

## Supporting Information

# Synthesis of tailored SrTiO<sub>3</sub>-TiO<sub>2</sub> microspherical photocatalyst and its photogenerated charges properties

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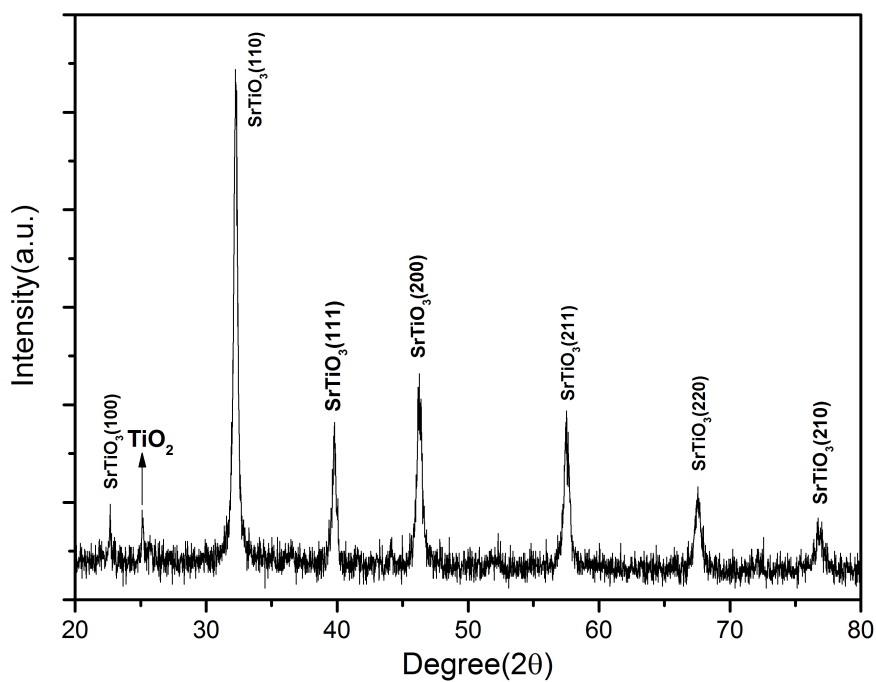
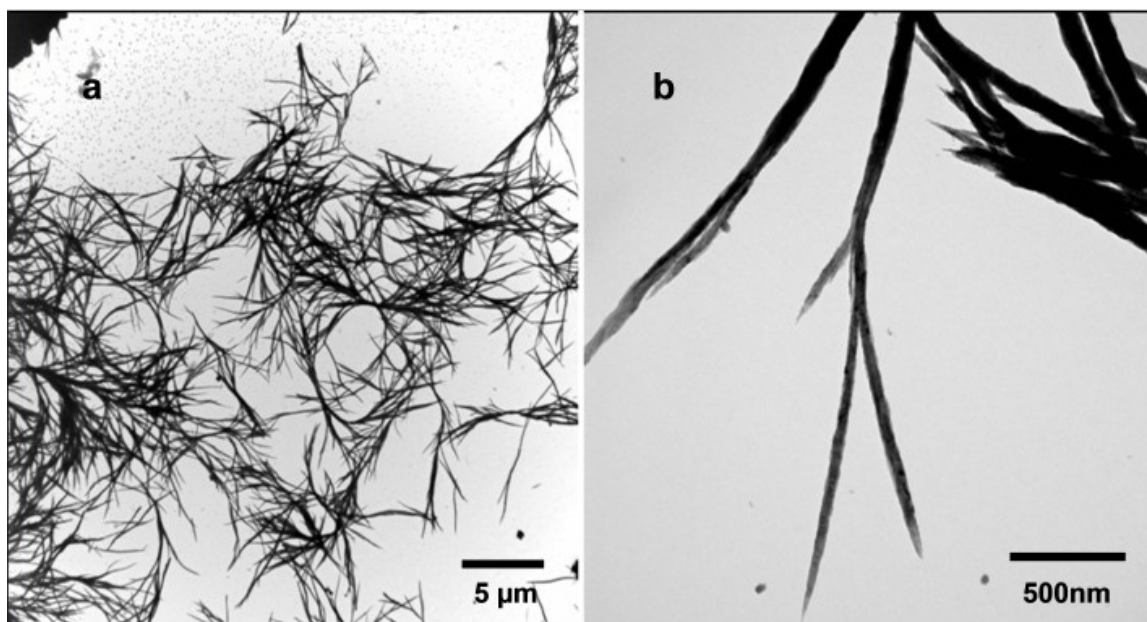
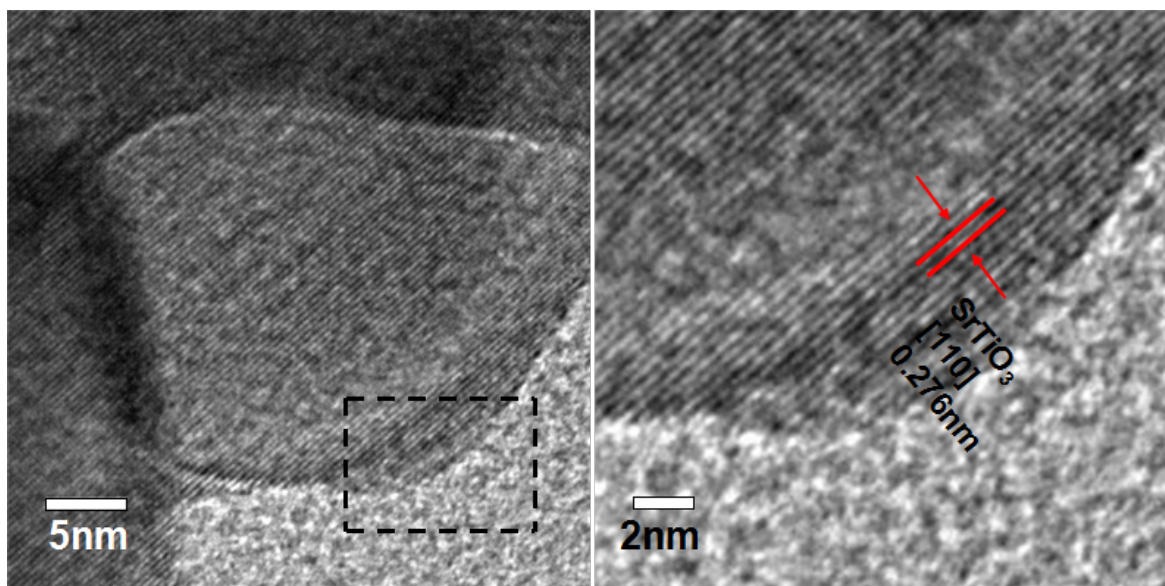


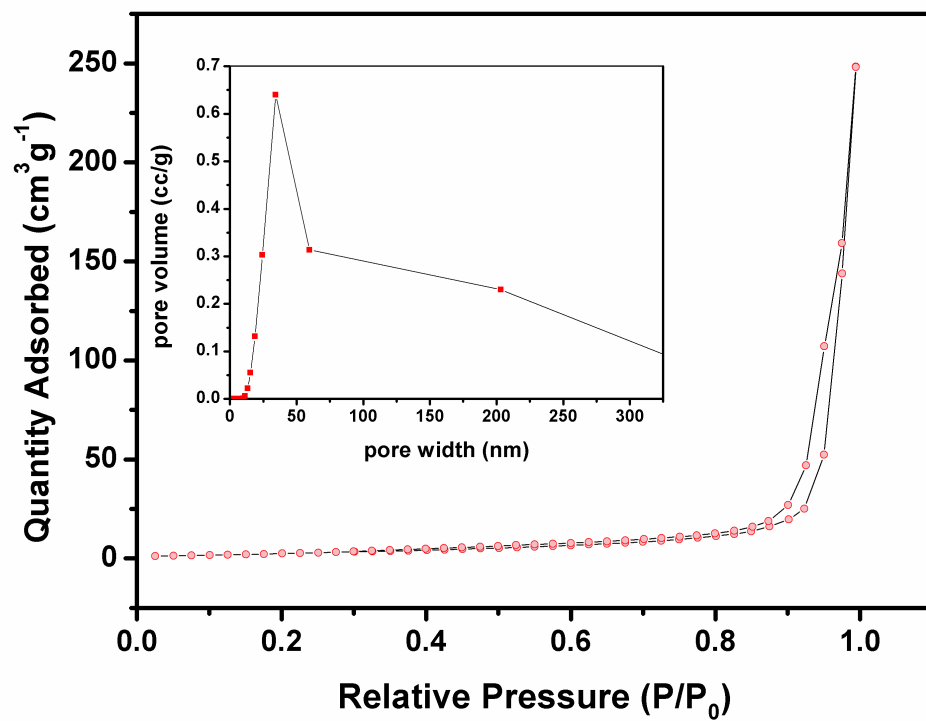
Fig. S1 XRD patterns of SrTiO<sub>3</sub>-TiO<sub>2</sub> nanowires.



**Fig. S2** The TEM images of SrTiO<sub>3</sub>-TiO<sub>2</sub> nanoliner(a), image(b) is the local amplification image of (a).



**Fig. S3** HRTEM of the crystalline SrTiO<sub>3</sub> on the microsphere surface.



**Fig. S4** Nitrogen adsorption–desorption isotherms and pore-size distribution (inset) of the SrTiO<sub>3</sub>-TiO<sub>2</sub> microspheres with 12 h hydrothermal reaction