Supporting Information

Controlled Synthesis of Mixed-Valent Fe-Containing Metal Organic Framework for Degradation of Phenol under Mild Conditions

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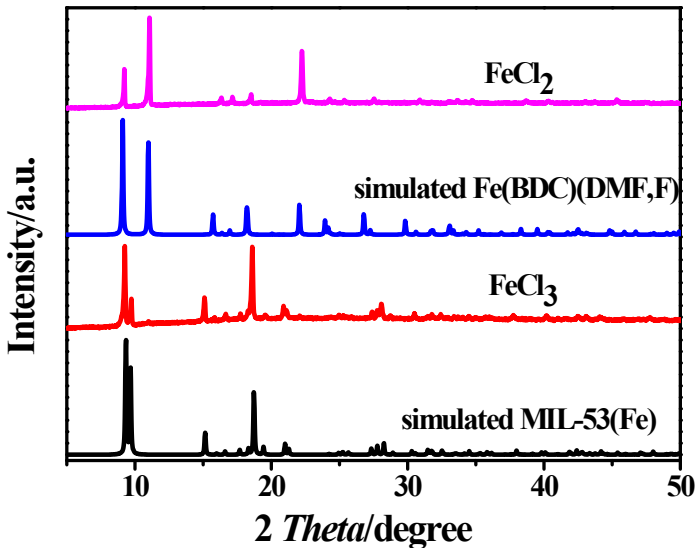

Fig. S1 XRD patterns of simulated Fe(BDC)(DMF,F) and MIL-53(Fe), and samples synthesized with $FeCl_3$ and $FeCl_2$

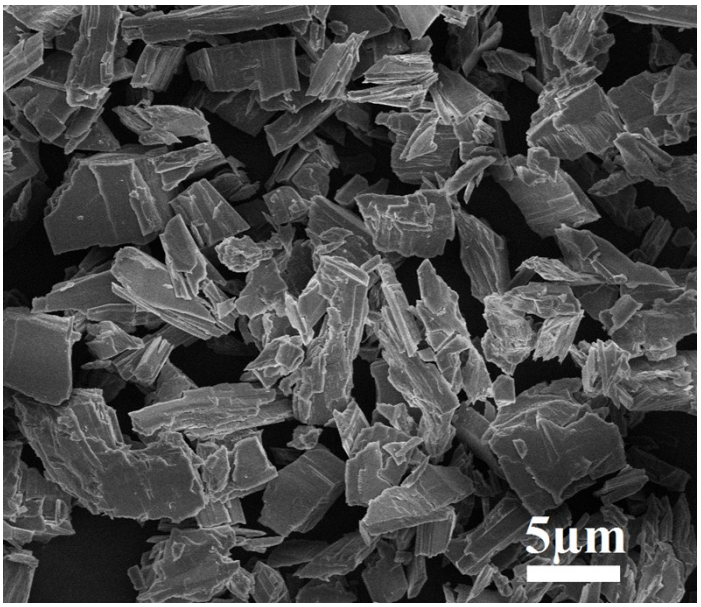

Fig. S2 SEM image of the sample prepared with $FeCl_3$

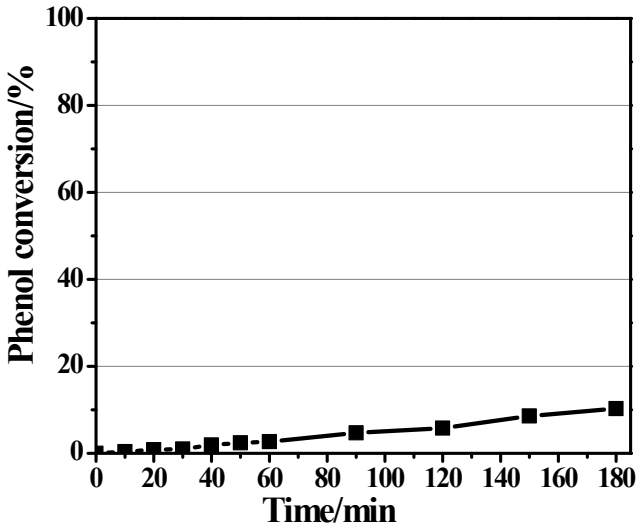

Fig. S3 Time conversion plot of phenol degradation over the nano Fe_3O_4 (Conditions: initial phenol concentration, 1000 mg L^{-1}; $n(H_2O_2)$:n(phenol)=14; initial pH 6.2; cat 0.064 g L^{-1}; 35 °C, 1 atm, 3 h)

Table S1 Results of the leached iron in the solution after degradation

sample	Fe/mg L^{-1}
FeMOF-71	1.3
FeMOF-31	1.0
FeMOF-11	1.2
FeMOF-13	1.4
FeMOF-17	1.0
Fe(BDC)(DMF,F)	1.2

Conditions: initial phenol concentration, 1000 mg L^{-1}; $n(H_2O_2)$:n(phenol)=14; initial pH 6.2; cat 0.32 g L^{-1}; 35 °C, 1 atm, 3 h.

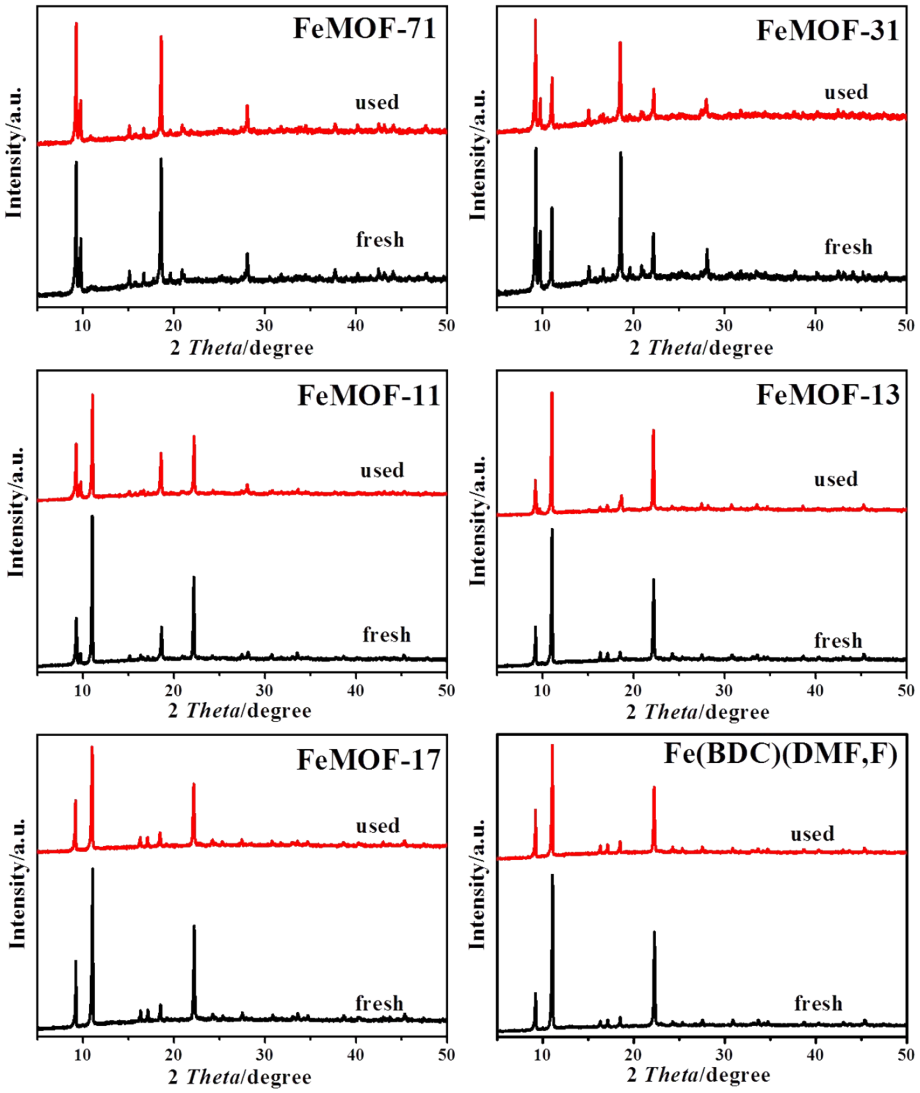

Fig. S4 XRD patterns of the fresh and used iron-containing MOFs

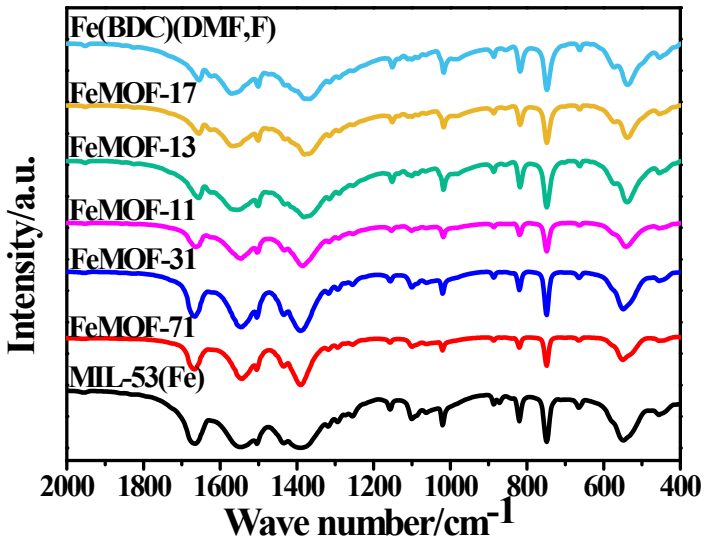

Fig. S5 FT-IR spectra of the samples synthesized with different $n(FeCl_3)/n(FeCl_2)$