Supporting information

Durable release of $SO_4^{\cdot-}$ over g-C_3N_4/ZnO/Fe(III) system mediated by persulfate: Fe(III)/Fe(II) cycling and degradation pathway

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This file includes 1 tables and 4 figures available for further information addressing g-C_3N_4/ZnO/PS/Fe(III) photocatalytic systems parameters, experimental data and other additional data.

Figure caption:

Table.S1 Kinetic fit parameters for RhB degradation by different system

Fig.S1 Variation of RhB concentration (C/C_0) with reaction time in different system. Reaction conditions: RhB (20 mg/L); PS (2.0 mM); Fe(III) (0.05 mM); Fe(II) 0.05 mM); temperature keep on 25 ℃.

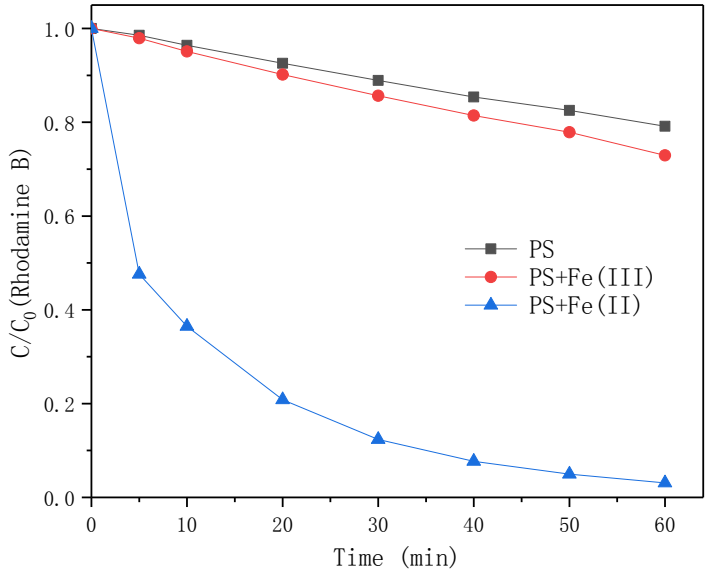
Fig.S2 (a) Quasi-first-order and (b) Pseudo-second-order kinetic fit of different system for degradation of RhB

Fig.S3 The influence of catalyst dosage on the g-C_3N_4/ZnO/PS/Fe(III) system. Reaction conditions: visible light (500 W); PS (2.0 mM); Fe(III) (0.05 mM); temperature keep on 25 ℃; initial pH 2.9.

Fig. S4 The possible reasons for the influence of light intensity on the system

Table.S1 Kinetic fit parameters for RhB degradation by different system

System	Quasi-first-order kinetic		Pseudo-second-order kinetic	
	$K_1(min^{-1})$	R_1^2	$K_2(min^{-1})$	R_2^2
PS	0.00388	0.99944	0.00204	0.99892
g-C_3N_4/ZnO	0.0052	0.98826	0.00292	0.99278
g-C_3N_4/ZnO/PS	0.02084	0.97562	0.01527	0.99524
g-C_3N_4/ZnO/PS/Fe(III)	0.03311	0.98182	0.03671	0.86956



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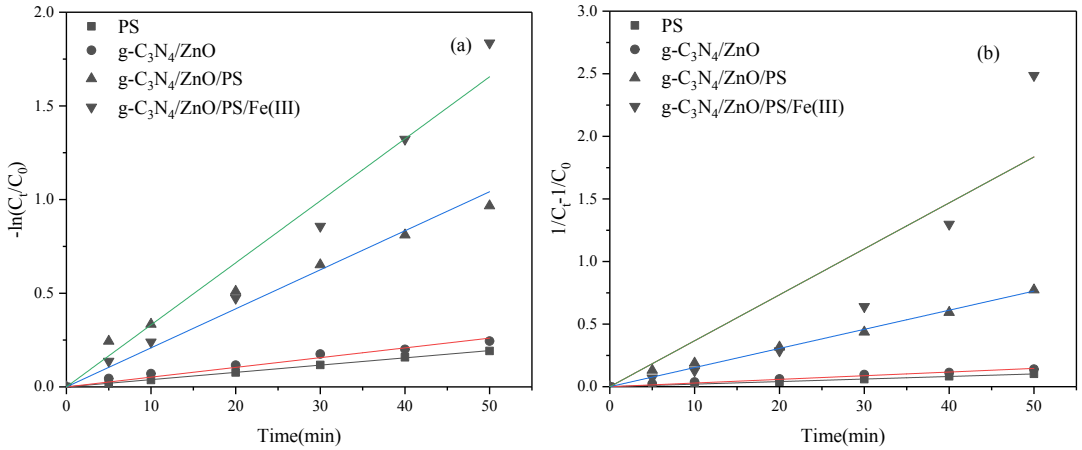

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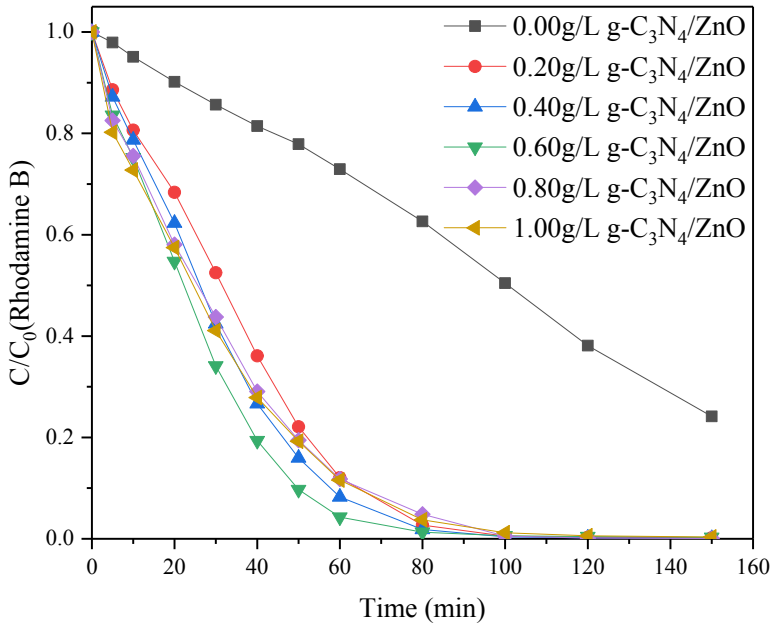
43 **Fig.S2 (a) Quasi-first-order and (b) Pseudo-second-order kinetic fit of different**
44 **system for degradation of RhB**



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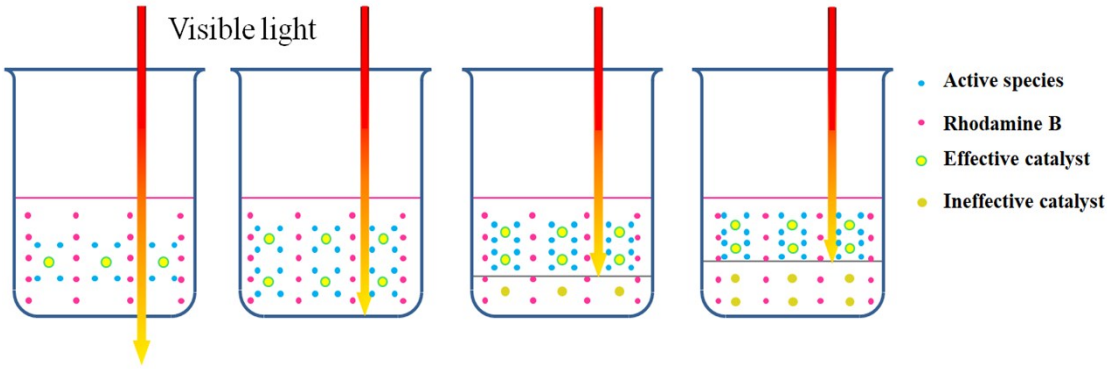

Fig.S4 The Possible reasons for the influence of light intensity on the system