Degradation of aniline with zero-valent iron as an activator of persulfate in aqueous solution

Imtyaz Hussain^a, Yongqing Zhang ^{a,b *}, Shaobin Huang ^{a,b,c},

^aCollege of Environment and Energy, South China University of Technology, Guangzhou, 510006, PR China

^bGuangdong Provincial Key Laboratory of Atmospheric environment and Pollution
Control, Guangzhou, 510006, PR China

^cState Key Laboratory of Pulp and Paper Engineering, South China University of Technology, Guangzhou, 510640, PR China

* Corresponding author: Yongqing Zhang

Tel: +86-20-39380569

Fax: +86-20-39380508

E-mail address: zhangyq@scut.edu.cn

Supporting Information

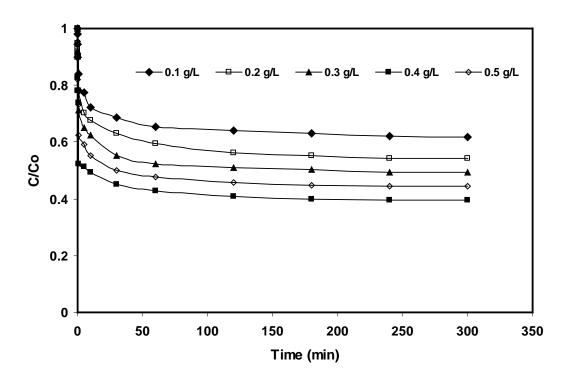


Fig. 1. Effect of Fe²⁺ dosages on aniline degradation in persulfate- Fe²⁺ system. [Aniline]₀ = 0.05 mM; Temp. = $25 ^{\circ}\text{C}$; [PS]₀ = 2.5 mM; pH = 7.0.

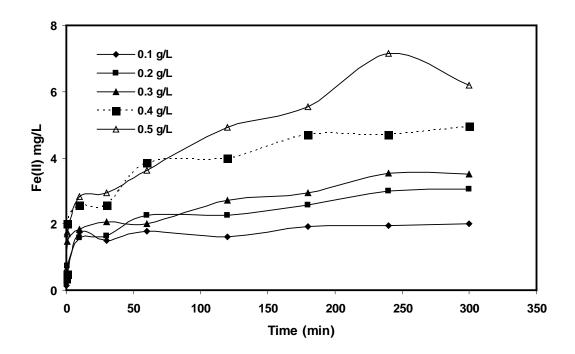


Fig. 2. Fe²⁺ concentration in the persulfate-ZVI system. [Aniline]₀ = 0.05 mM; [PS]₀ = 2.5 mM; Temp. = $25\,^{\circ}$ C; [ZVI] = 0.1–0.5 g L⁻¹; pH = 7.0.

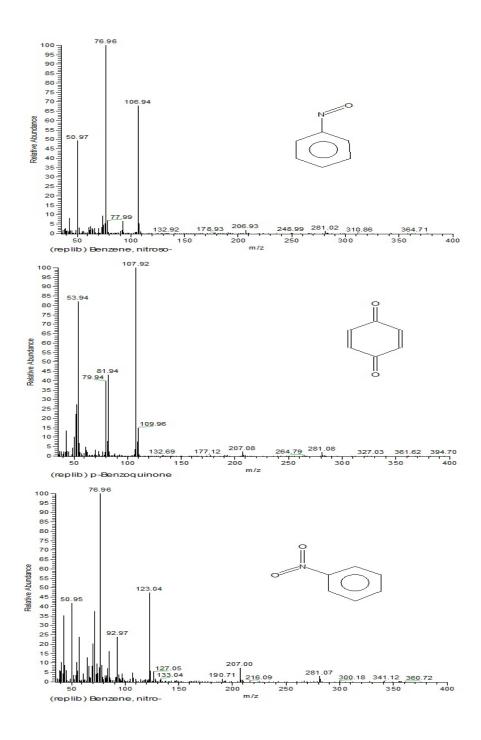


Fig.3 EI mass spectrum of main intermediates of aniline by persulfate-ZVI system with $$\operatorname{GC}/\operatorname{MS}$$