Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics

Synthesis of efficient N-containing TiO_2 photocatalyst with high anatase thermal stability and the effects of residue nitrogen on photoinduced charge separation

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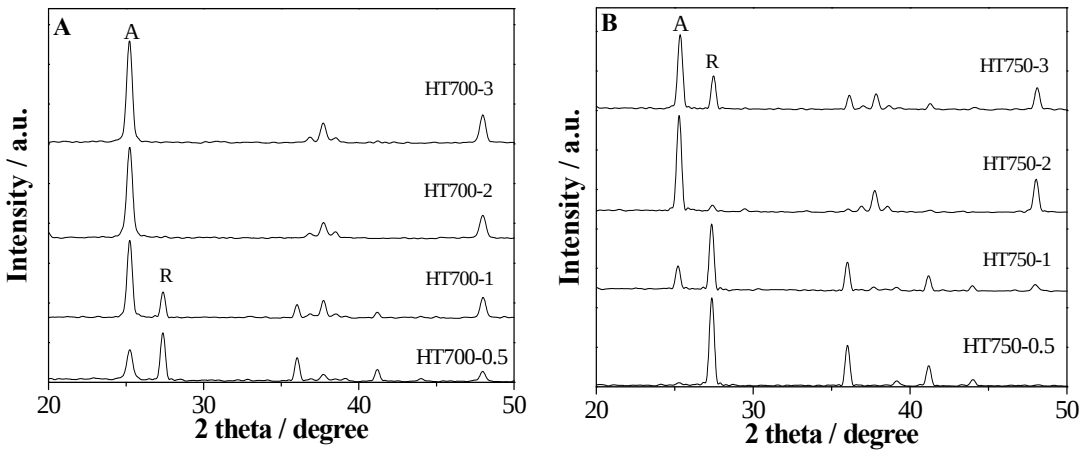
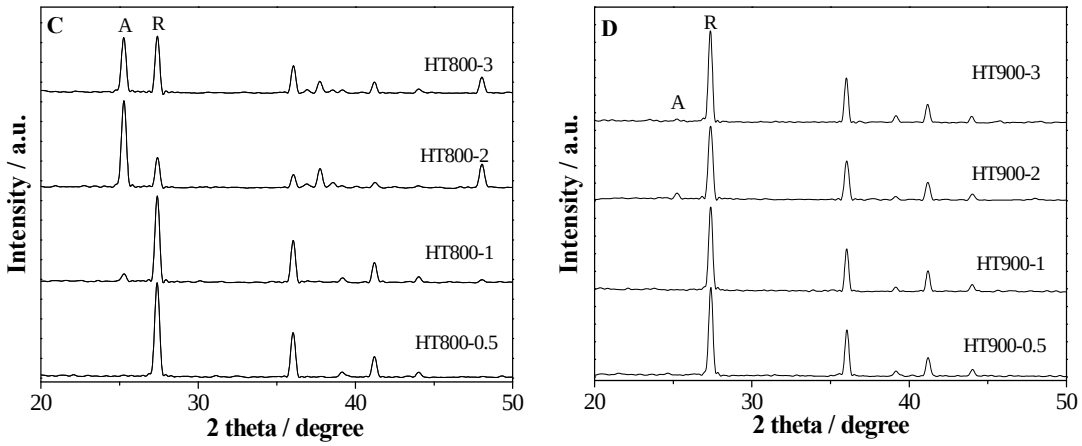
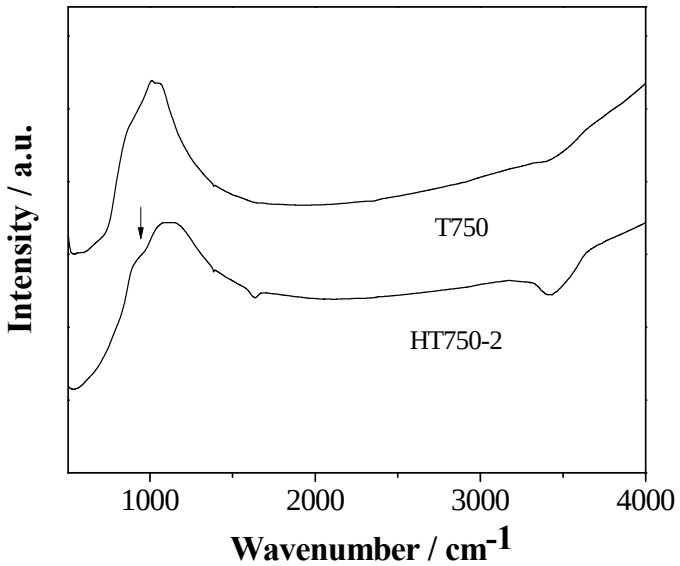
Supporting information (SI)-figure 1. XRD patterns of TiO_2 samples modified by different amount of HMT calcined at the temperature of 700 (A), 750 (B), 800 (C) and 900 □ (D)

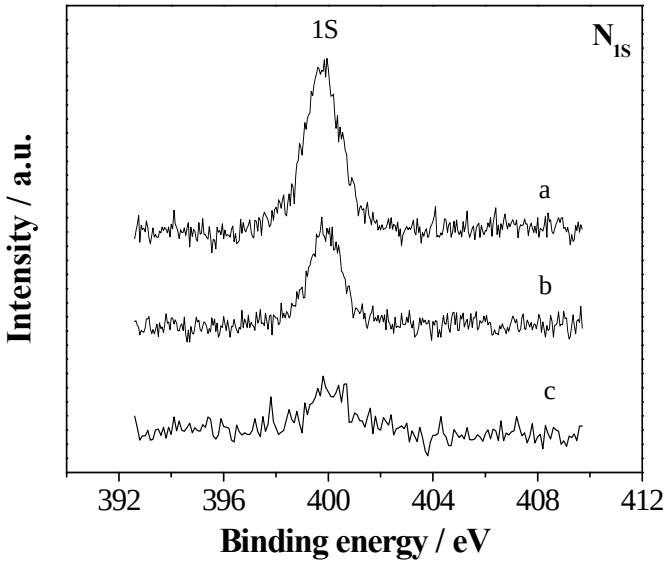




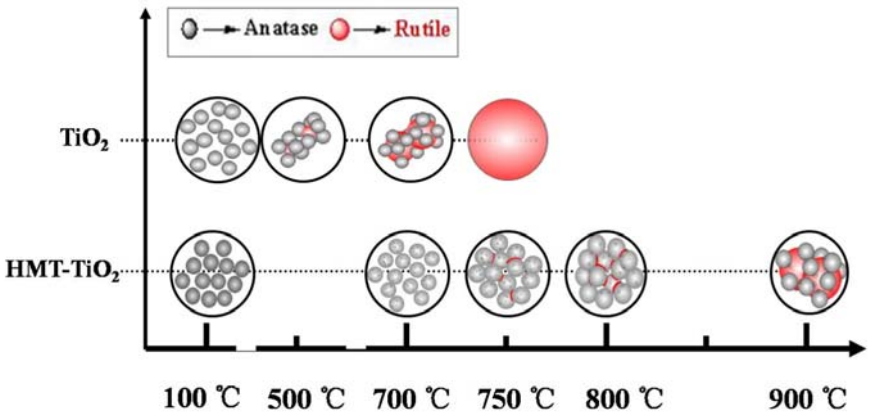
SI-figure 2. FT-IR spectra of T750 and HT750-2 samples



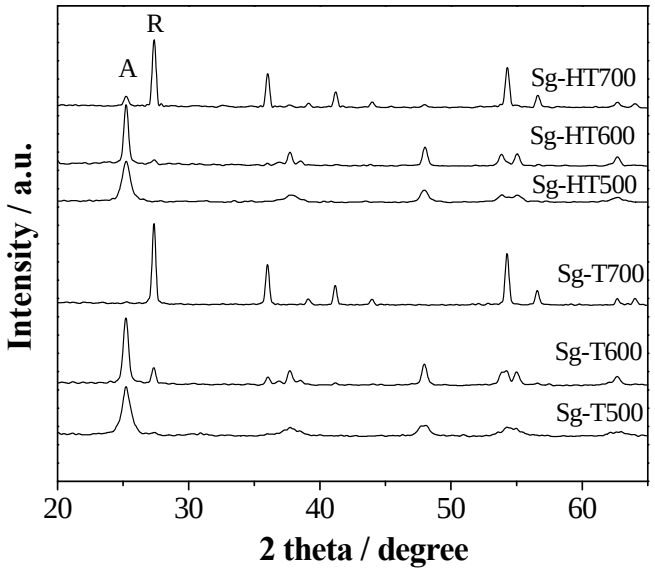
SI-figure 3. N1s XPS spectra of HT750-2 sample etched by Ar^+ sputtering for different time (a: 0 min, b:1 min, c: 5 min)



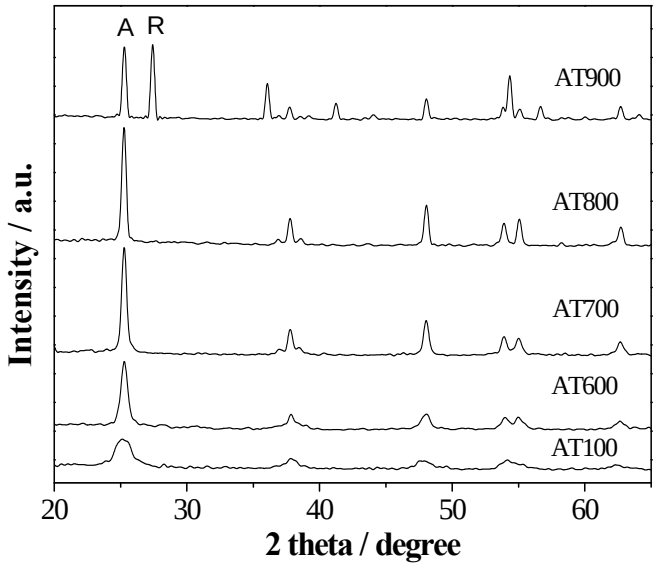
SI-figure 4. A schematic of phase transformation process of unmodified and modified TiO_2



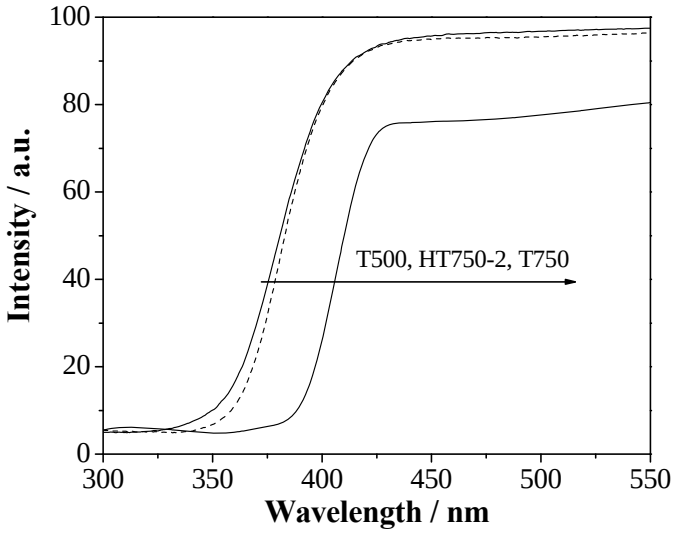
SI-figure 5. XRD patterns of different TiO_2 samples by sol-gel process



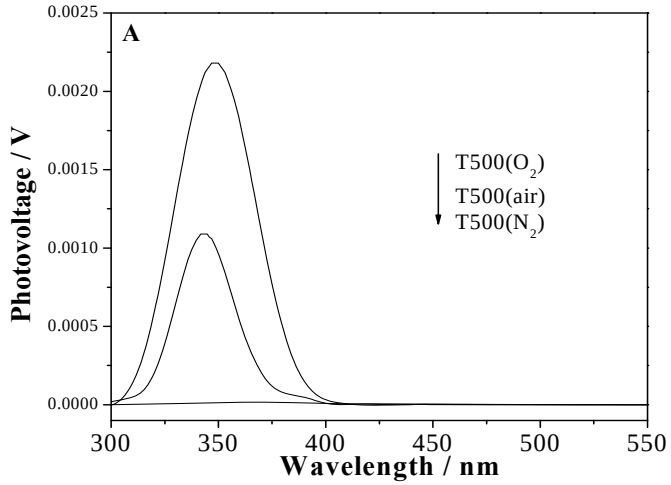
SI-figure 6. XRD patterns of TiO_2 samples modified by ammonia

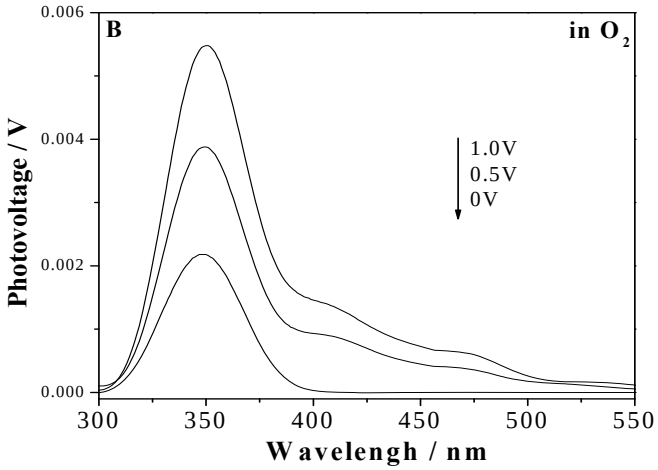


SI-figure 7. UV-vis diffuse reflection spectra of T500, T750 and HT750-2 samples

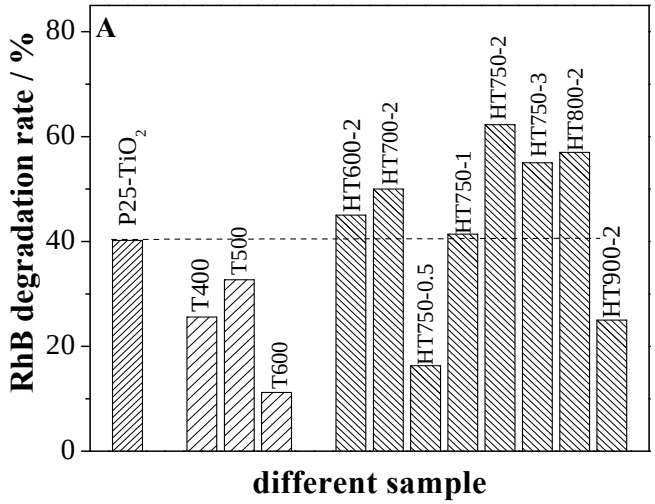


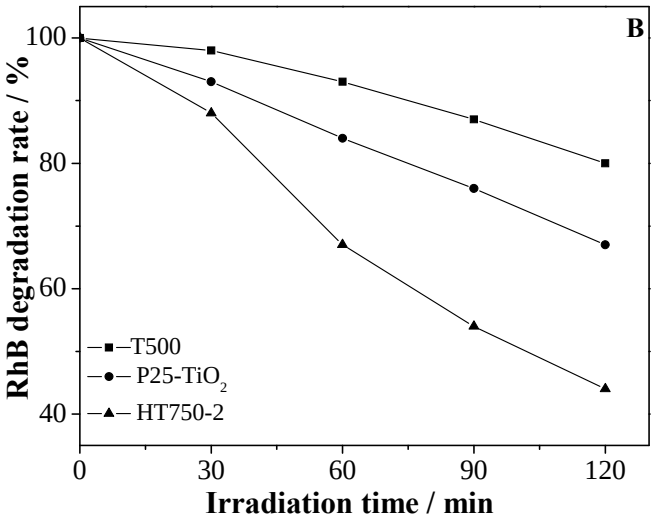
SI-figure 8. SPS responses of the T500 in different atmospheres (A) and SPS responses of theT500 in the oxygen gas at the aid of an outer electric field (B)





SI-figure 9. Photocatalytic degradation rates (A) and photocatalytic degradation evolution curves (B) of RhB solution on the different TiO_2 samples




B
RhB degradation rate / %
100
80
60
40
0
30
60
90
120
Irradiation time / min
T500
P25-TiO2
HT750-2