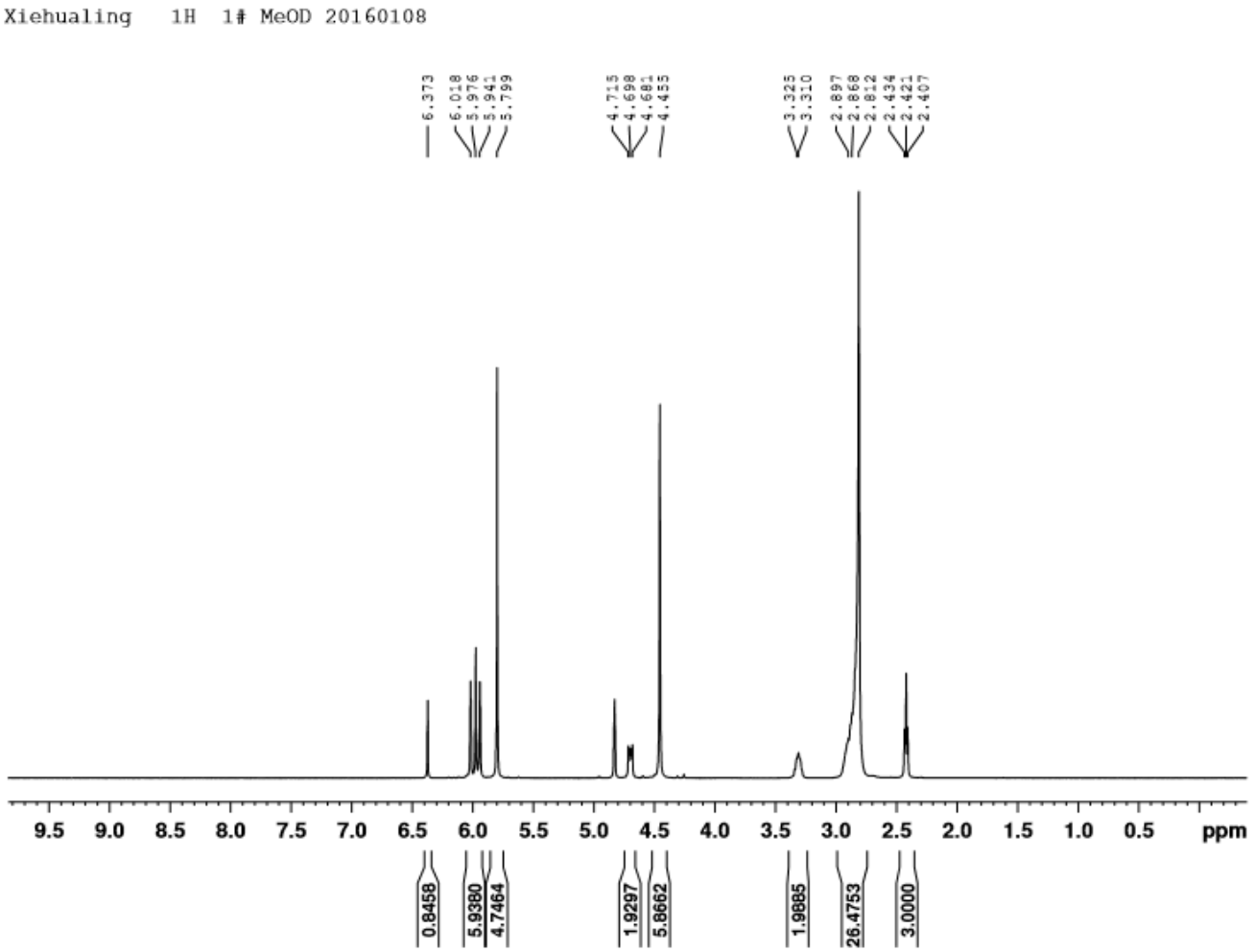


Fig. 1S Hydrogenous nuclear magnetic resonance spectroscopy

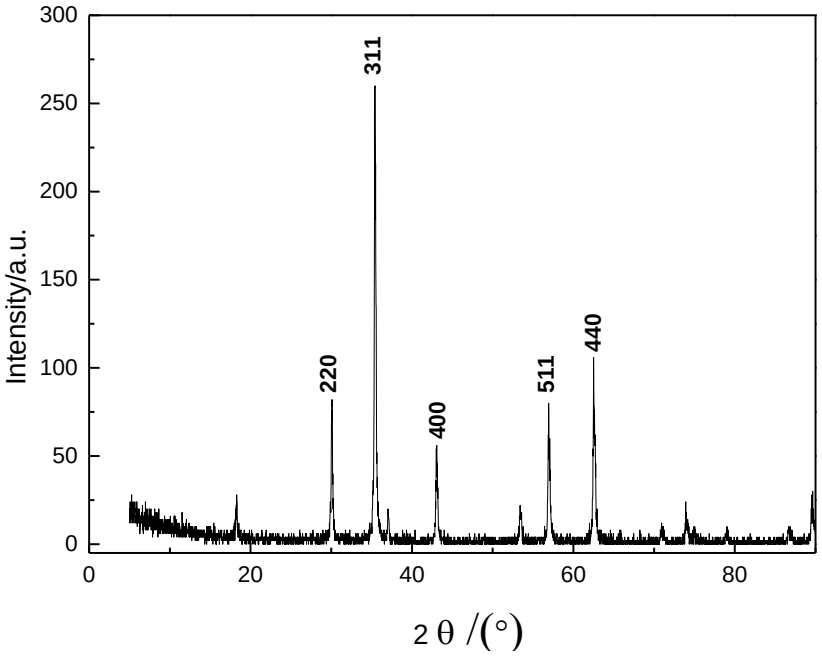


Fig. 2S wide-angle XRD patterns for Fe_3O_4.

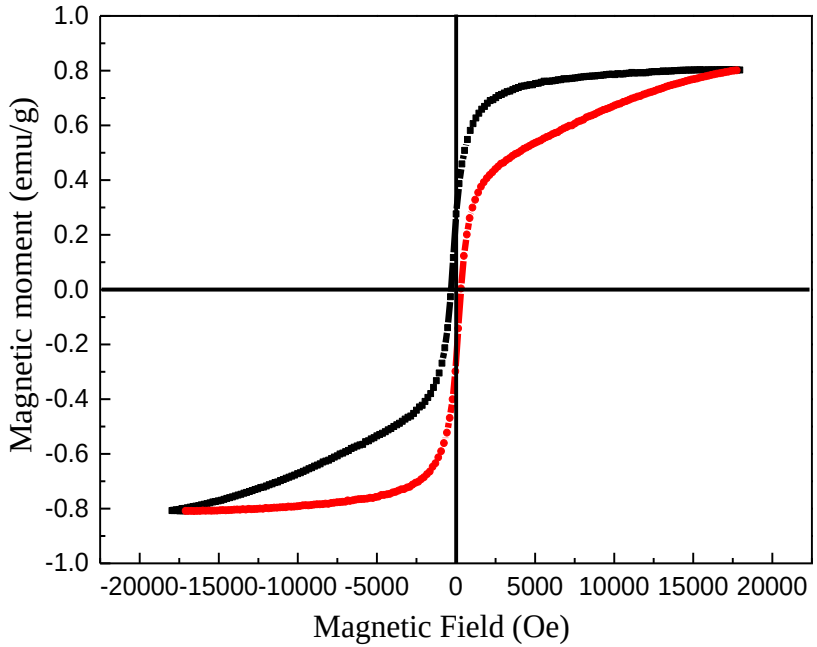


Fig. 3S Magnetic Hysteresis for MMS at 293K.

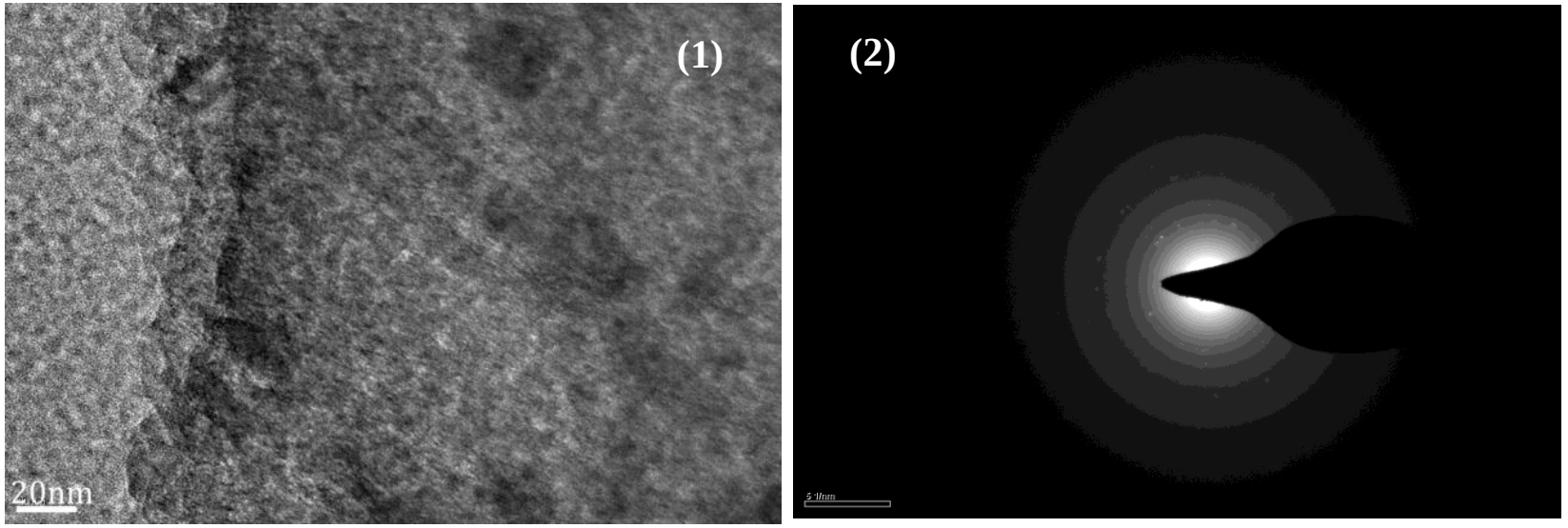


Fig. 4S TEM images of MMIOC for MMS.

元素	重量	原子	
	百分比	百分比	
O K	66	79.9	
Si K	24.6	16.9	
Fe L	9.4	3.2	
总量	100.00	100	

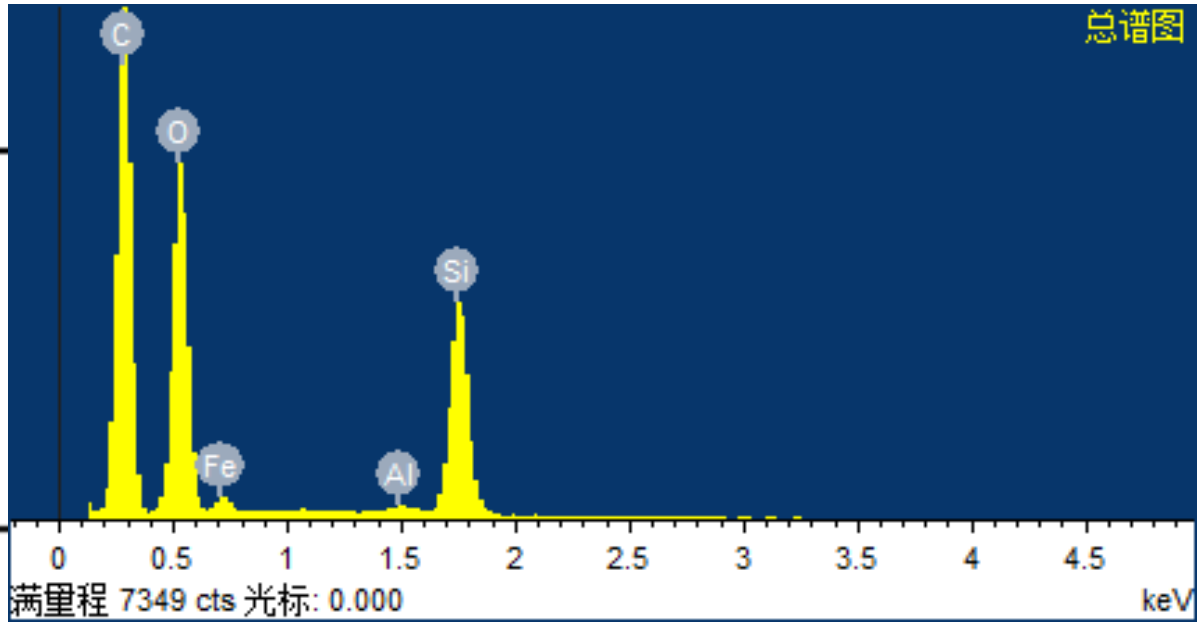


Fig. 5S EDS of MMIOC for MMS

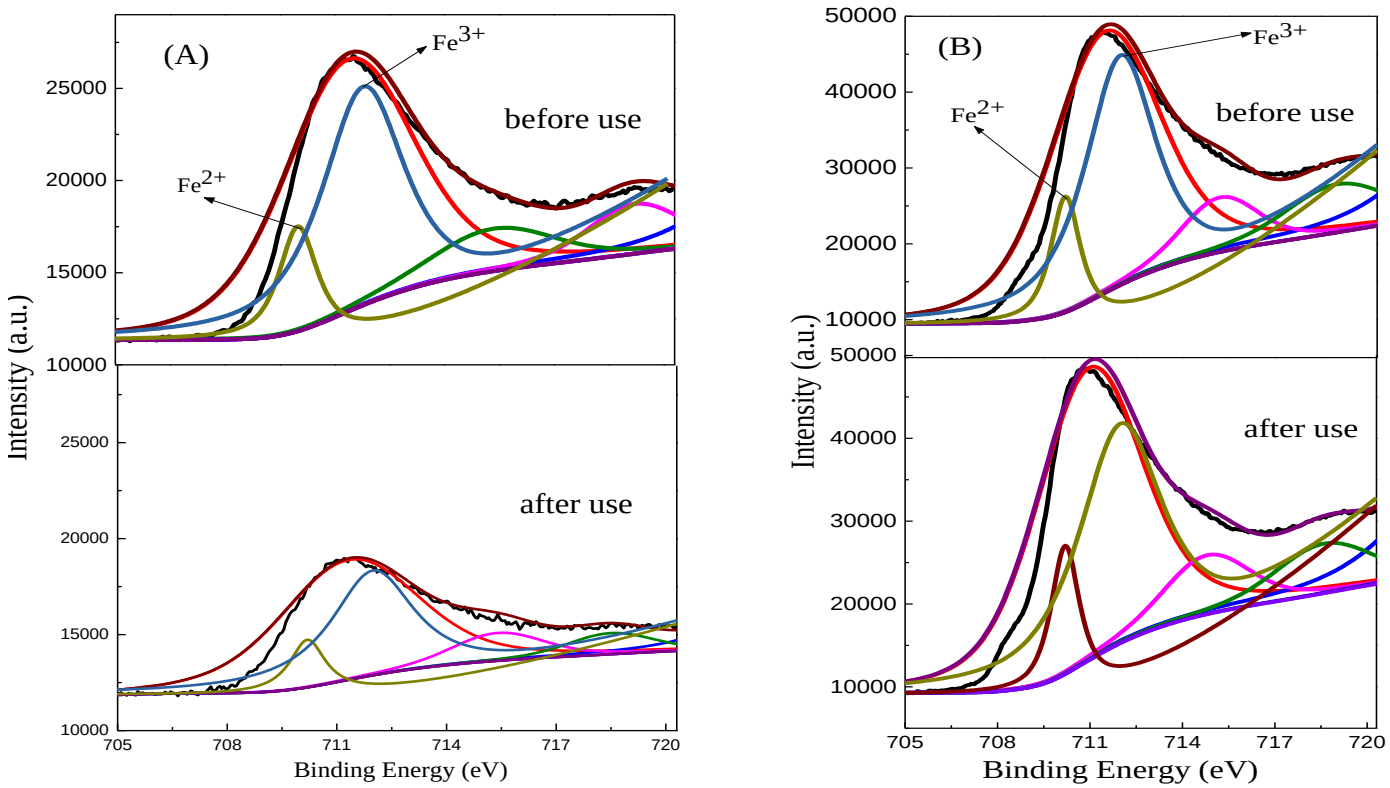


Fig. 6S Fe $2p_{3/2}$ XPS spectra for (A) MMS and (B) Fe_3O_4

Table 1S Binding energies (B.E.) in eV (±0.1) for MMS and Fe_3O_4 before (B.U.) and after (A.U.) use

Catalysts	Si(2p)	O(1S)	Fe($2p_{3/2}$)			
			Fe(III)	%	Fe(II)	%
MMS(B.U.)	154	532.75	711.25	85%	710	15%
MMS(A.U.)	154	532.60	712.12	90%	710.39	10%
Fe_3O_4(B.U.)	~	530.5	714.66	57.81%	711.49	42.19%
Fe_3O_4(A.U.)	~	530.1	712.61	67%	710.25	33%

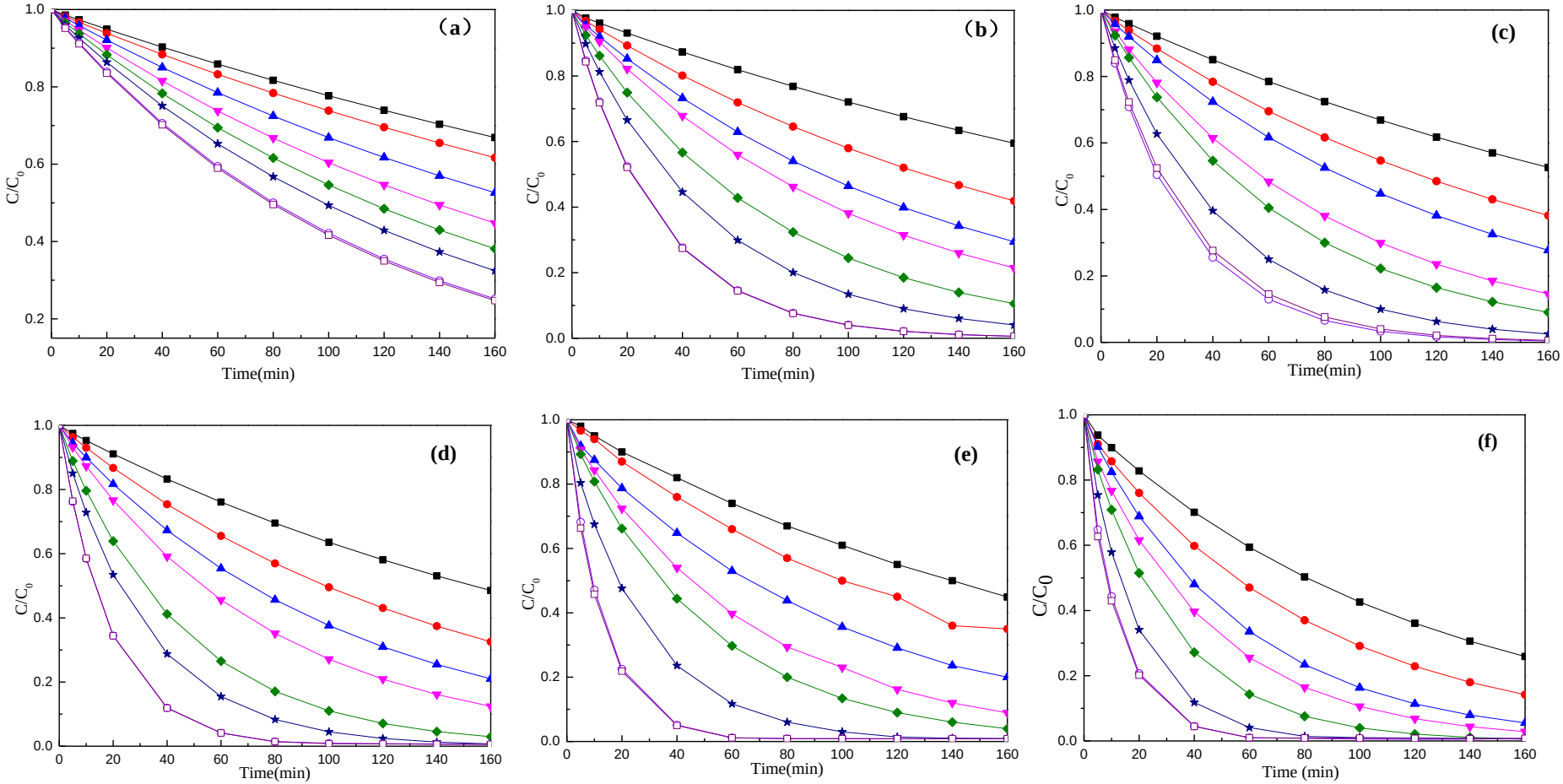
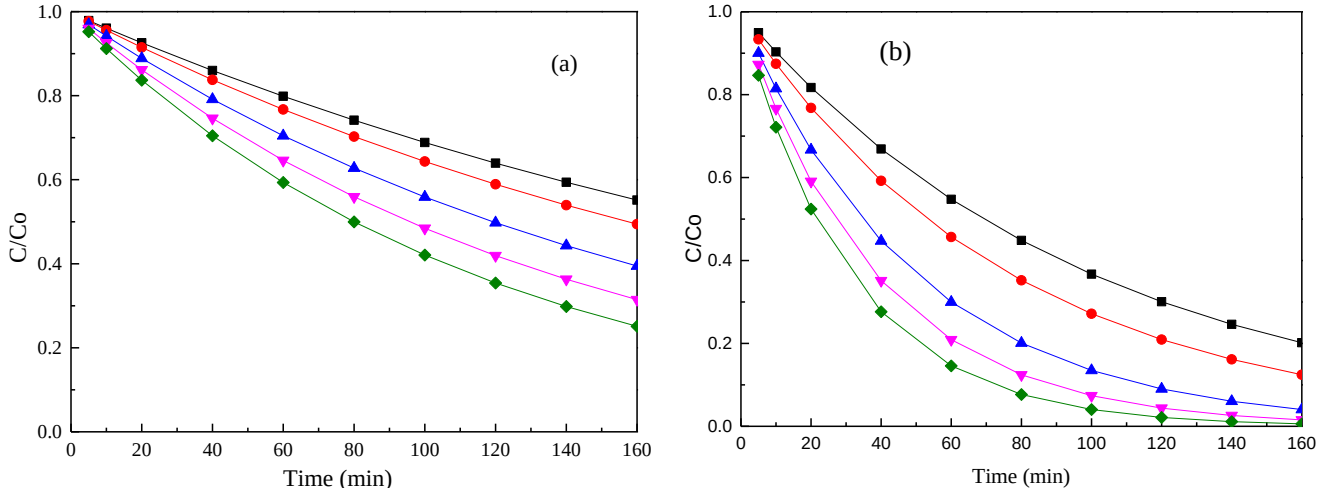

(a)
(b)
(c)
(d)
(e)
(f)
C/C0
Time(min)
Time (min)

Fig. 7S Degradation effect of various catalysts: (a) Fe_3O_4; (b) P7/3; (c) F7/3; (d) P8/2; (e) F8/2; (f) MMS; (■)0.05g ·L^{-1}; (●)0.1g ·L^{-1}; (▲)0.2g ·L^{-1}; (▼)0.5g ·L^{-1}; (◆)1g ·L^{-1}; (★)1.5g ·L^{-1}; (○)2g ·L^{-1}; (□)4g ·L^{-1}; Expect investigated parameter, others fixed at [RhB] = 1 mM; [PS] = 40 mM; initial pH = 7.0; T = 25°C.



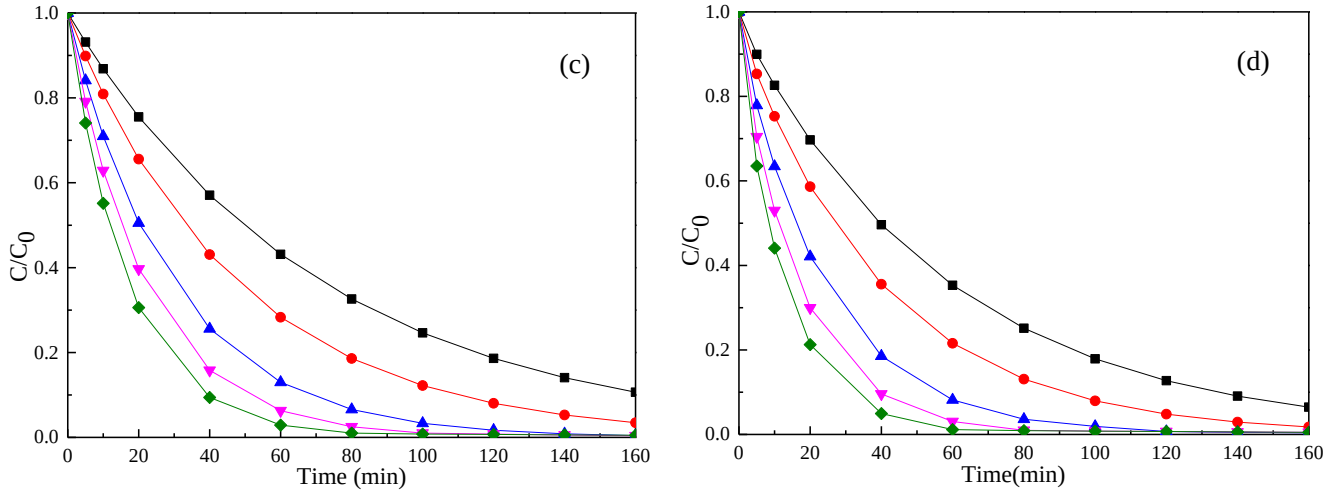


Fig. 8S Decolorization effect of different PS dosage: (a) Fe_3O_4; (b) P8/2; (c) F8/2; (d) MMS; (■)5mM; (●)10mM; (▲)20mM; (▼)30mM; (◆)40mM. Expect investigated parameter, others fixed at [RhB] = 1 mM; [Catalyst] = 2.0 g $\cdot L^{-1}$; initial pH = 7.0; T = 25°C.

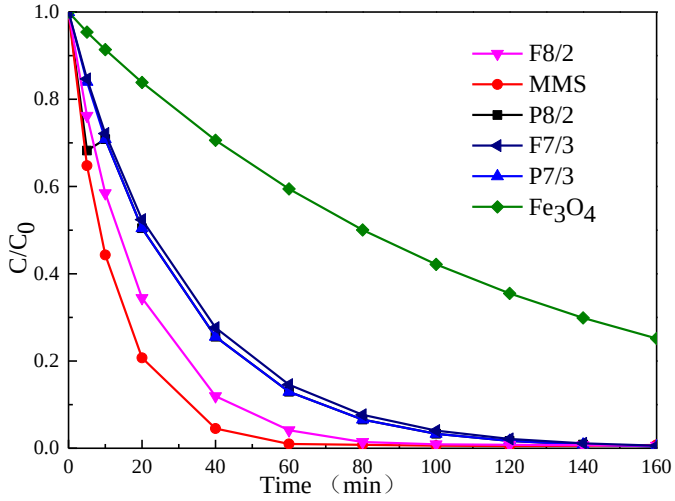


Figure 9S Effect of various catalysts on RhB degradation in different Fe_xO_y/PS systems. Expect investigated parameter, others fixed at [RhB] = 1 mM; [Catalyst] = 2.0 g L^{-1}; [PS] = 40 mM; initial pH = 7.0; T = 25°C.