## **Electronic Supplementary Information**

Rutile TiO<sub>2</sub> Nanowire Array Infiltrated with Anatase Nanoparticles as photoanode for Dye-Sensitized Solar Cell. Enhance Cell Performance via Rutile-Anatase Heterojunction

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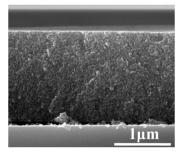


Fig. S1 Cross-sectional SEM image of TiO<sub>2</sub> NPs spin coated on bare FTO substrate.

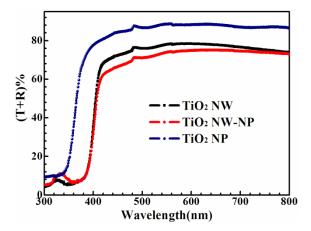
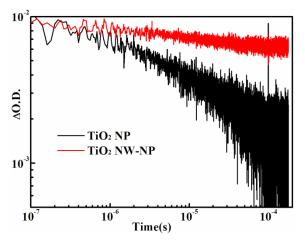
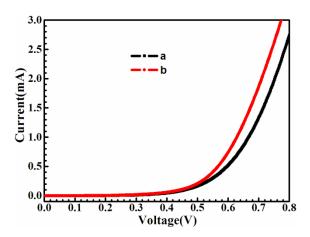


Fig. S2 Sum of diffuse transmittance and reflectance spectra of bare TiO<sub>2</sub> NW, NW-NP and NP films.



**Fig. S3** Transient absorption spectra of N719 dye loaded NP and NW-NP films by monitoring the decay of photoinduced absorption of dye cations.



**Fig. S4** Dark I-V curves of FTO/electrolyte/Pt device, a bare FTO glass; b FTO glass hydrothermally reacted in hydrochloric acid and deionized water (1:1 by volume) at 423 K and kept constant temperature for 8 hrs.