Electronic Supplementary Material (ESI) for Environmental Science: Nano.

Supporting information for

Synthesis of Ta_3N_5/Bi_2MoO_6 core-shell fiber-shaped heterojunctions as efficient and easily recyclable photocatalysts

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Figures

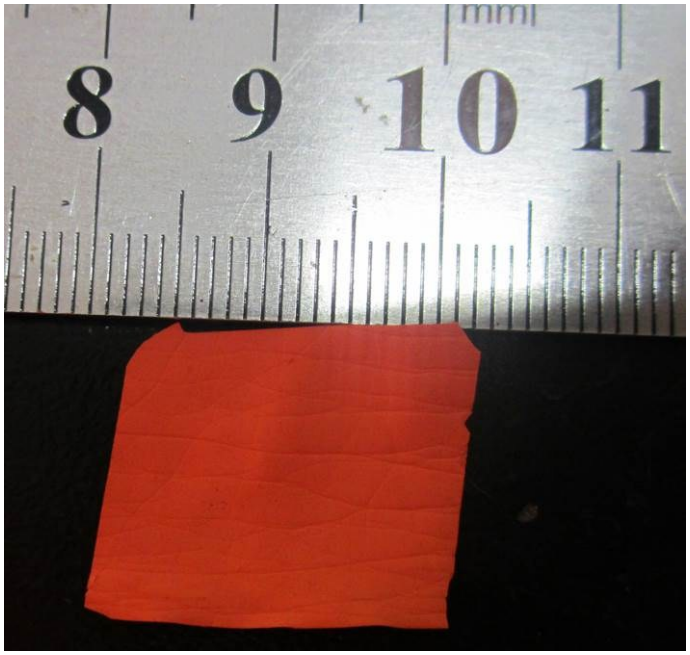

Fig. S1 The photo of Ta_3N_5 nonwoven cloth.

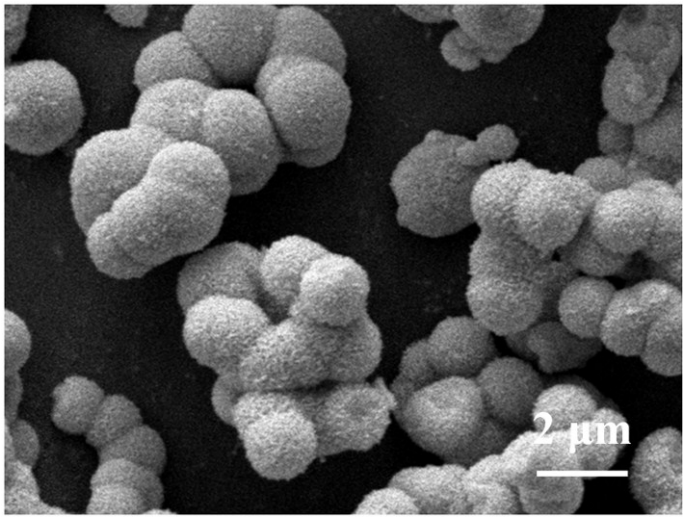

Fig. S2 SEM image of pure Bi_2MoO_6.

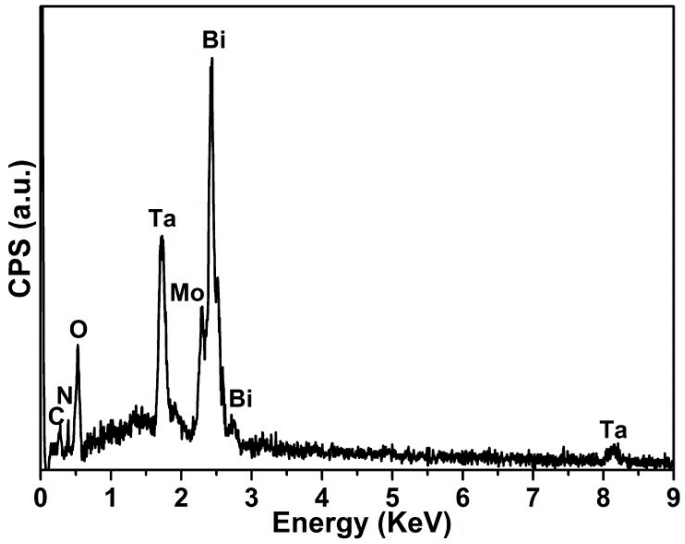

Fig. S3 EDS pattern of T-B.

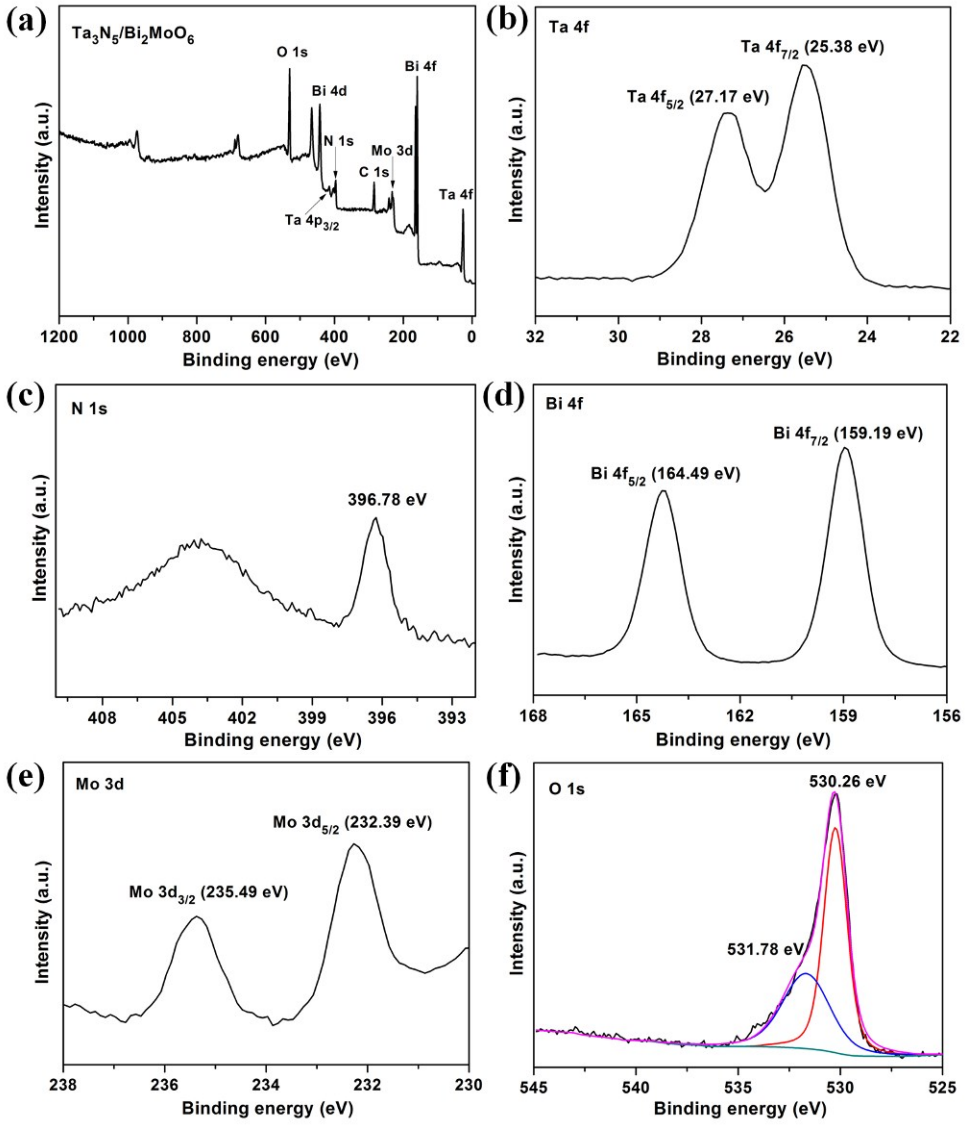

Fig. S4 (a) Survey XPS data of Ta_3N_5/Bi_2MoO_6; High-resolution XPS data of Ta 4f (b), N 1s (c), Bi 4f (d), Mo 3d (e), and O 1s (f).

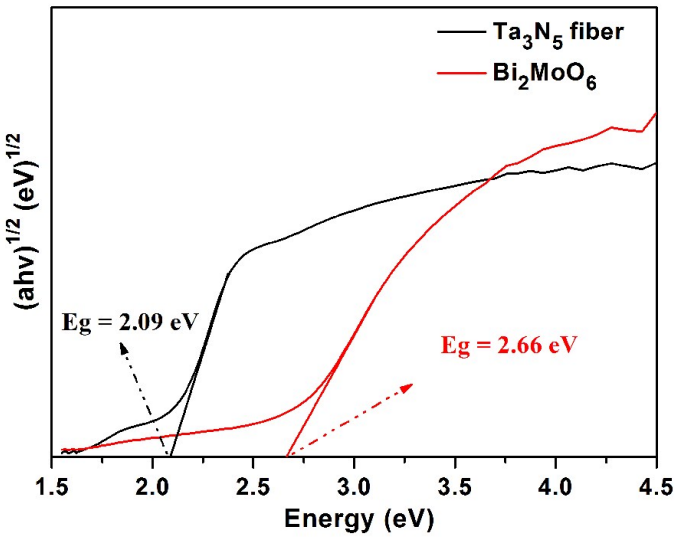

Fig. S5 A plot of $(\alpha h\nu)^{1/2}$ versus the bandgap (eV) for Ta_3N_5 and Bi_2MoO_6.

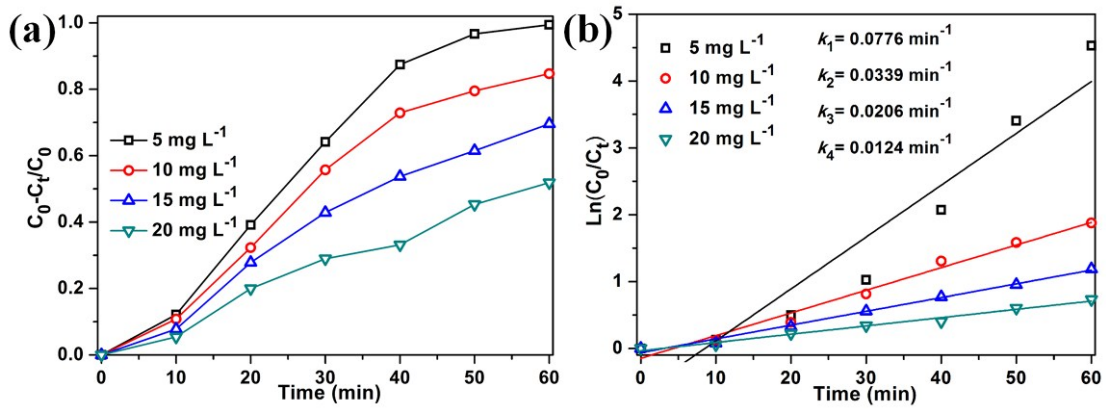

Fig. S6 The effect of initial concentrations of RhB (50 mL) on the photocatalytic performance of B-T heterojunction (15 mg) under visible-light irradiation ($\lambda > 400$ nm).

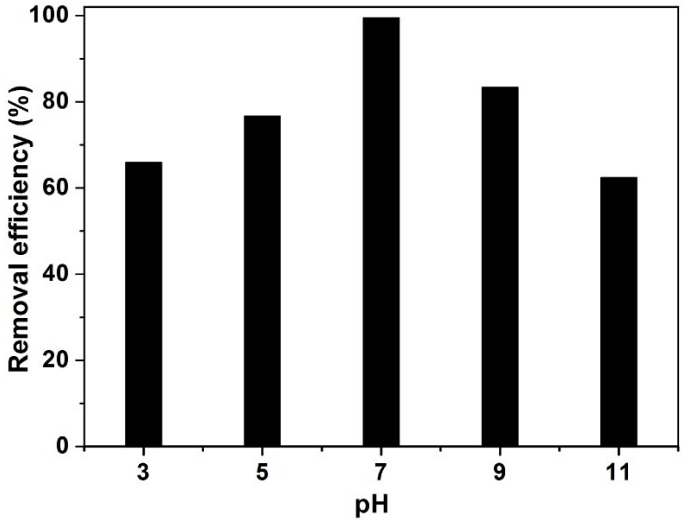

Fig. S7 The effect of pH on the photodegradation efficiency of RhB (5 mg L^{-1}, 50 mL) by B-T heterojunction (15 mg) after 60 min reaction.

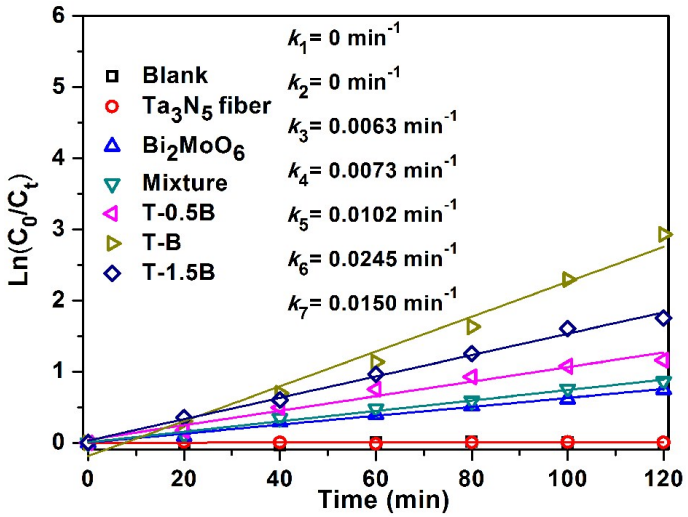

Fig. S8 Rate constants of photocatalytic degradation of 4-CP versus the exposure time under visible-light irradiation (λ > 400 nm), in the absence of photocatalysts and in the presence of as-prepared photocatalysts (15 mg).

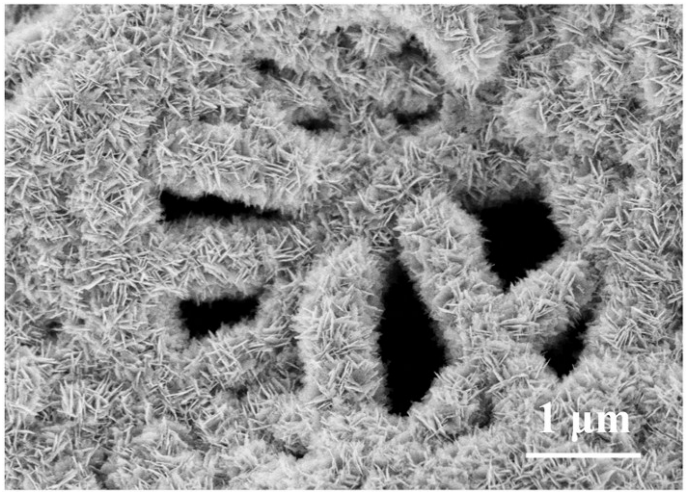

Fig. S9 SEM image of B-T after reaction.

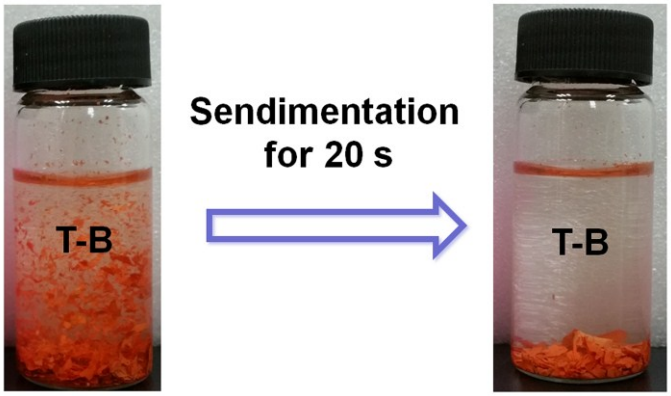

Fig. S10 The easy recycle of Ta_3N_5/Bi_2MoO_6 by a simple sendimentation.

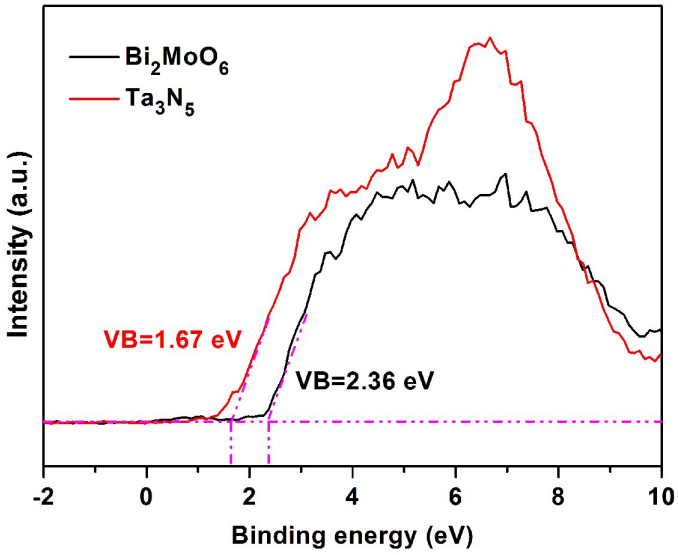

Fig. S11 VB XPS spectra of Bi_2MoO_6 and Ta_3N_5.

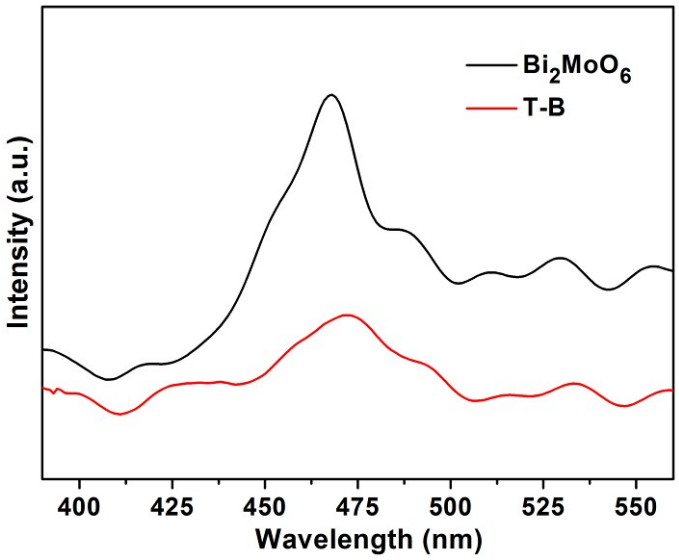

Fig. S12 Photoluminescence (PL) spectra of Bi_2MoO_6 and T-B with an excitation wavelength of 354 nm.

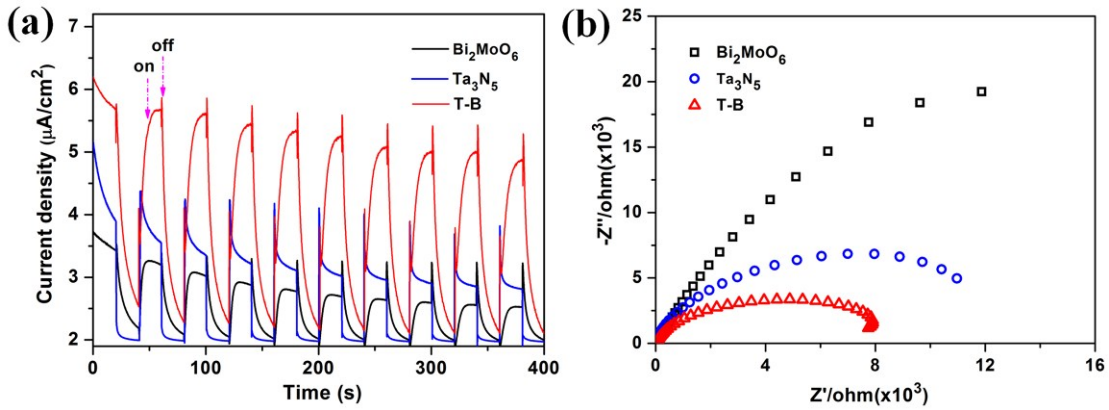

Fig. S13 (a) Transient photocurrent responses and (b) EIS Nynquist plots of Bi_2MoO_6, Ta_3N_5 and T-B under visible-light irradiation ($\lambda > 420$ nm).