Supporting information

3D graphene anchored zerovalent Fe/Cu aerogel activating persulfate for efficiently 2,4-dichlorophenol degradation over a broad pH range

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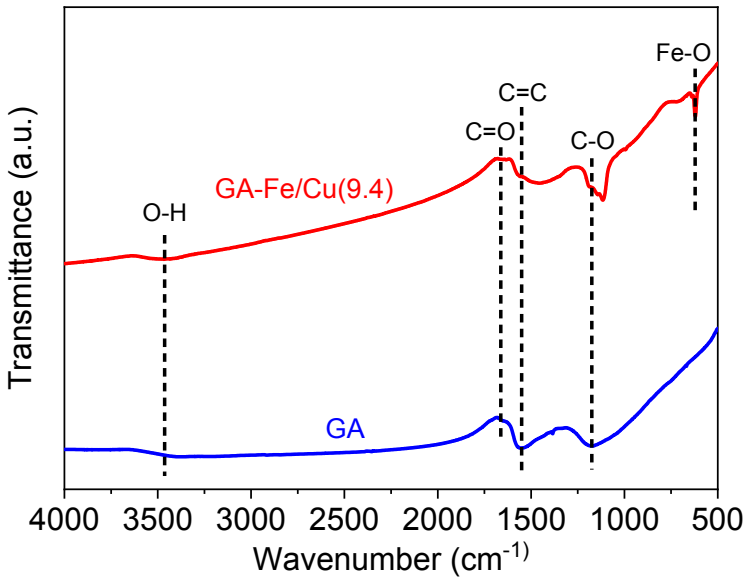

Fig. S1. FTIR spectra of GA and GA-Fe/Cu(9.4)

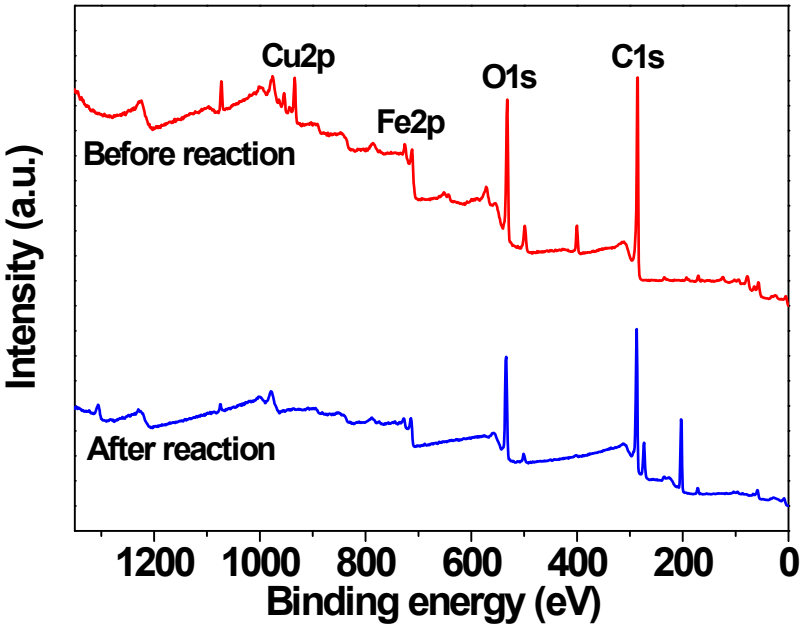

Fig. S2. Wide-scan survey XPS spectra of GA-Fe/Cu(9.4) before and after reaction

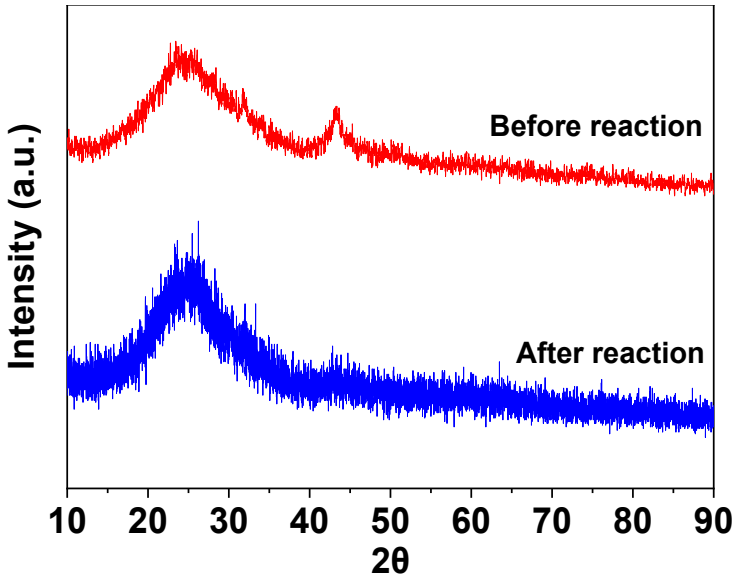

Fig. S3. XRD patterns of GA-Fe/Cu(9.4) before and after the reaction.

Table S1. The DCP degradation rates constants (k_1) of GA, GA-Fe/Cu3.4, GA-Fe/Cu5.1, and GA-Fe/Cu9.4 with PS at pH 4.5.

Material	Pseudo-first-order model ($\ln(C_t/C_0) = -k_1 \cdot t$)	
	k_1 (min $^{-1}$)	R^2
GA	0.0174	0.96
GA-Fe/Cu3.4	0.0258	0.99
GA-Fe/Cu5.1	0.0418	0.99
GA-Fe/Cu9.4	0.0748	0.99

Table S2. The DCP degradation rates constants rates constants (k_1) of GA-Fe/Cu9.4 with different initial PS concentrations (0.5 – 4 mM) at pH 4.5.

PS (mM)	Pseudo-first-order model ($\ln(C_t/C_0) = -k_1 \cdot t$)	
	k_1 (min $^{-1}$)	R^2
0.5	0.0099	0.88
1	0.0147	0.90

2	0.0748	0.99
4	0.0704	0.95

Table S3. The DCP degradation rates constants rates constants (k_1) of GA-Fe/Cu9.4 with PS at different pH 4.5, 7, 8, 9.5.

pH	Pseudo-first-order model ($\ln(C_t/C_0) = -k_1 t$)	
	k_1 (min^{-1})	R^2
4.5	0.0748	0.99
7	0.0390	0.97
8	0.0313	0.98
9.5	0.0252	0.97