Electronic Supplementary Material (ESI) for Catalysis Science & Technology.

Fe/Fe_3C@N-doped porous carbon hybrids derived from nano-scale MOFs: robust and enhanced heterogeneous catalyst for peroxymonosulfate activation

Supplementary Information

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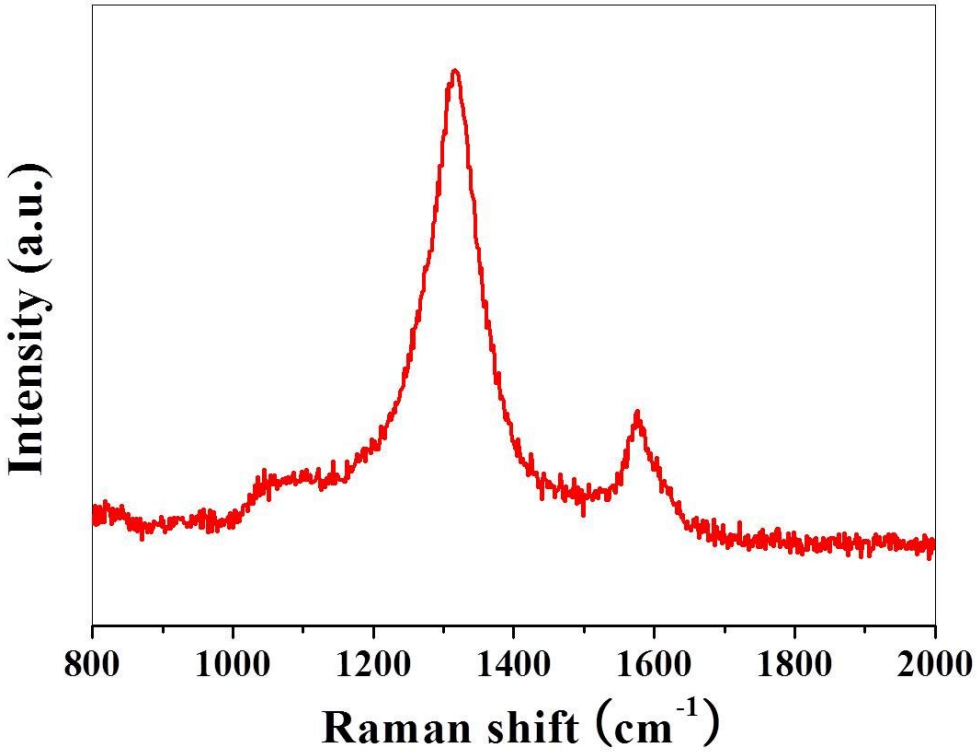

Fig. S1 Raman spectrum of Fe/Fe_3C@NC samples.

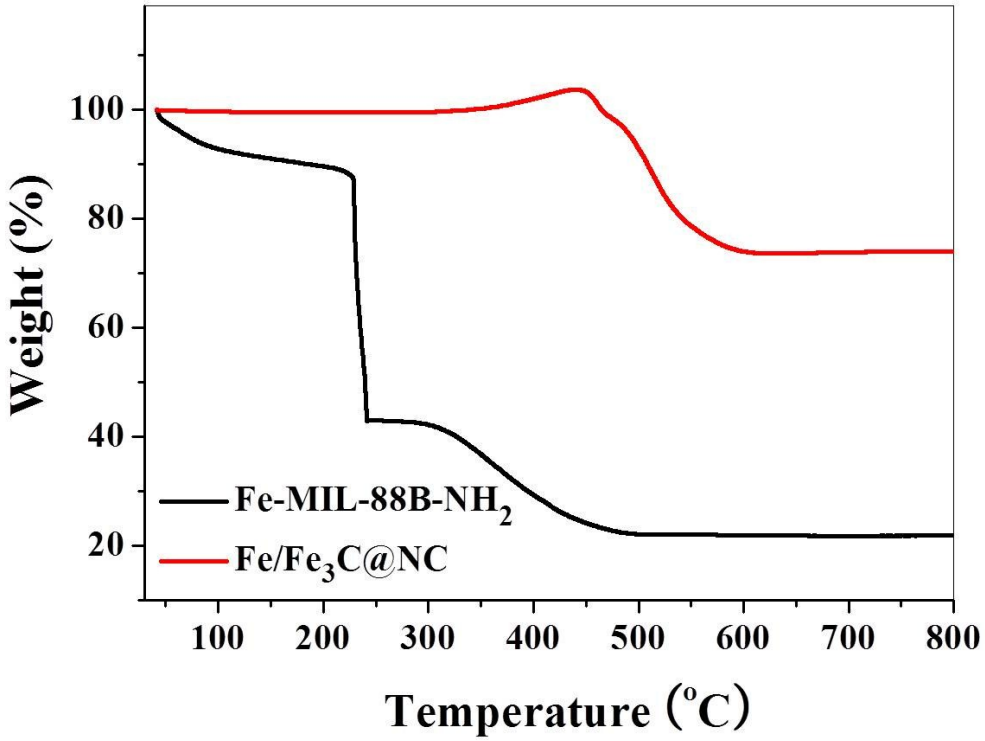

Fig. S2 TGA curves of Fe-MIL-88B-NH_2 and Fe/Fe_3C@NC samples.

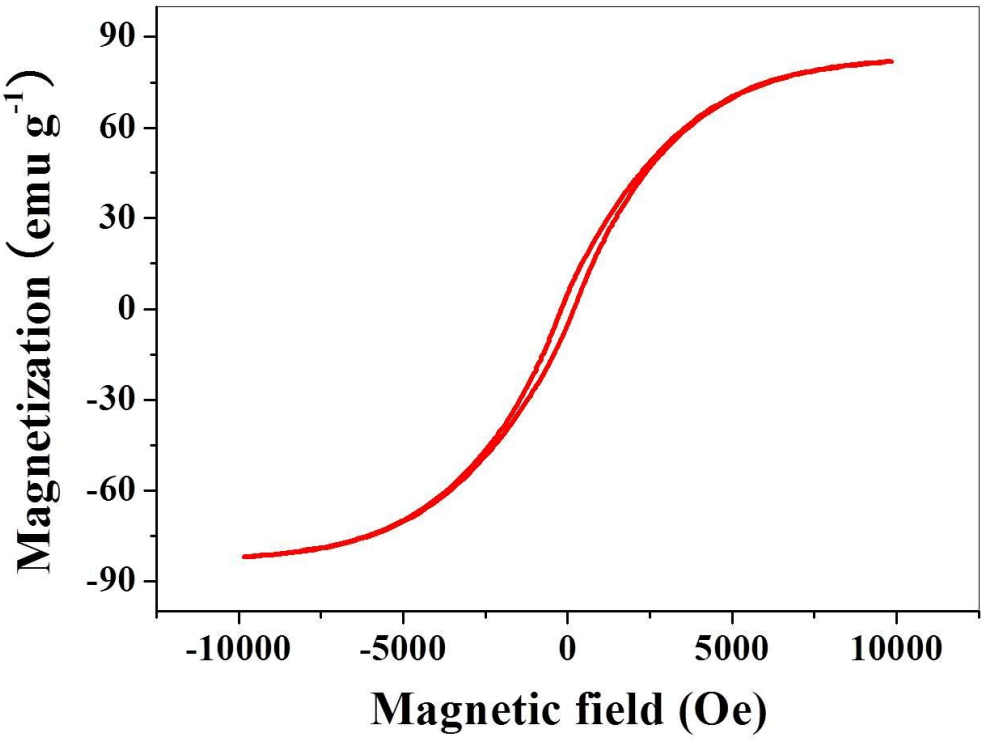

Fig. S3 Magnetization curves of Fe/Fe_3C@NC hybrids.

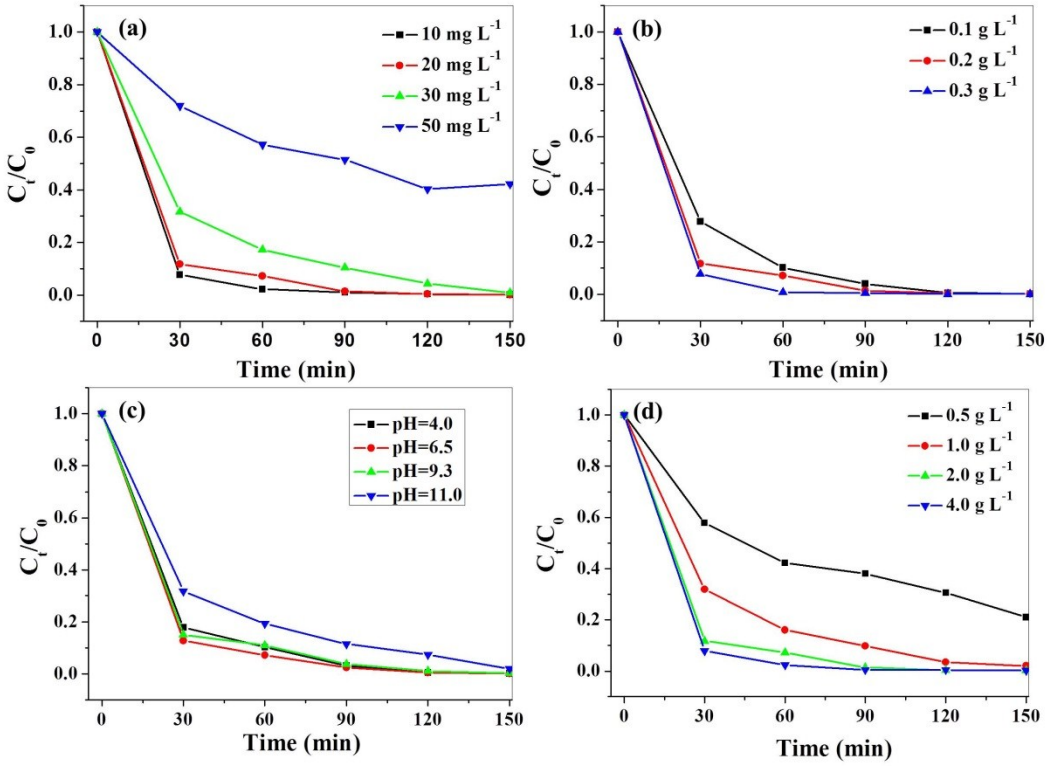

Fig. S4 Effects of initial 4-CP concentration (a), catalyst dosage (b), initial solution pH (c), and PMS concentration (d) on 4-CP degradation.

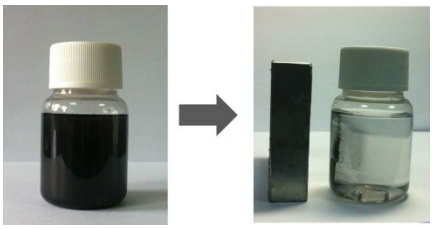

Fig. S5 Pictures show the magnetic separation of the catalyst in mixture

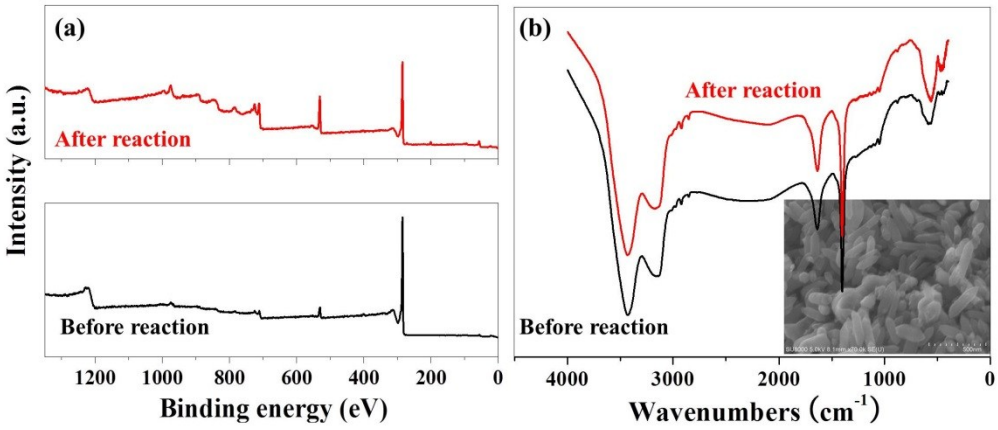

Fig. S6 XPS (a) and FTIR spectra (b) of catalyst before and after use; the inset in (b) is the SEM image of catalyst after use.

Table S1 Comparison of different catalysts under same conditions

Catalyst	Concentration of 4-CP	Dosage of catalyst	Dosage of PMS	Removal of 4-CP within 90 min	reference
Fe/Fe_3C@NC	20 mg L^{-1}	0.2 g L^{-1}	2 g L^{-1}	99%	This work
Co_3O_4	20 mg L^{-1}	0.2 g L^{-1}	2 g L^{-1}	40%	This work
Fe_3O_4	20 mg L^{-1}	0.2 g L^{-1}	2 g L^{-1}	17%	This work
Carbon@Co	20 mg L^{-1}	0.2 g L^{-1}	2 g L^{-1}	96%	1
N-doping G	20 mg L^{-1}	0.2 g L^{-1}	2 g L^{-1}	55%	1

[1] T. Zeng, H. Y. Zhang, Z. Q. He, J. M. Chen, S. Song, Sci Rep. **2016**, 6,33348.