In situ coupling of Ti₂O with rutile TiO₂ as a core-shell structure and the

photocatalysis performance

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Fig.S1 The UV-Vis spectrum of the filter.



Fig.S2 (a).UV-Vis absorption spectra of as-synthesized samples at 580 $^\circ\!\!C$ for 2-10 h.

(b). The relative content of Ti_2O in the selected samples.



Fig.S3 The evolution of absorbance with the irradiation time of sample 610-6.