

**Enhanced Visible Light Photocatalytic Activity of TiO₂ Assisted by
Organic Semiconductor: A Structure Optimization Strategy of
Conjugated Polymer**

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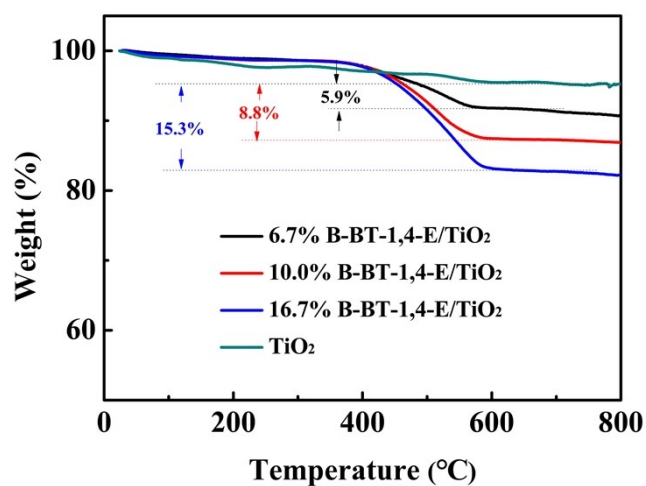


Fig. S1 Thermal gravity analysis of TiO₂, 6.7% B-BT-E-1,4-E/TiO₂, 10% B-BT-E-1,4-E/TiO₂ and 16.7% B-BT-E-1,4-E/TiO₂

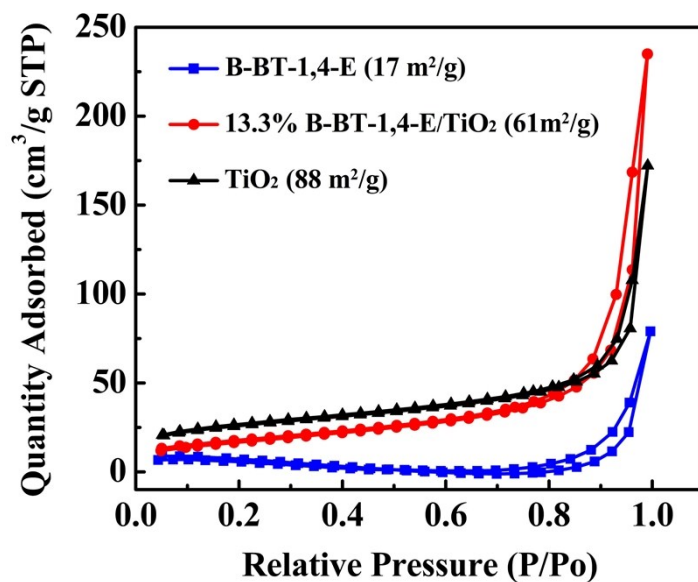


Fig. S2 N₂-adsorption-desorption isotherms of TiO₂, 16.7% B-BT-E-1,4-E/TiO₂ and B-BT-E-1,4-E

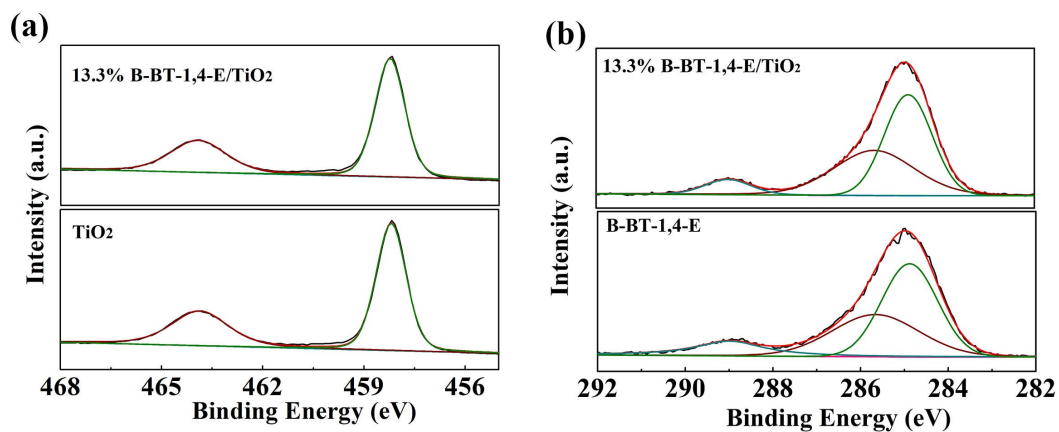


Fig. S3 XPS of 13.3% B-BT-1,4-E/TiO₂ and B-BT-1,4-E, (a) Ti 2p, (b) C 1s.

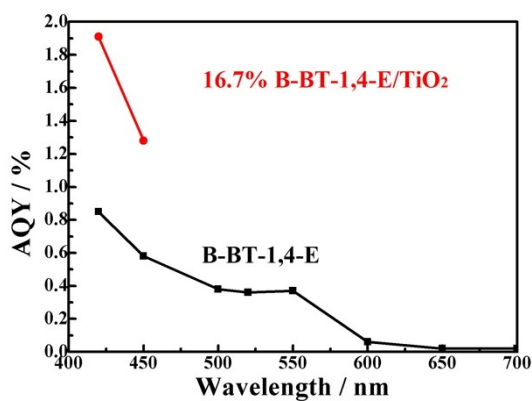


Fig. S4 AQY curve of 16.7% B-BT-1,4-E/TiO₂ and B-BT-1,4-E for H₂ production under different wavelength.

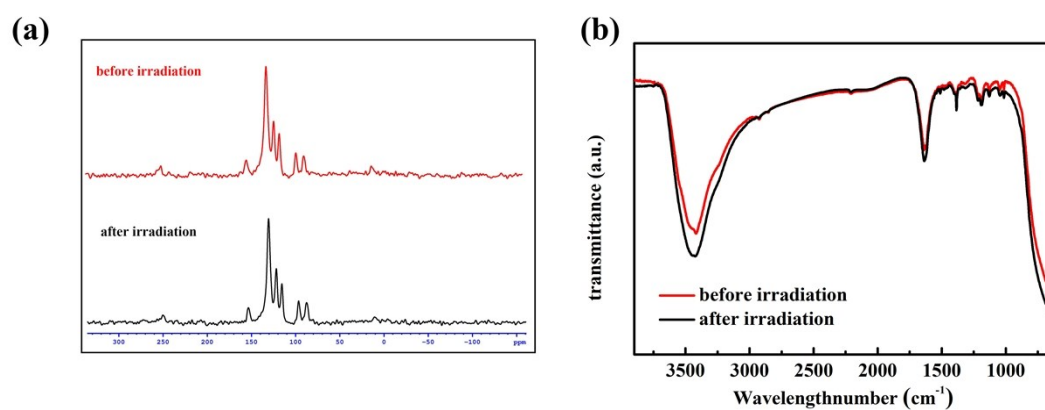


Fig. S5 Comparison of ¹³C-NMR and FTIR spectra of 10% B-BT-1,4-E/TiO₂ before and after photocatalytic H₂ evolution.

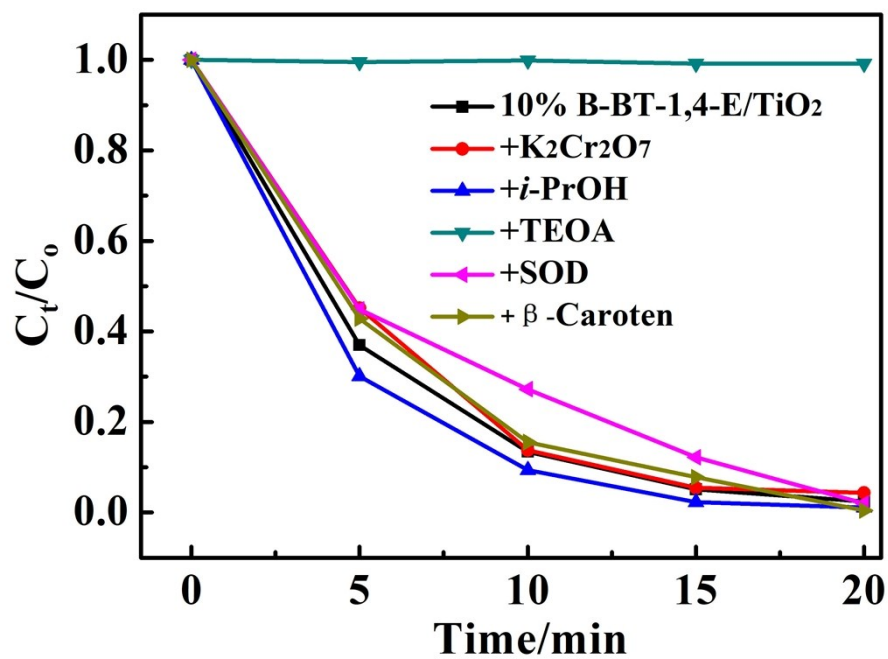


Fig. S6 Trapping measurement with different scavenger (*i*-PrOH $\rightarrow$ •OH, K₂Cr₂O₇ $\rightarrow$ e⁻, SOD $\rightarrow$ •O₂⁻, TEOA $\rightarrow$ h⁺) for photodegradation of sulfathiazole.

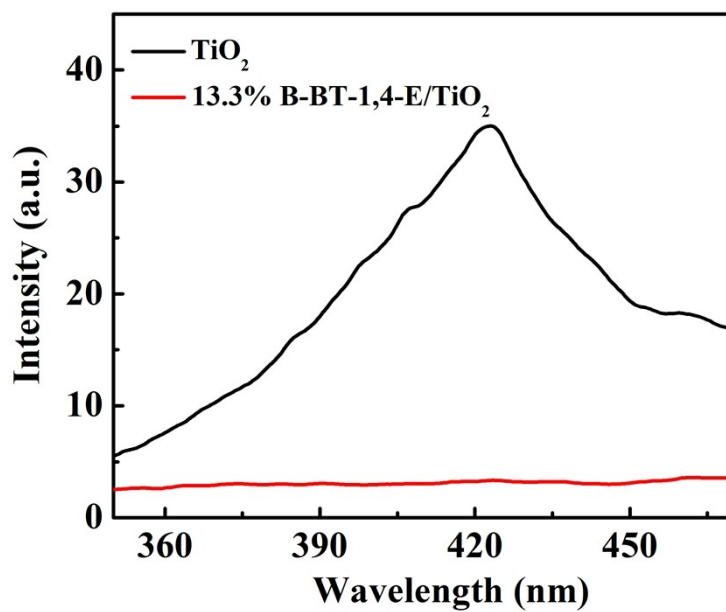


Fig. S7 PL spectra of TiO₂ and 13.3% B-BT-1,4-E/TiO₂ excited at 270 nm.