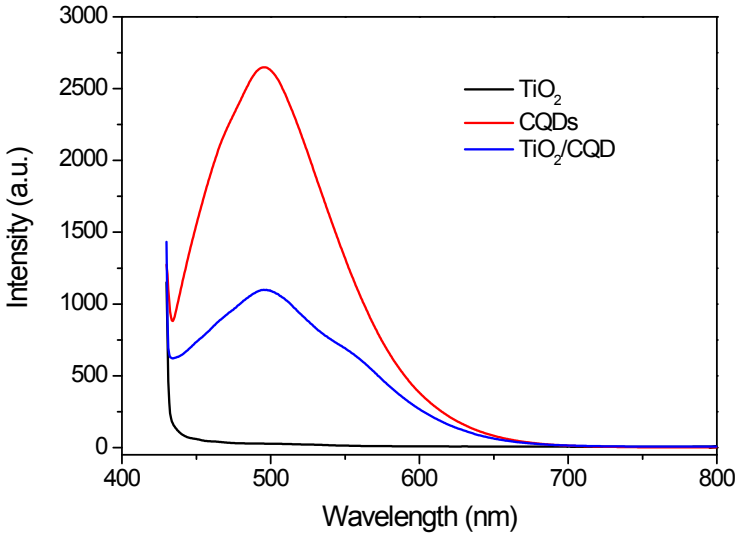

Figure S4. Photoluminescence spectra of TiO_2, the CQDs and the 4.0% TiO_2/CQD composite irradiated at 420 nm.