

Electronic supporting information

**Fabrication and enhanced the simulated sunlight photocatalytic
activity of metallic platinum and indium oxide codoped titania
nanotubes**

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Table 1Textural parameters of various TiO₂-based materials

Samples	S _{BET} (m ² g ⁻¹)	V _p (cm ³ g ⁻¹)	D _p (nm)
TiO ₂ -NTs	250.8	0.57	9.07
Pt/In ₂ O ₃ -TiO ₂ -NTs-(0, 9.4)	183.8	0.55	11.02
Pt/In ₂ O ₃ -TiO ₂ -NTs-(0, 12.0)	147.3	–	–
Pt/In ₂ O ₃ -TiO ₂ -NTs-(0.4, 9.4)	186.0	–	–
Pt/In ₂ O ₃ -TiO ₂ -NTs-(0.8, 9.4)	123.7	0.48	16.14
Pt/In ₂ O ₃ -TiO ₂ -NTs-(6.9, 9.4)	65.1	–	–
Pt/In ₂ O ₃ -TiO ₂ -NPs-(0.8, 9.4)	134.8	0.26	5.76
Pt/In ₂ O ₃ -TiO ₂ -NTs-(0.8, 9.4)-573	237.6	–	–
Pt/In ₂ O ₃ -TiO ₂ -NTs-(0.8, 9.4)-773	64.1	–	–

Fig. S1 HRTEM images of the Pt/In₂O₃-TiO₂-NTs-(0.4, 9.4) (a) and Pt/In₂O₃-TiO₂-NTs-(6.9, 9.4) (b).

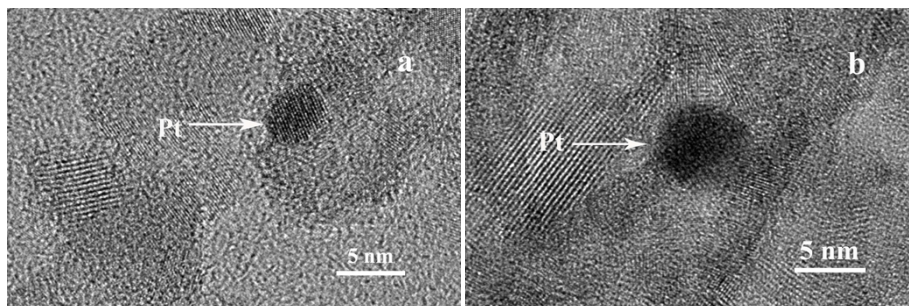


Fig. S2 FT-IR spectra of Pt/In₂O₃-TiO₂-NTs-(0.8, 9.4) and Pt/In₂O₃-TiO₂-NPs-(0.8, 9.4).

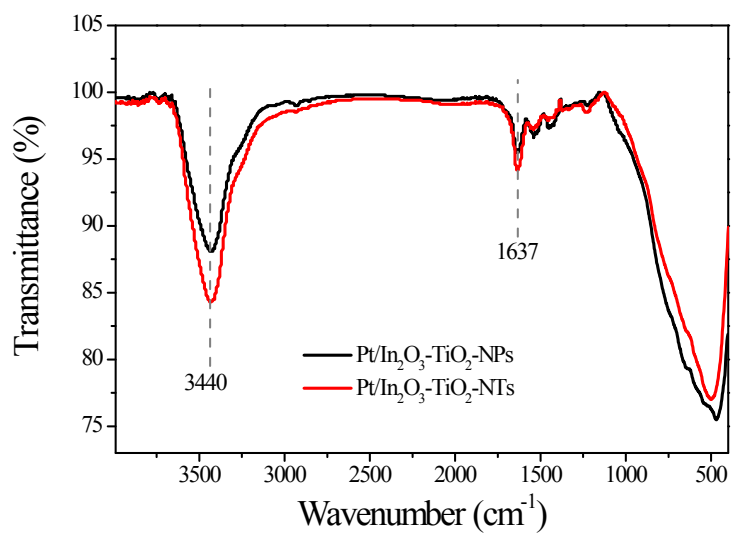


Fig. S3. Changes of TOC in the reaction systems during the process of the simulated sunlight photocatalytic degradation of DEP over Pt/In₂O₃-TiO₂-NTs-(0.8, 9.4). TOC₀ and TOC_t is the original and residual DEP total organic carbon in the reaction system. C₀^{DEP}= 10 mg L⁻¹; volume: 100 mL; catalyst: 100 mg.

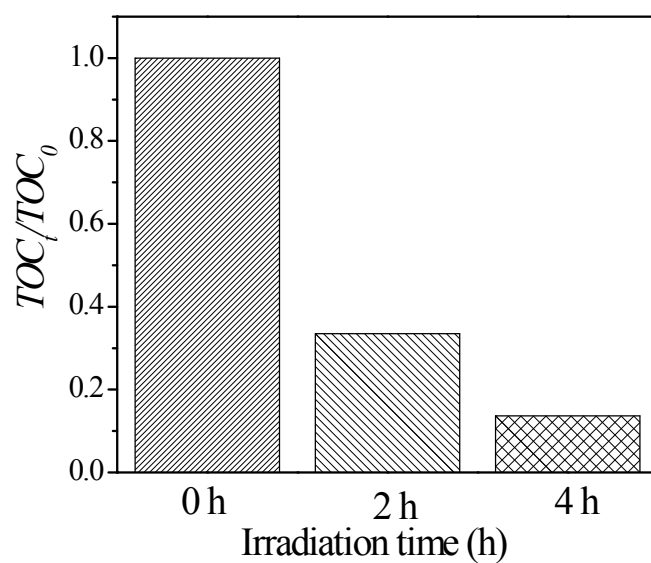


Fig. S4 TEM (a) and HRTEM (b) images of the Pt/In₂O₃-TiO₂-NTs-(0.8, 9.4) after recycling for 5 times.

