

Electronic Supplementary Information for

Ni-doped rutile TiO₂ nanoflowers: Low-temperature solution synthesis and the enhanced photocatalytic efficiency

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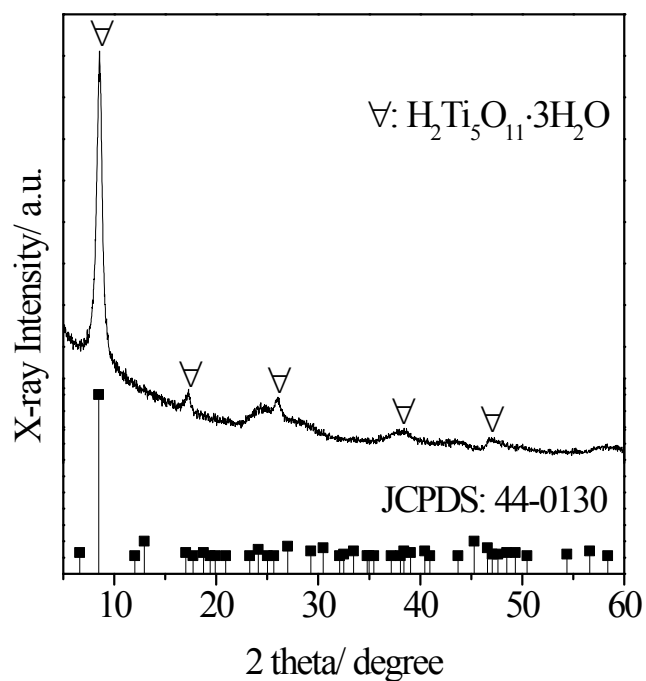


Figure S1. XRD pattern of the as-synthesized titanate nanowires

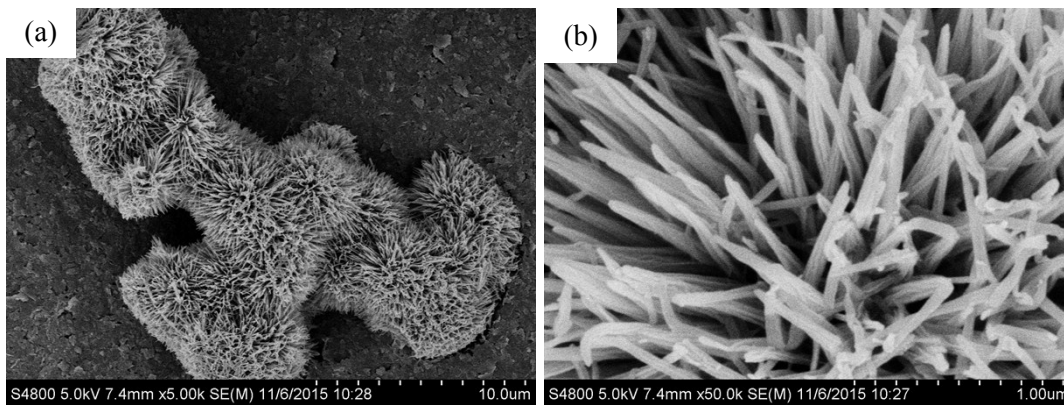


Figure S2. Low (a) and (b) high magnification FESEM images of the as-synthesized titanate nanowires.

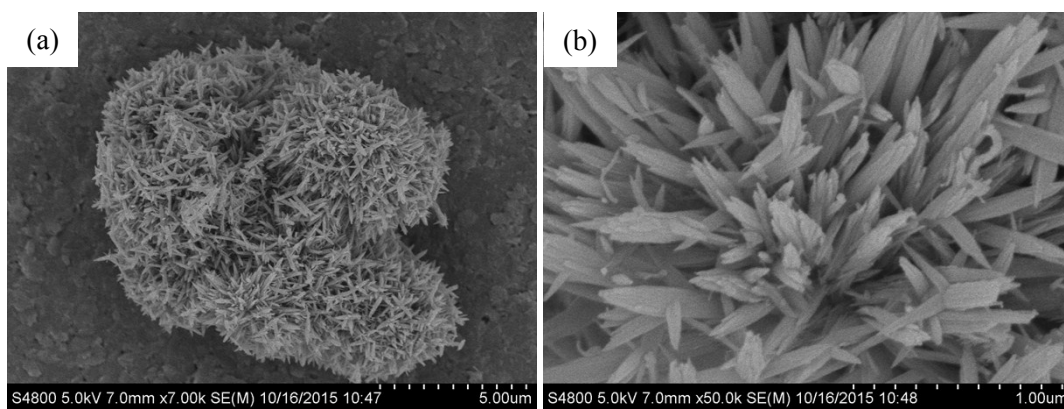


Figure S3. Low (a) and (b) high magnification FESEM images of titanate nanowires after immersing at 80 °C for 72 h in 0.05 M H_2SO_4 solution.

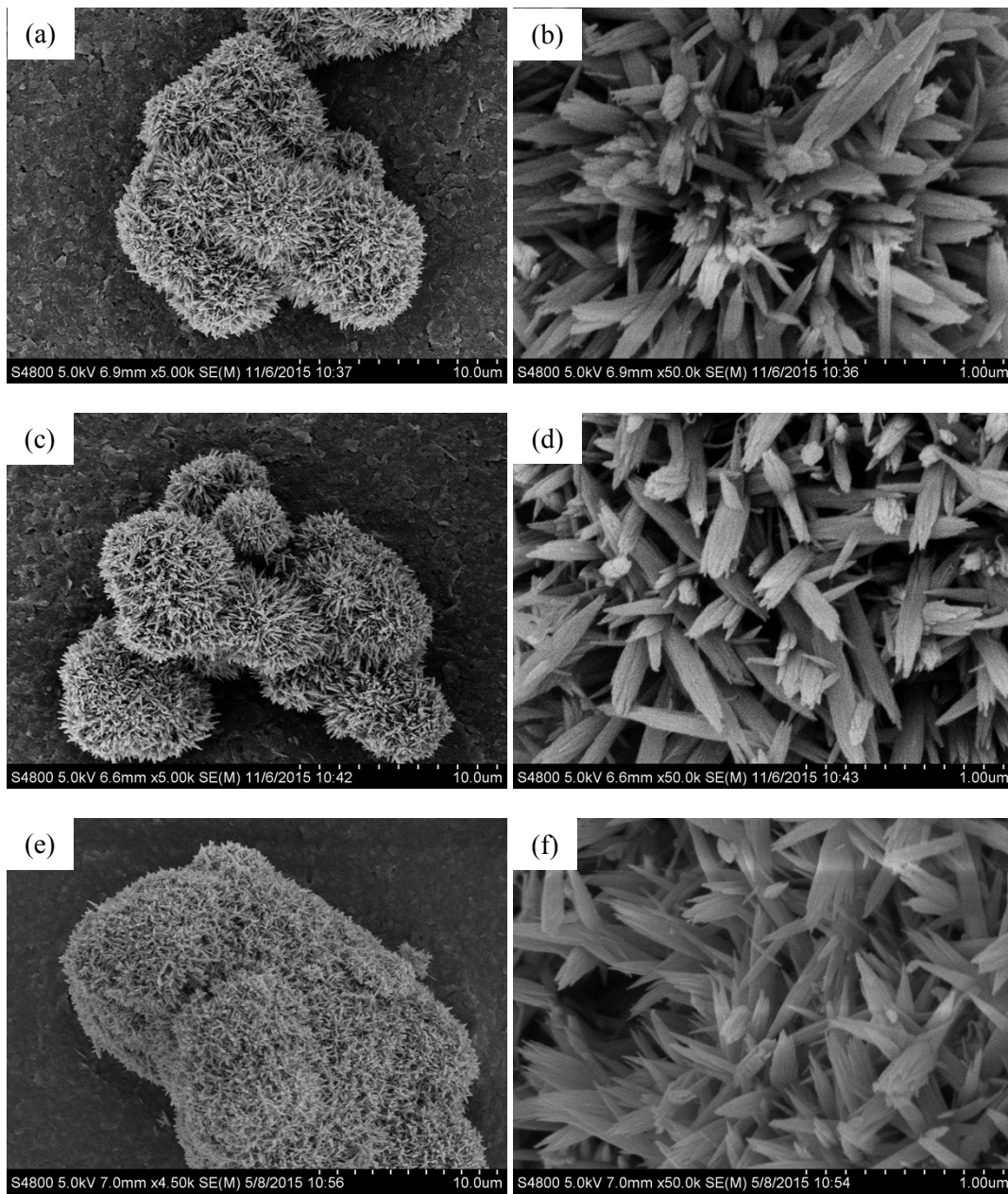


Figure S4. FESEM images of titanate nanowires after immersing at 80 °C for 72 h in 0.05 M H_2SO_4 solutions containing $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ with various concentrations of (a, b) 0.5 mM, (c, d) 2 mM, and (e, f) 4 mM.

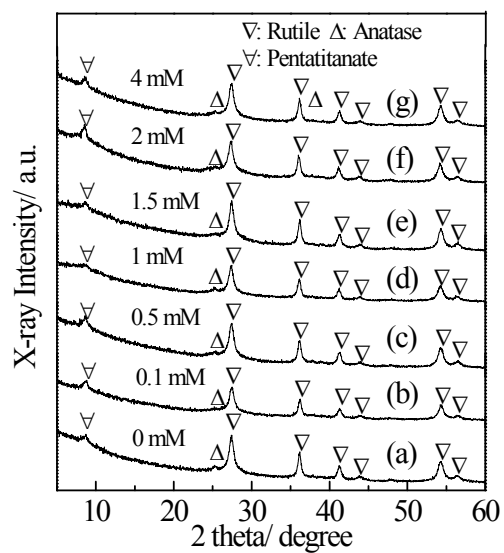


Figure S5. XRD patterns of titanate nanowires after immersing at 80 °C for 72 h in 0.05 M H₂SO₄ solutions containing NiSO₄·6H₂O with various concentrations of (a) 0 mM, (b) 0.1 mM, (c) 0.5 mM, (d) 1 mM, (e) 2 mM and (f) 4 mM.

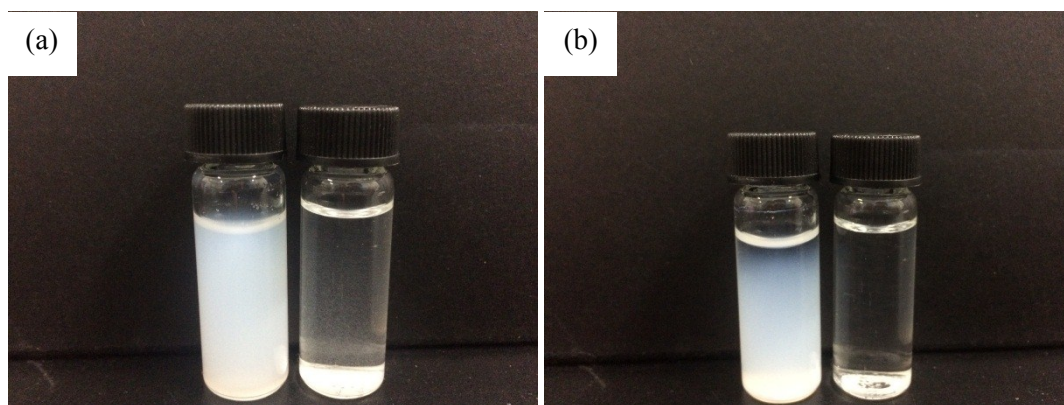


Figure S6. Optical photographs of the slurry system of P25 (left) and Ni-doped TiO₂ nanoflowers (right) after sediment for 1 min (a) and 24 h (b).

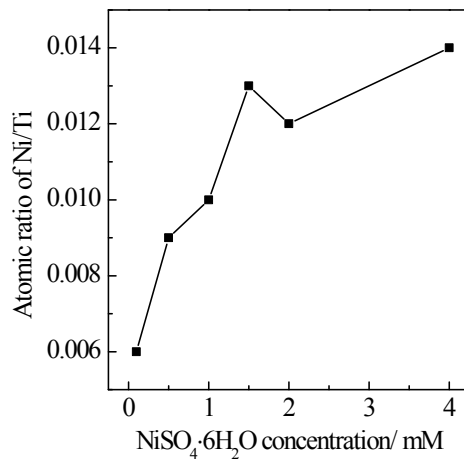


Figure S7. Ni/Ti atomic ratio derived from the SEM-EDS analysis as a function of the concentration of NiSO₄·6H₂O in the H₂SO₄ solution.

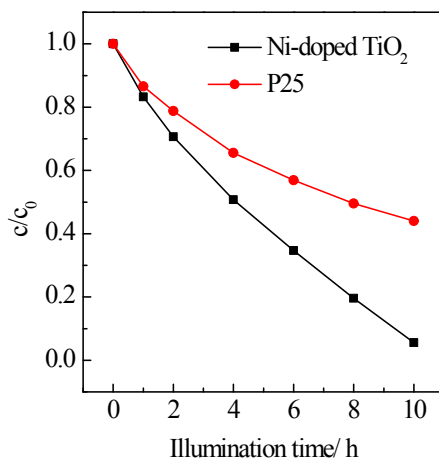


Figure S8. Photodegradation curves of rhodamine B in the presence of Ni-doped rutile nanoflowers and P25 under UV + Vis light illumination. Initial RhB concentration: 0.1 mM (50 ppm); catalyst load: 0.2 g·L⁻¹.