Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A

Electronic Supplementary Information:

Synthesis of porous magnetic ferrite nanowires containing Mn and their application in water treatment

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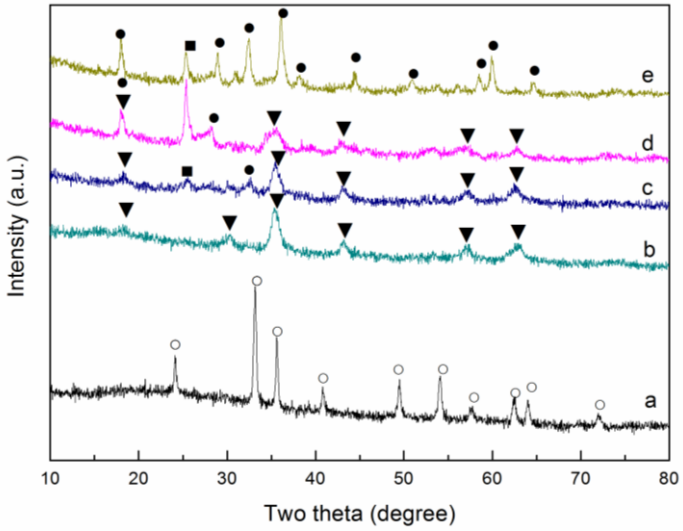

Fig. S1 XRD patterns of the calcined products with different Fe(II)/Mn(II) molar ratios: (a) Fe(II); (b) Fe(II)/Mn(II) = 1:1; (c) Fe(II)/Mn(II) = 1:2; (d) Fe(II)/Mn(II) = 1:3; (e) Mn(II) (○ α-Fe_2O_3; ▼ manganese ferrite; ■ Mn_2O_3; ● Mn_3O_4)

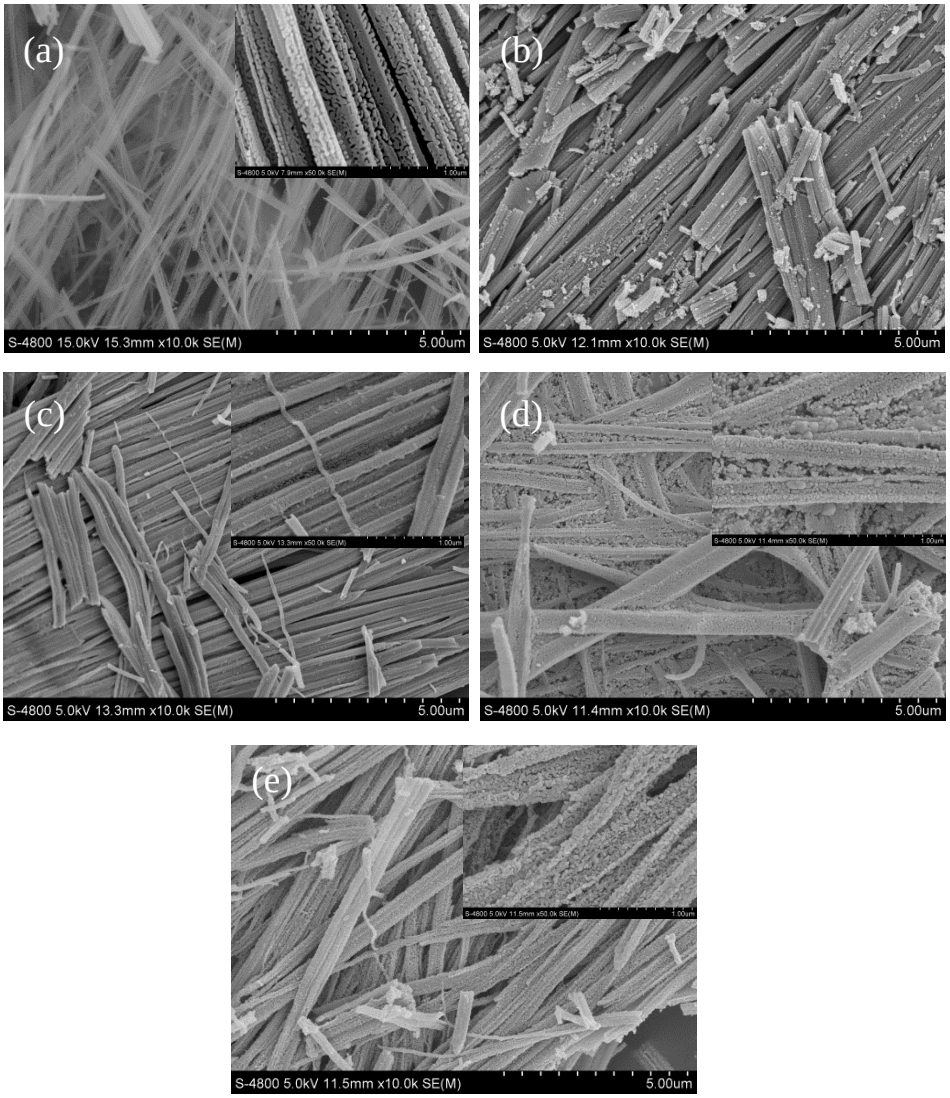

Fig. S2 SEM images of the calcined products with different Fe(II)/Mn(II) molar ratios: (a) Fe(II); (b) Fe(II)/Mn(II) = 1:1; (c) Fe(II)/Mn(II) = 1:2; (d) Fe(II)/Mn(II) = 1:3; (e) Mn(II)

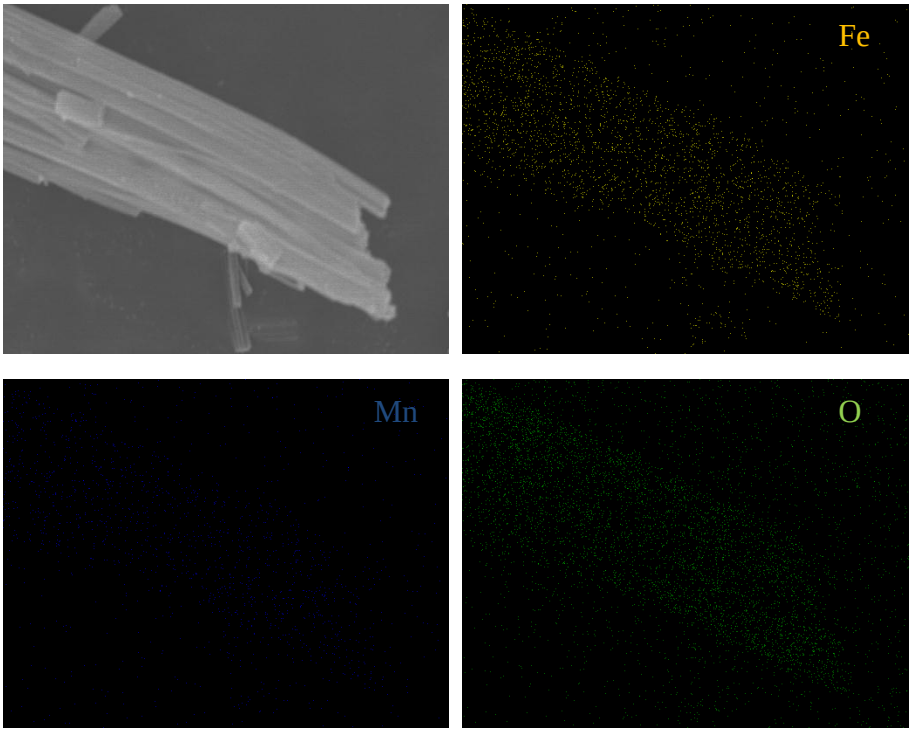

Fig. S3 Low-magnification SEM image of $MnFe_2O_4$ and scanning SEM elemental distribution mapping for Mn, Fe and O.

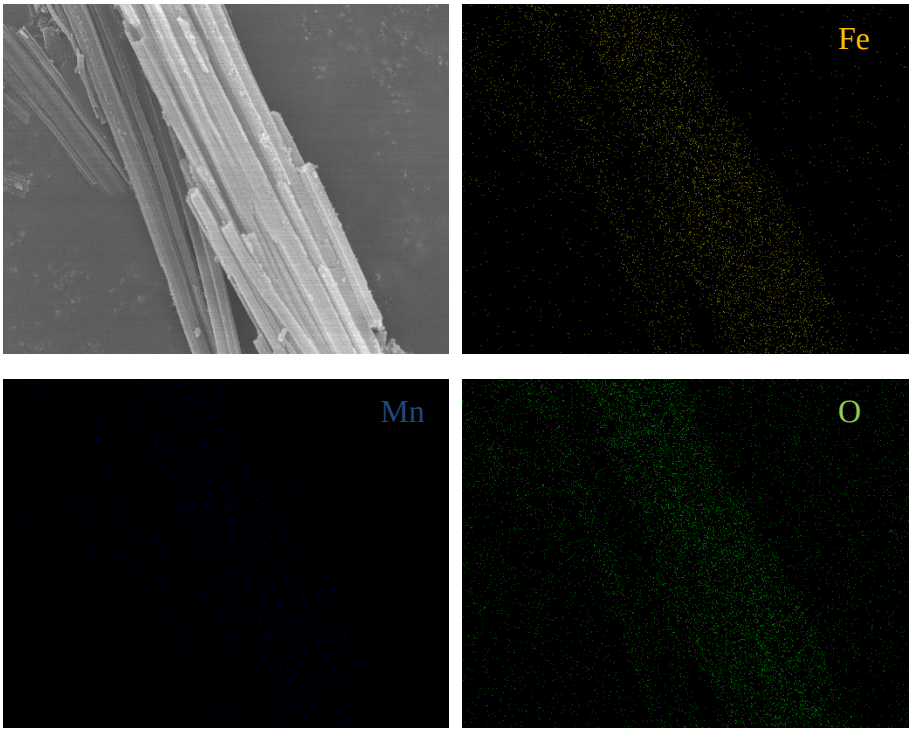

Fig. S4 Low-magnification SEM image of Mn doped Fe_3O_4 and scanning SEM elemental distribution mapping for Mn, Fe and O.

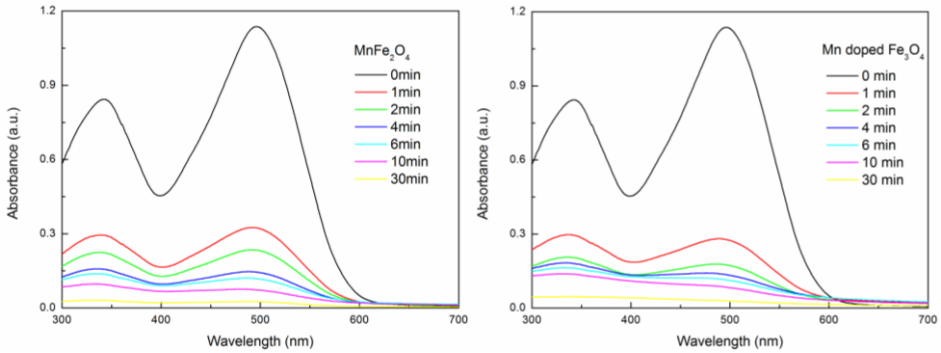

Fig. S5 UV-Vis absorption spectra of the solution of Congo red in the presence of the $MnFe_2O_4$ and Mn doped Fe_3O_4 at different time intervals.

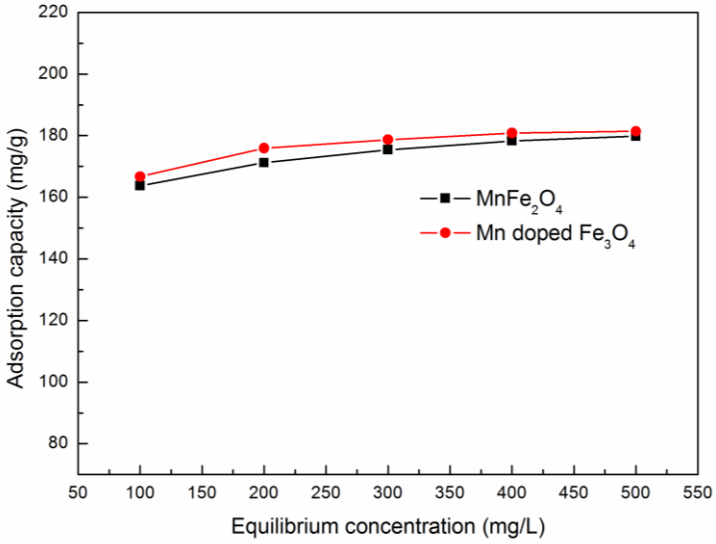

Fig. S6 Adsorption isotherms of Congo red using the porous $MnFe_2O_4$ and Mn doped Fe_3O_4 nanowires.