

Electronic Supplementary Information

Tri-functional Hierarchical TiO₂ Spheres Consisting of Anatase Nanorods and Nanoparticles for High Efficiency Dye-Sensitized Solar Cells

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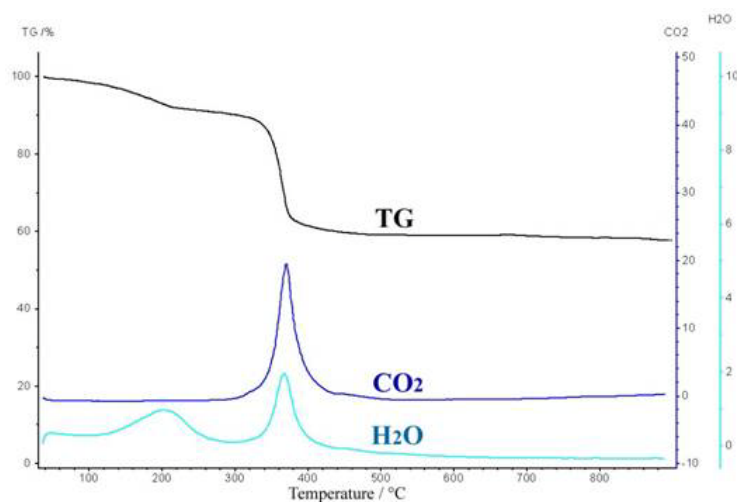


Figure S1. TG-IR curves of as-prepared sample via an acidthermal reaction at 140 °C for 12 h containing 1mL TBT and 30 mL HAc.

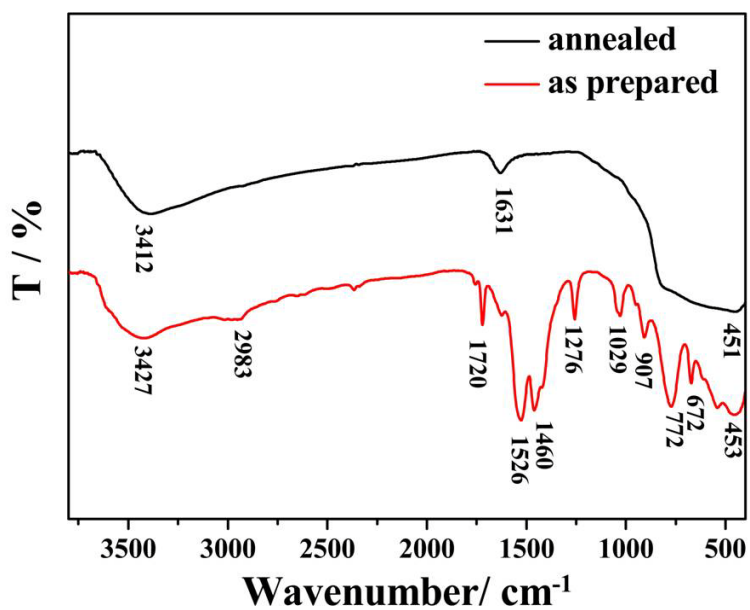


Figure S2. FTIR curves of as-prepared sample via an acidthermal reaction at 140 °C for 12 h and annealed sample at 500 °C for 3 h.

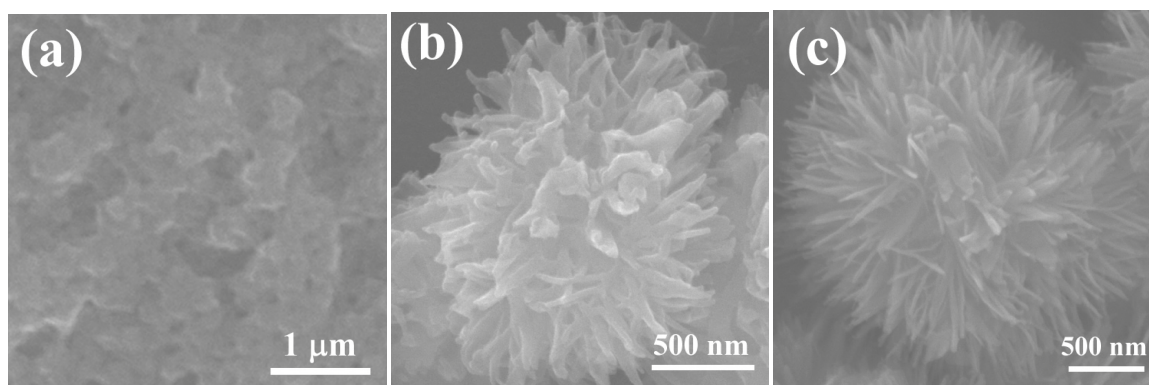


Figure S3. FE-SEM images of as-prepared materials synthesized for different reaction time 3 h (a), 6 h (b) and 12 h (c).

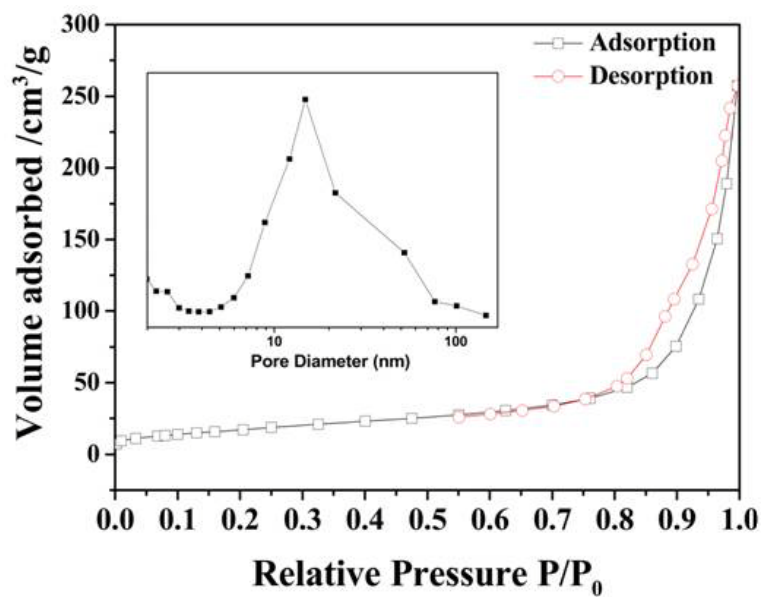


Figure S4. Nitrogen sorption isotherms of the calcined hierarchical TiO₂ spheres. The inset shows the pore diameter distribution of annealed hierarchical TiO₂ spheres.

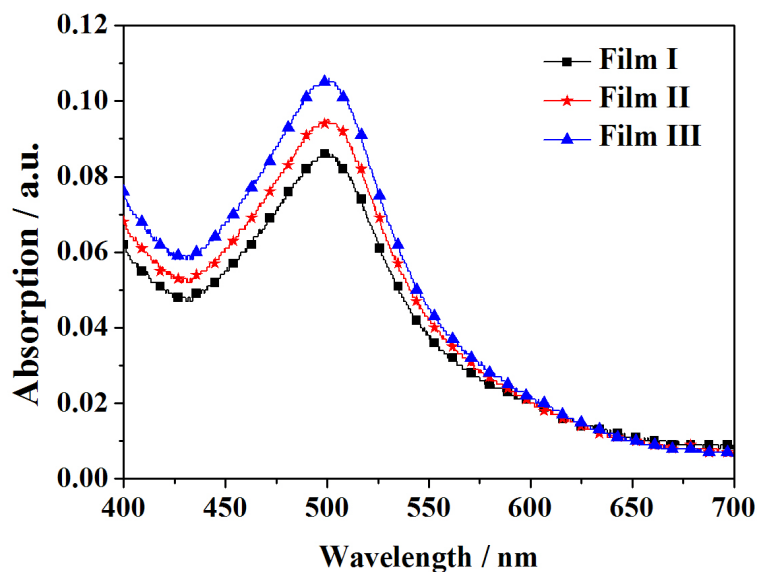


Figure S5. The UV-vis absorption spectra of solution containing dye molecules detached from the three films in 3.0 mL H₂O containing 0.1 M NaOH.

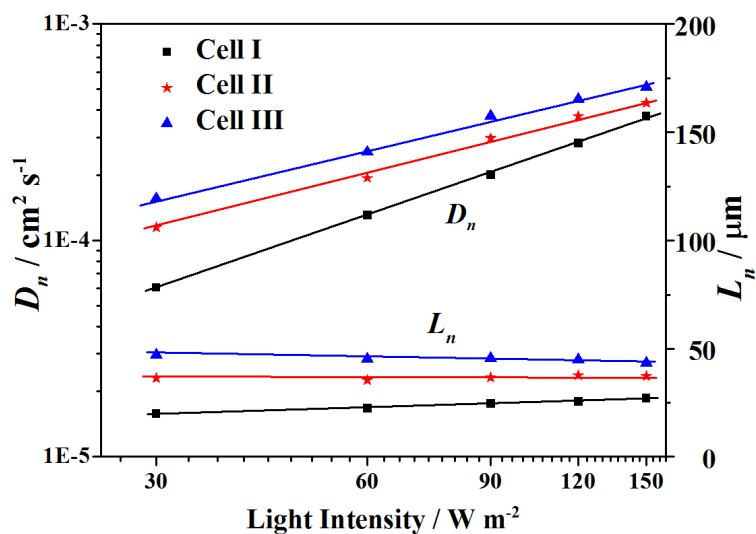


Figure S6. Incident light intensity dependent electron diffusion coefficient and effective diffusion length for DSSCs based on film I, II and III at 457 nm LED illumination.