

Supporting Information

Enhanced congo red dye removal from aqueous solutions using iron nanoparticles: adsorption, kinetics, and equilibrium studies

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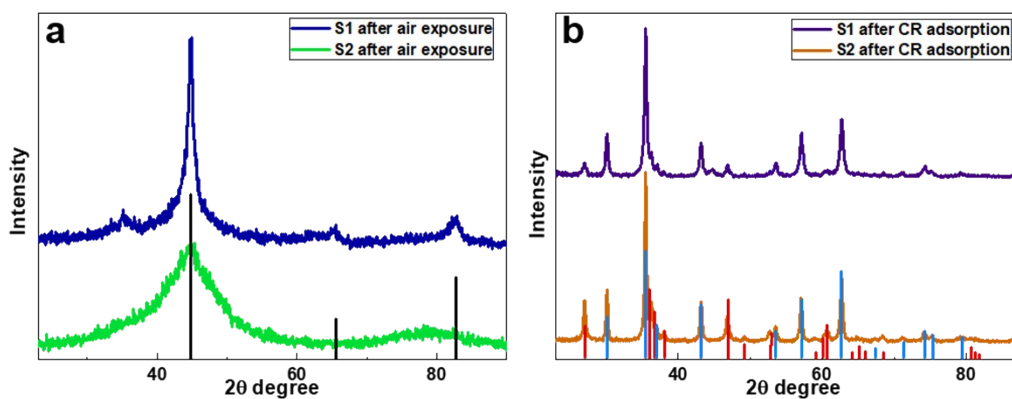


Figure S11. XRD patterns of S1 and S2 samples exposed for 5 days. b) XRD patterns of S1 (orange) and S2 (purple) after CR adsorption. Red and blue lines mark the powder diffraction data for lepidocrocite (FeOOH) and magnetite (Fe₃O₄), respectively.

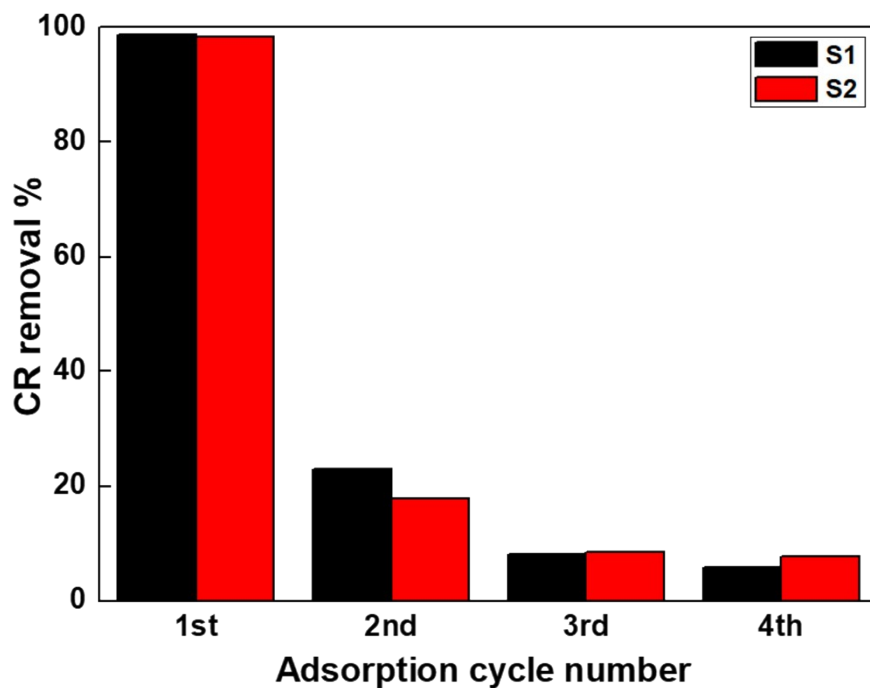


Figure S12. CR removal efficiency versus number of adsorption cycles of S1 and S2.

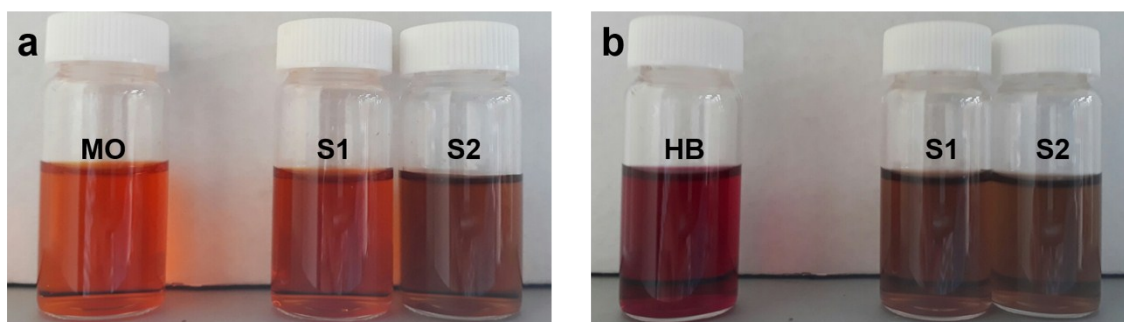


Figure S13. a) 125 ppm of methyl orange (MO) solution and the solution after dye adsorption using S1 and S2 nanoparticles. b) 125ppm of hydroxyl-naphthol blue (HB) solution and after dye adsorption using S1 and S2 nanoparticles.

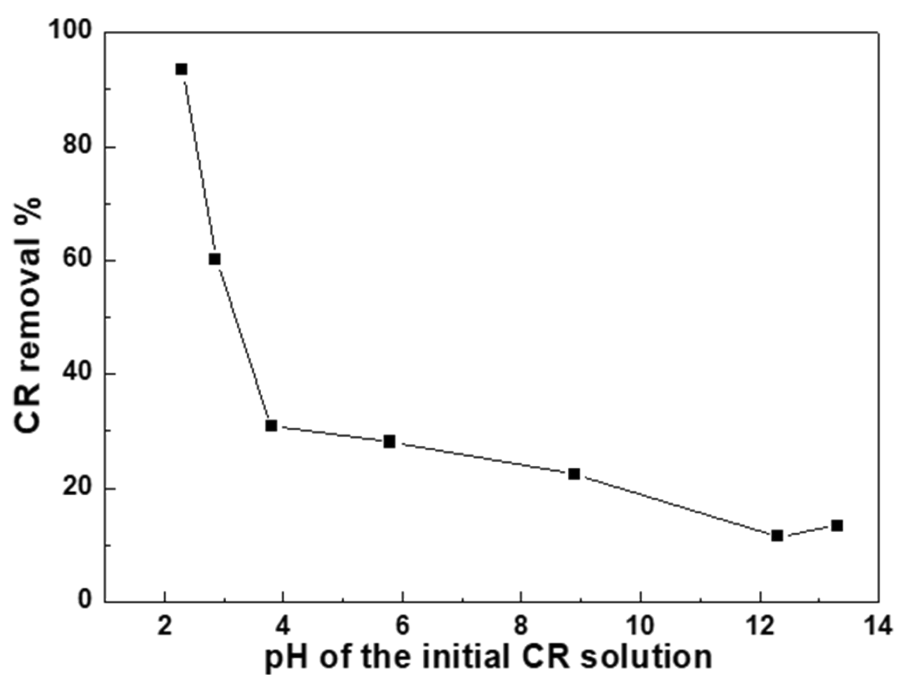


Figure S14. Effect of the pH value of the CR solution on the adsorption of CR by (S2) amorphous iron nanoparticles.