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**Article:**

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*Fenton-Like Oxidation of 4-Chlorophenol: Homogeneous or Heterogeneous?* *Industrial & Engineering Chemistry Research*, 54 (33). pp. 8122-8129. ISSN 0888-5885

<https://doi.org/10.1021/acs.iecr.5b02378>

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# Supporting Information

## Fenton-Like Oxidation of 4-Chlorophenol: Homogeneous or Heterogeneous?

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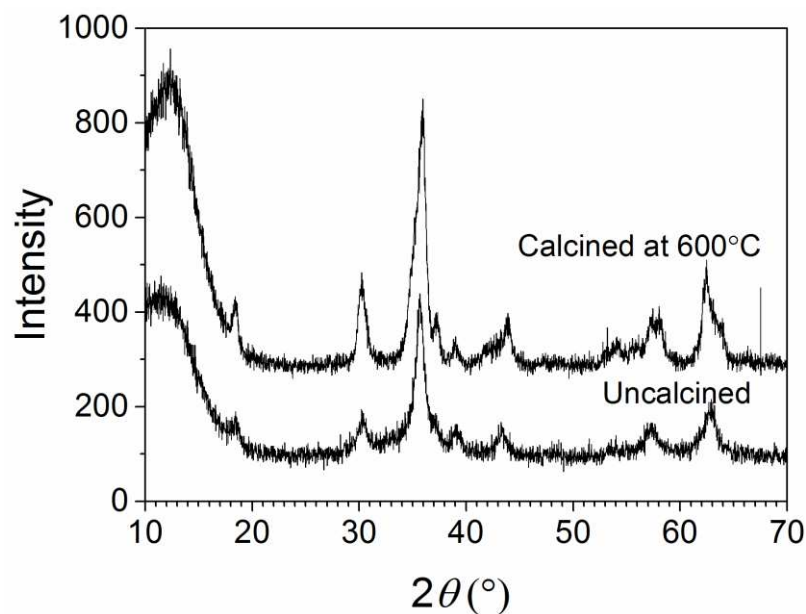


Figure S1. Powder XRD patterns of the calcined and uncalcined CuFe<sub>2</sub>O<sub>4</sub> powder measured using a Siemens D500 Kristalloflex Diffractometer. The step size was 0.02°.

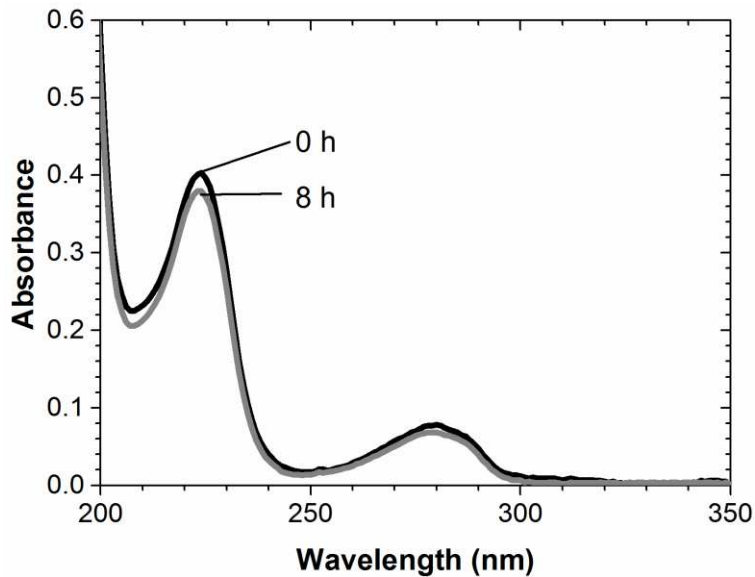


Figure S2. Blank test using 0.48 mM 4-CP only showing negligible 4-CP loss due to volatilisation at 60°C. More datapoints in between but only show the initial and final one because the intermediate ones are similar for clarity,

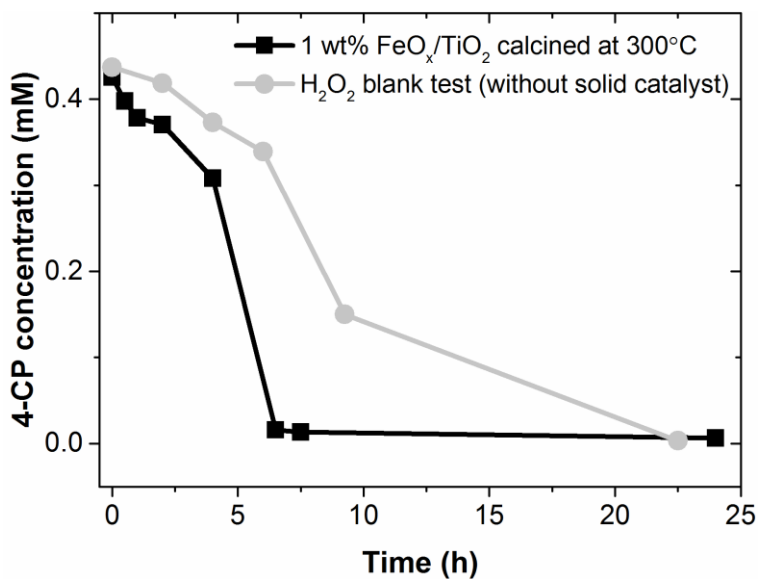


Figure S3. Blank test using 16 mM H<sub>2</sub>O<sub>2</sub> without the presence of FeO<sub>x</sub>/TiO<sub>2</sub> compared to reaction in the presence of FeO<sub>x</sub>/TiO<sub>2</sub> catalyst (16 mM H<sub>2</sub>O<sub>2</sub>, 1 g L<sup>-1</sup> FeO<sub>x</sub>/TiO<sub>2</sub> with 1 wt% Fe calcined at 300°C).

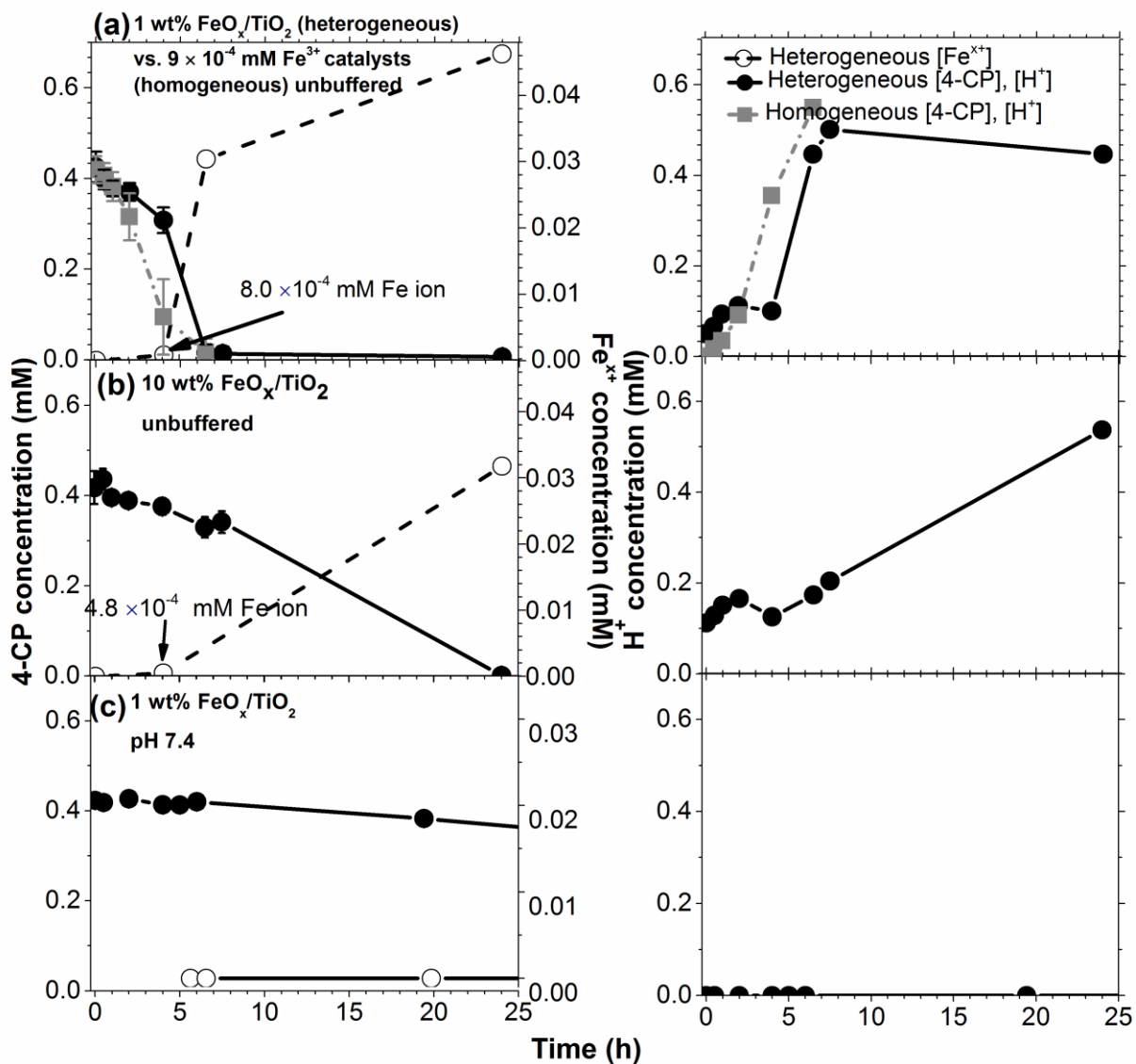


Figure S4. 4-CP degradation using FeO<sub>x</sub>/TiO<sub>2</sub> catalysts. (a) The solid phase catalyst FeO<sub>x</sub>/TiO<sub>2</sub> (1 wt% Fe) and the solution phase catalyst  $9.0 \times 10^{-4}$  mM [Fe<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>]. (b) FeO<sub>x</sub>/TiO<sub>2</sub> (10 wt% Fe) catalyst. (c) FeO<sub>x</sub>/TiO<sub>2</sub> (1 wt% Fe) catalyst in a solution buffered at pH 7.4. All initial reactant solutions contained 16 mM H<sub>2</sub>O<sub>2</sub> and 0.48 mM 4-CP.

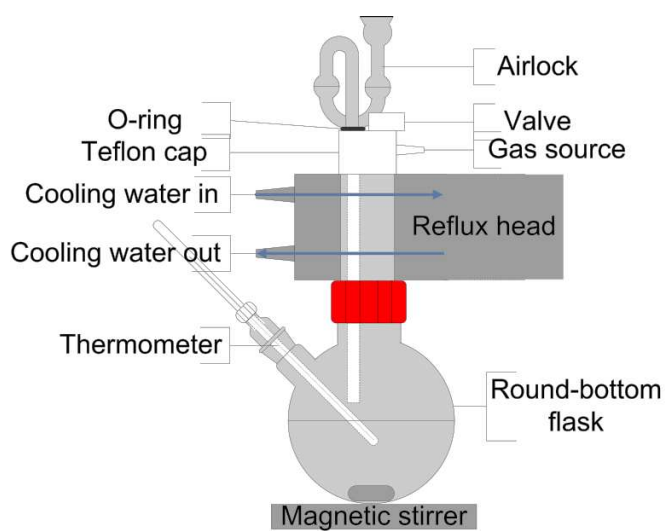


Figure S5. The glass reactor system.