Electronic Supplementary Material (ESI) for RSC Advances

Magnetite as a heterogeneous electro Fenton catalyst for the removal of Rhodamine B from aqueous solution

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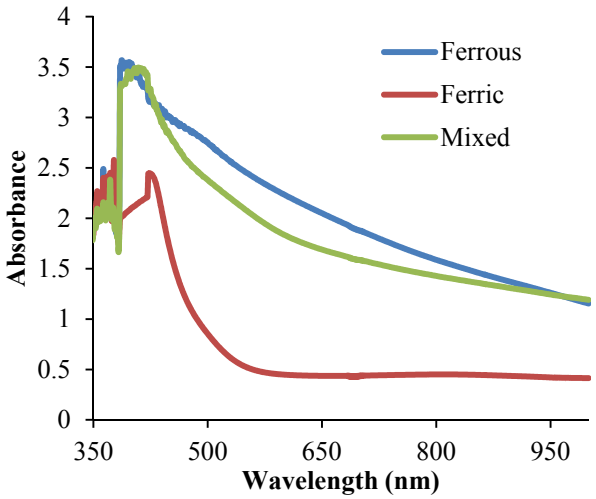
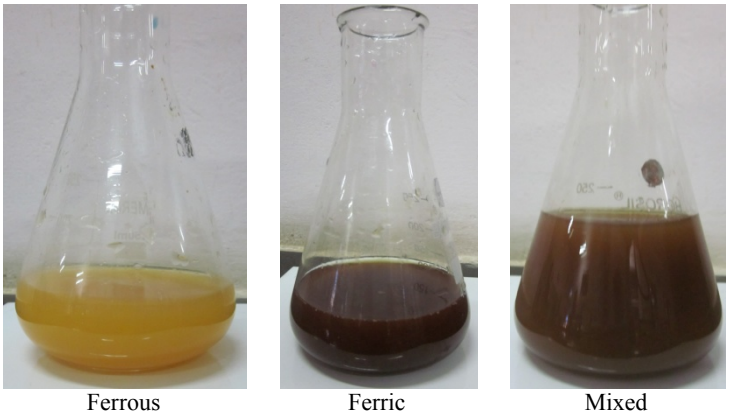


Fig. S1 UV Visible spectra of ferrous, ferric and mixed solutions



Ferrous Ferric Mixed

Fig. S2 Color of ferrous, ferric and mixed solutions

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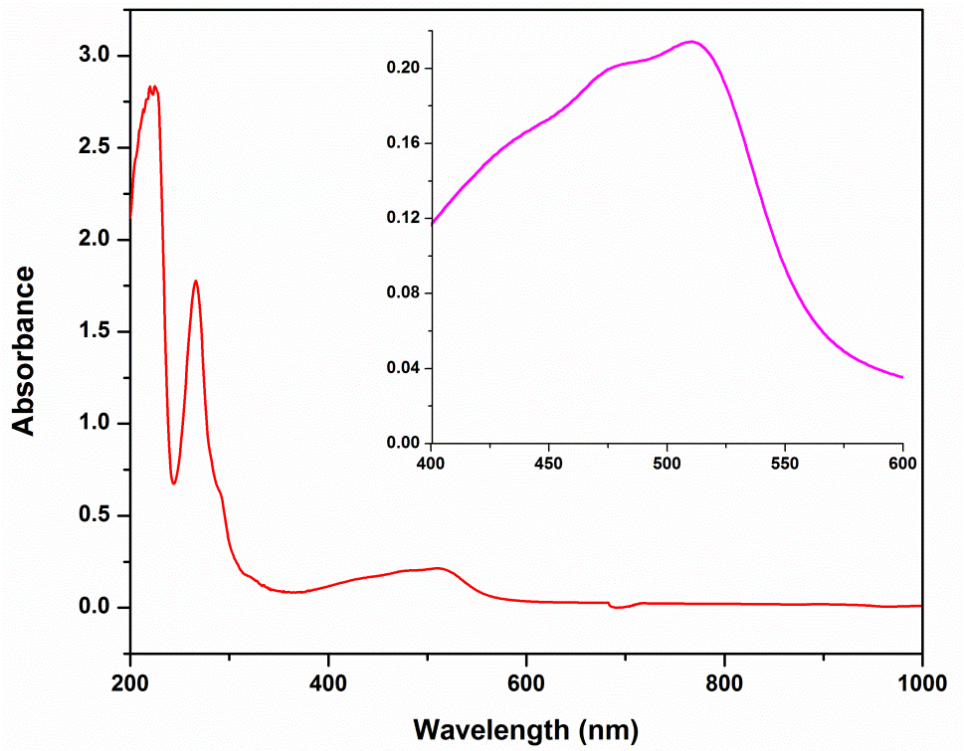

Fig. S3 UV Visible spectra of the solution prepared according to modified 1,10-phenanthroline method

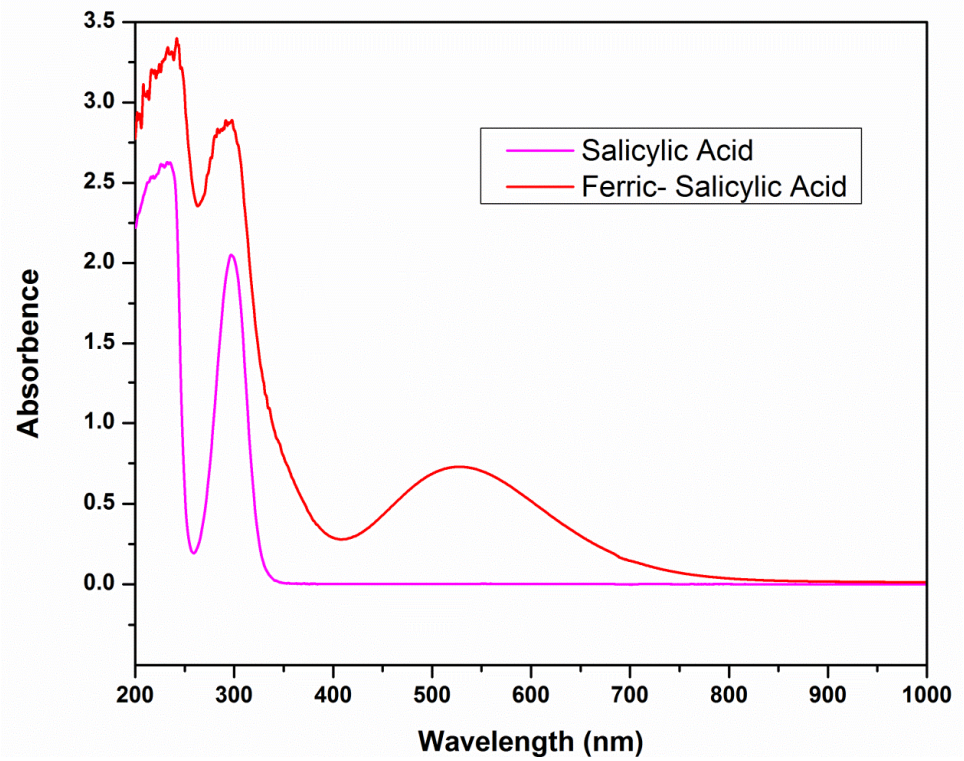

Fig. S4 UV Visible spectra of salicylic acid and ferric-salicylic acid solution

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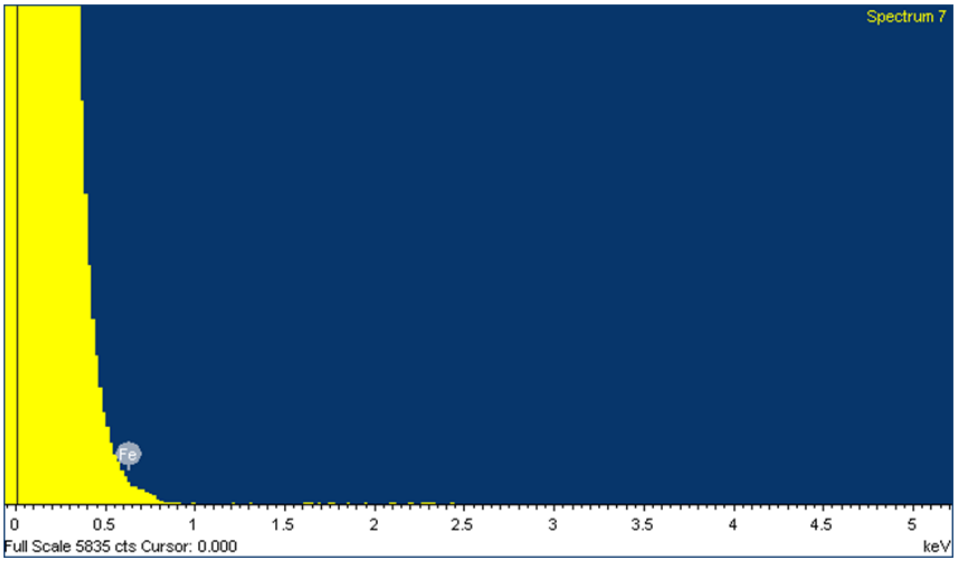

Fig. S5 EDX spectra of prepared catalyst

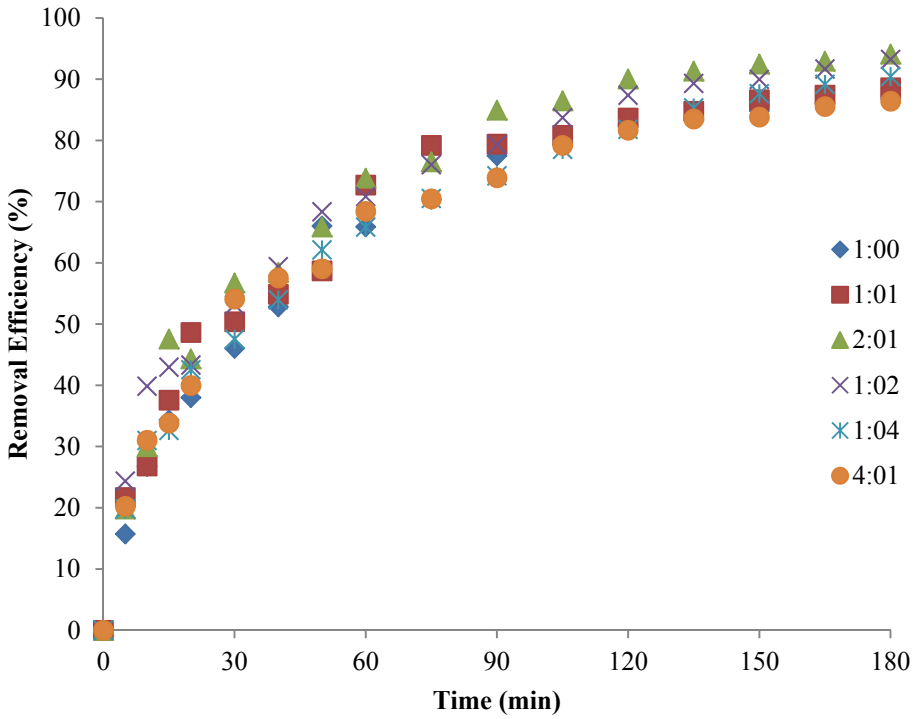

Fig. S6 RhB removal kinetics of magnetites at various ferrous/ferric concentrations

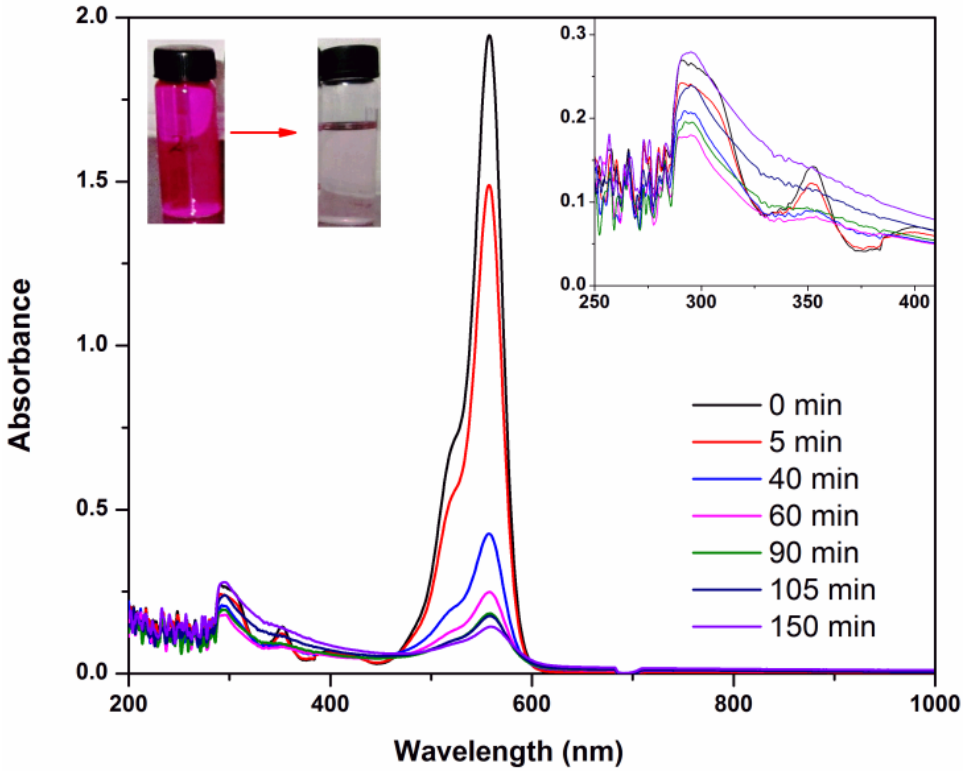

Fig. S7 UV Visible absorption spectra of RhB at various electrolysis times (Inset: Initial and Final color of RhB solution)

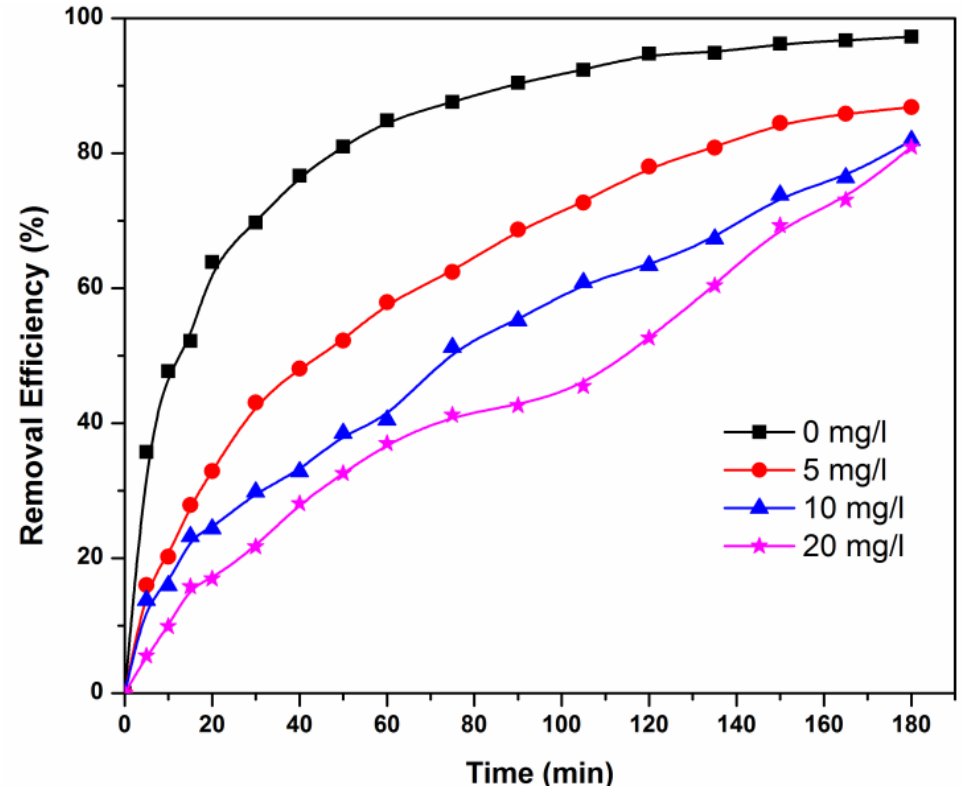

Fig. S8 Effect of chloride ion concentration on RhB removal kinetics

(Experimental conditions: initial RhB concentration of 10 mg/l, solution pH 3, catalyst concentration of 10 mg/l, applied voltage of 8 V, electrode area of 25 cm^2 and inner electrode spacing of 4 cm)

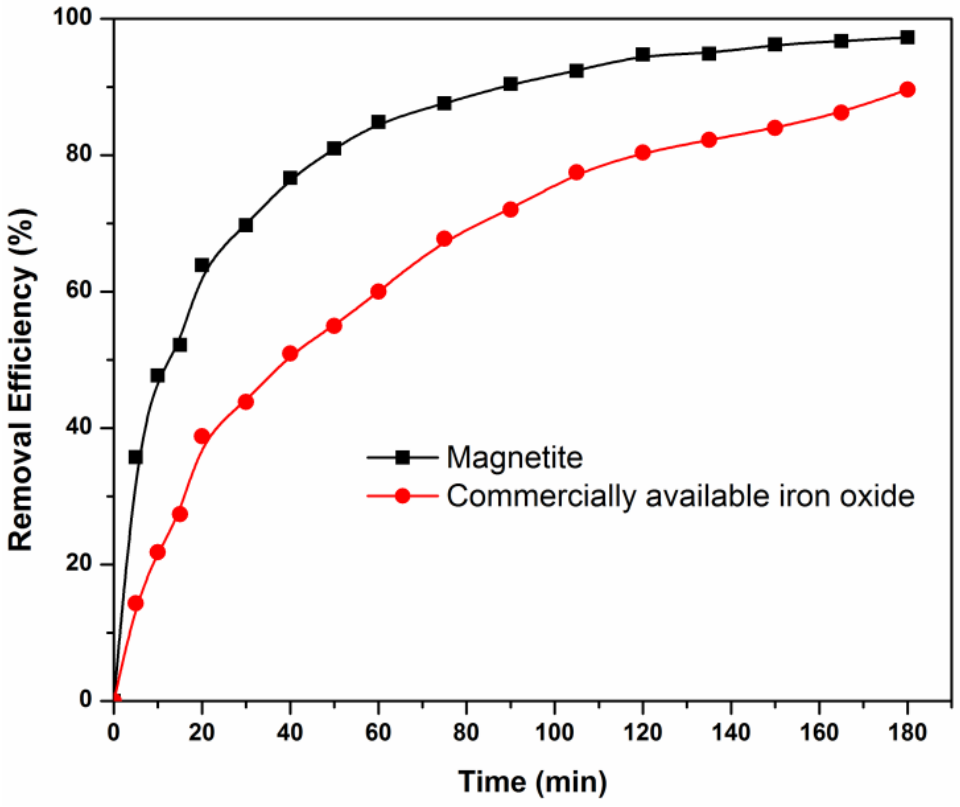

Fig. S9 RhB removal efficiencies of commercially available iron oxide and magnetite

(Experimental conditions: initial RhB concentration of 10 mg/l, solution pH 3, catalyst concentration of 10 mg/l, applied voltage of 8 V, electrode area of 25 cm^2 and inner electrode spacing of 4 cm)