

Supporting Information for

Enhancement of photo-Fenton catalytic activity with the assistance of Oxalic acid on the Kaolin-FeOOH system for degradation of organic dyes

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Supplementary Figures

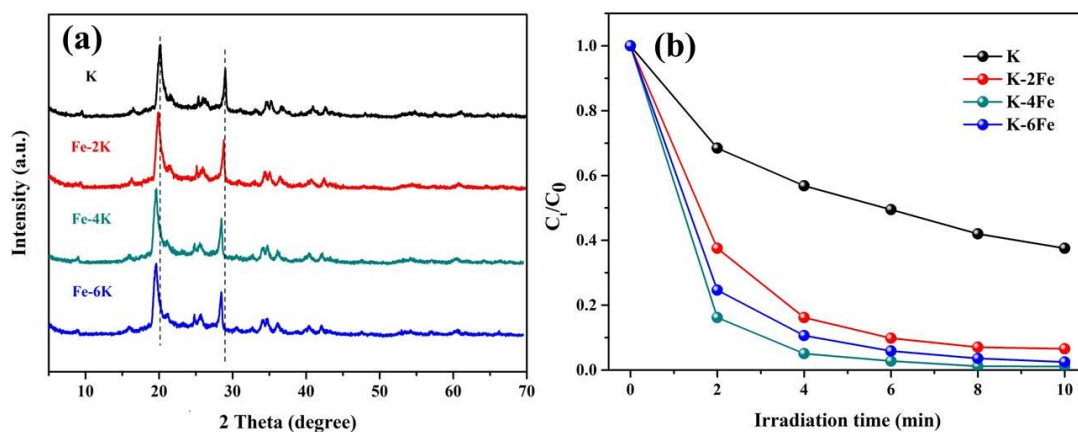


Fig. S1 (a) XRD patterns of the K-xFe catalyst samples ($x=0, 2, 4, 6$), (b) the RhB degradation of the K-xFe catalyst samples ($x=0, 2, 4, 6$) ((catalysts) = 1.0 g/L, pH = 7.2, (oxalic acid) = 1.0 mM, (H_2O_2) = 0.5 mM).

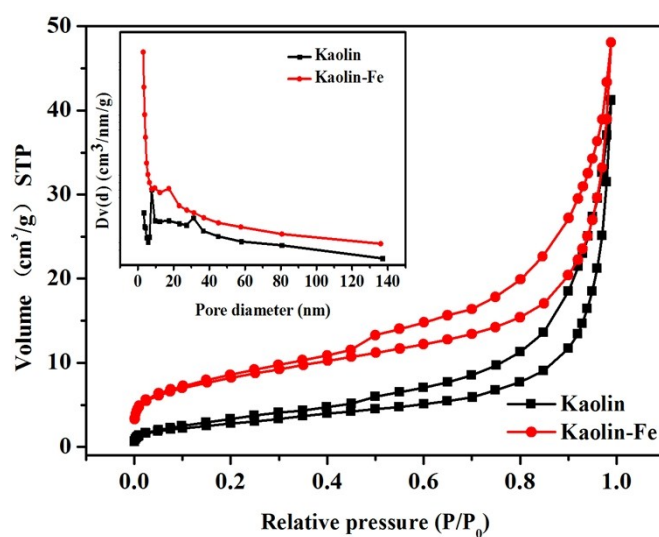


Fig. S2 N_2 adsorption-desorption isotherms of the kaolin and K-Fe.

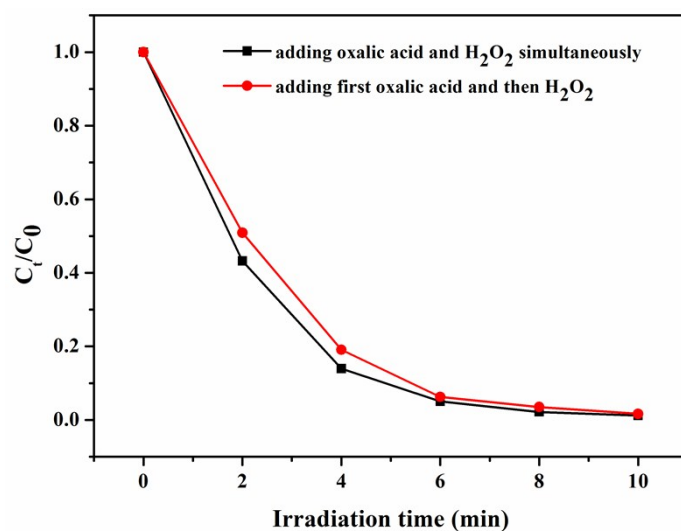


Fig. S3 The effect of the adding order of H₂O₂ and oxalic acid on the degradation of RhB ((K-Fe) = 1.0 g/L, pH = 7.2, (oxalic acid) = 1.0 mM, (H₂O₂) = 0.5 mM).

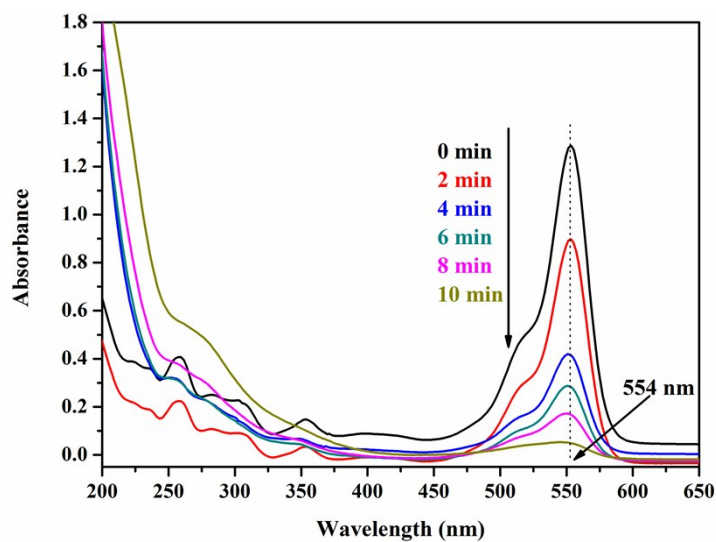


Fig. S4 UV-vis absorption spectra of RhB of different irradiation time over the K-Fe catalyst ((K-Fe) = 1.0 g/L, pH = 7.2, (oxalic acid) = 1.0 mM, (H₂O₂) = 0.5 mM).

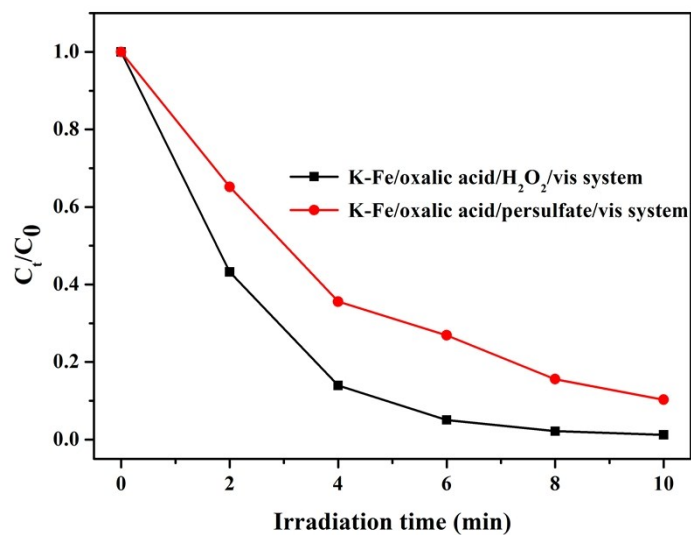


Fig. S5 The effect of different oxidants on the degradation of RhB ((K-Fe) = 1.0 g/L, pH = 7.2, (oxalic acid) = 1.0 mM, (H₂O₂ or persulfate) = 0.5 mM).

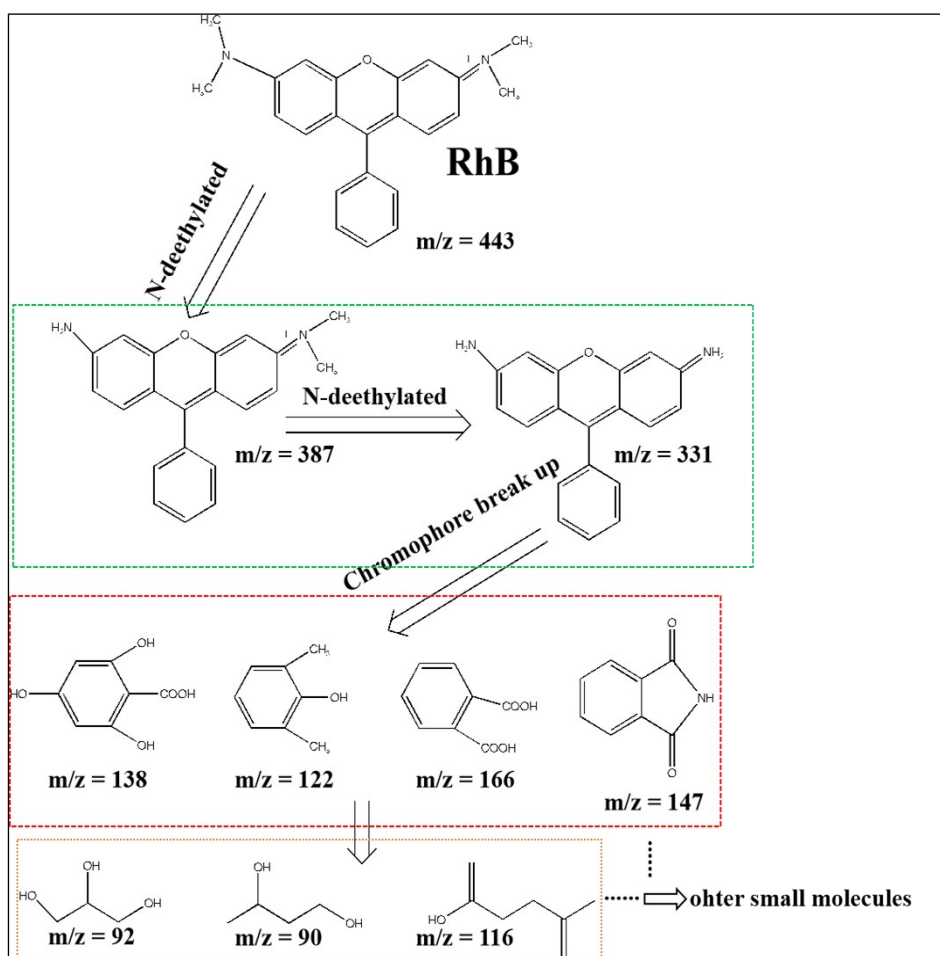


Fig.S6 A possible degradaiton pathways of RhB in K-Fe/oxalic acid/H₂O₂/vis system.

Table S1 The variation of pH value at different irradiation time.

Irradiation time (min)		The pH value of the solution				
0	3.3	5.7	7.2	9.6	10.8	
2	2.6	3.9	5.6	7.2	8.0	
4	2.8	4.2	5.2	6.3	6.9	
6	3.3	4.4	4.9	6.1	6.3	
8	3.5	4.3	4.7	5.9	6.4	
10	3.4	4.2	4.6	5.8	6.2	