Electronic Supplementary Material (ESI) for RSC Advances.

Title: Degradation of phenol by perborate in the presence of iron-bearing and carbonaceous materials

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Supplementary Material

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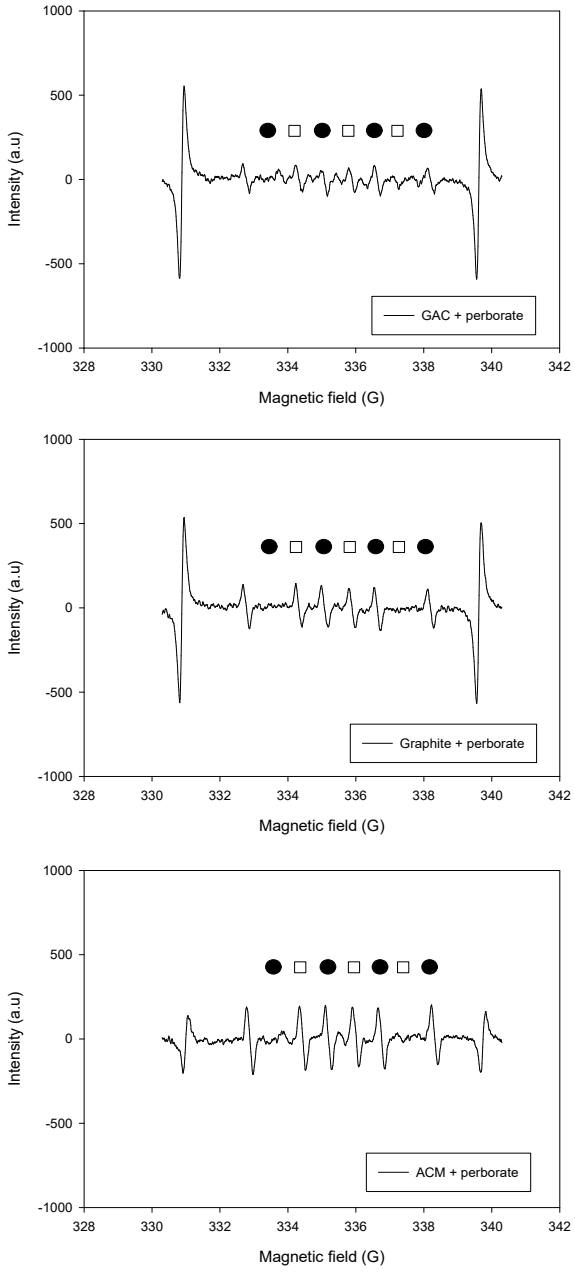

Fig. S1. EPR spectra of ·OH and $\cdot O_2^-$ (●: DMPO-·OH; □: DMPO-$\cdot O_2^-$) radicals obtained from perborate-carbonaceous material systems. The reaction time and reactor volume are 1 min and 20 mL, respectively. The initial concentrations of phenol and DMPO are 1.06 mM and 10 mM, respectively. The dosage of carbonaceous material is 200 mg. The pH is 7.0, adjusted with 0.1 mM phosphate buffer.

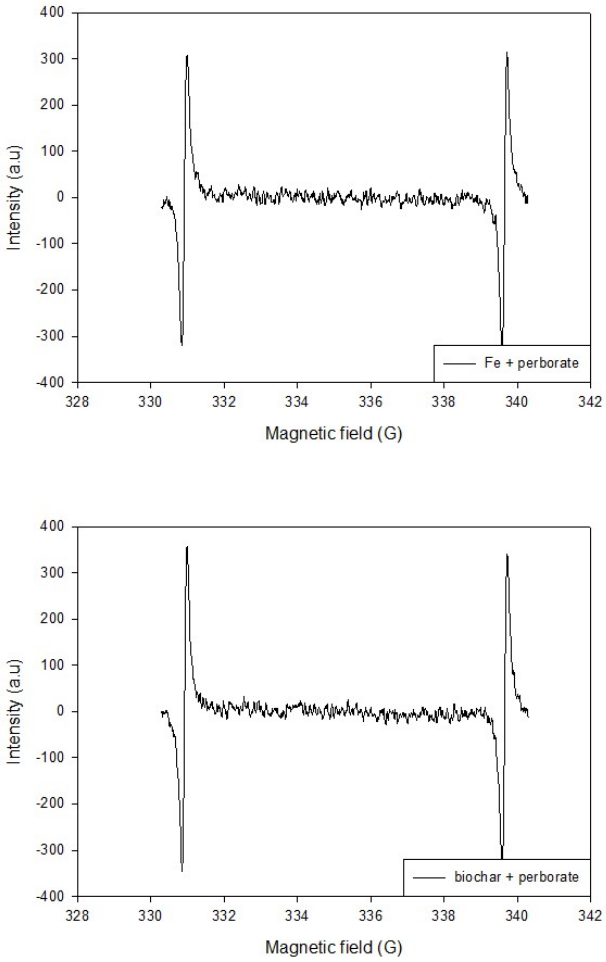

Fig. S2. EPR spectra of $^1O_2$ (TEMPO-$^1O_2$) obtained from perborate-carbonaceous/iron material systems. The reaction time and reactor volume are 1 min and 20 mL, respectively. The initial concentrations of phenol and TEMPO are 1.0 mM and 10 mM, respectively. The dosage of carbonaceous/iron material is 100 mg. The pH is 7.0, adjusted with 0.1 mM phosphate buffer.