A Silica-Supported Iron Oxide Catalyst Capable of Activating Hydrogen Peroxide at Neutral pH Values

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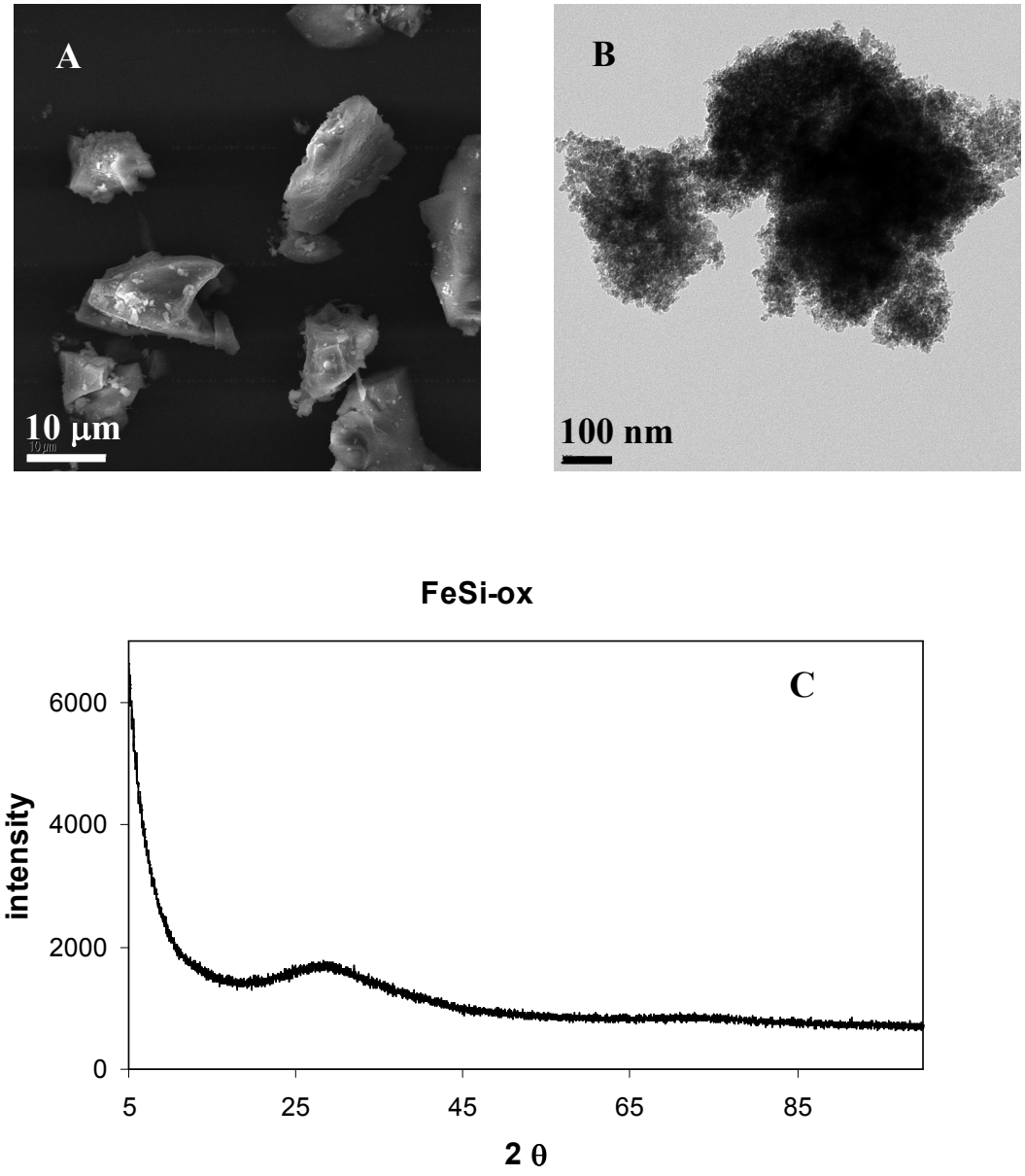

Figure SI 1. *FeSi-ox* obtained by sol – gel processing of aqueous mixture of $Fe(ClO_4)_3$, $Al(NO_3)_3$ and TeOS. (A) SEM. (B) TEM. (C) XRD.

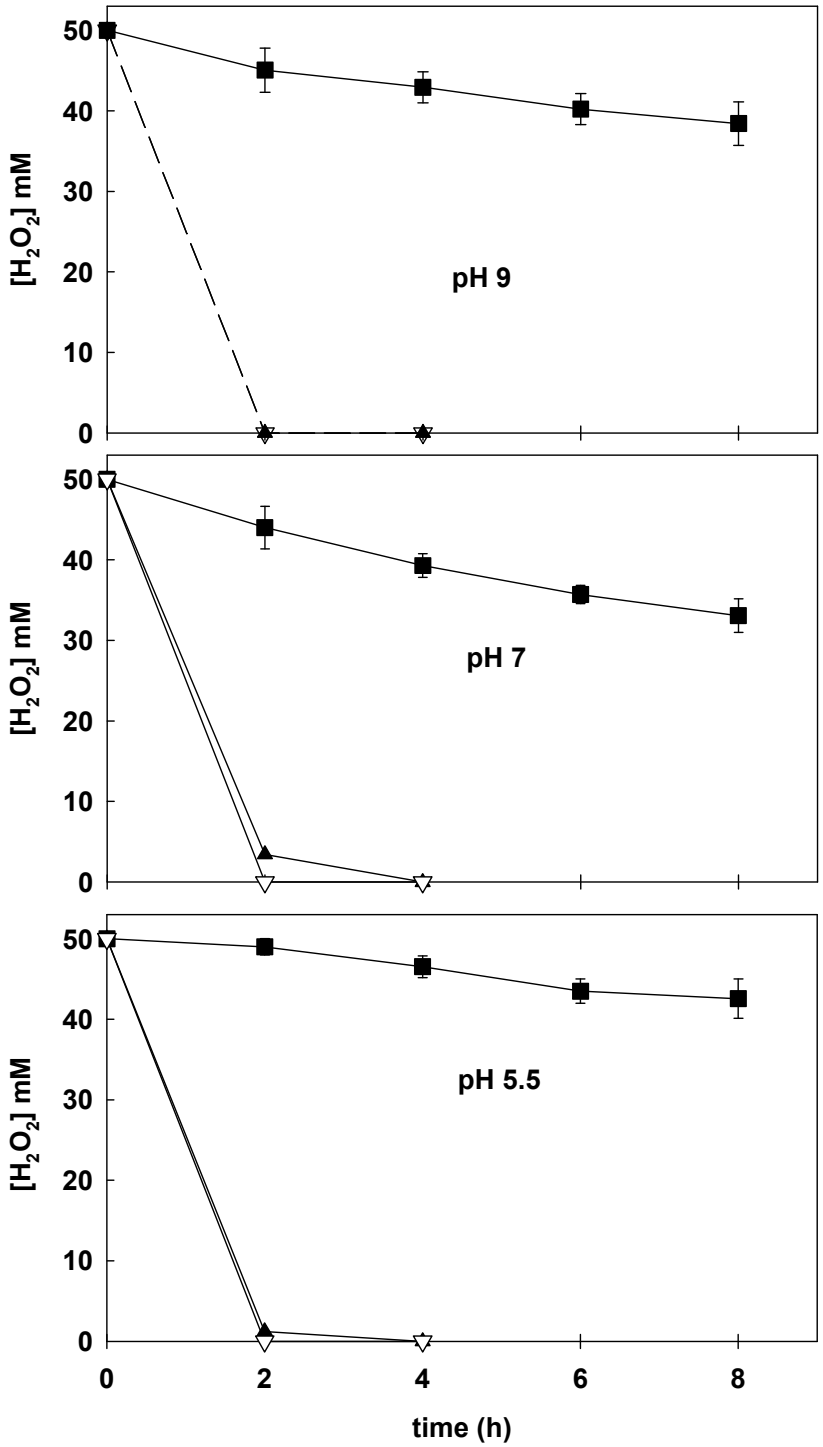

Figure SI 2. H_2O_2 decomposition catalyzed by iron oxides: (■) hematite; (▽) amorphous FeOOH; (▲) goethite. $[phenol]_o$ = 0.5 mM; $[H_2O_2]_o$ = 50 mM; [iron oxide] = 3 g/L.

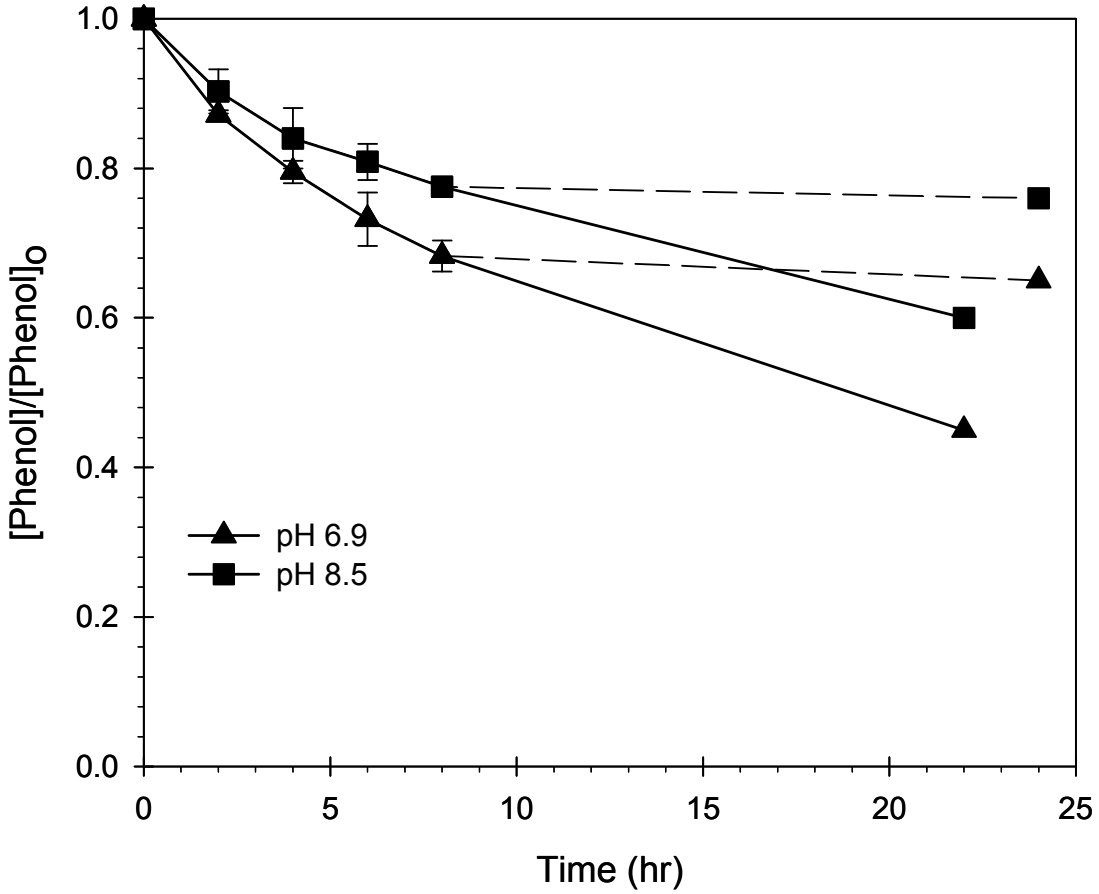

Figure SI 3. Phenol concentration as a function of time. $[phenol]_o$ = 0.5 mM; $[H_2O_2]$ = 50 mM; [*FeAlSi-ox*] = 3 g/L. At t = 8hrs, *FeAlSi-ox* was removed from the reactor and phenol concentration was followed (dashed lines).

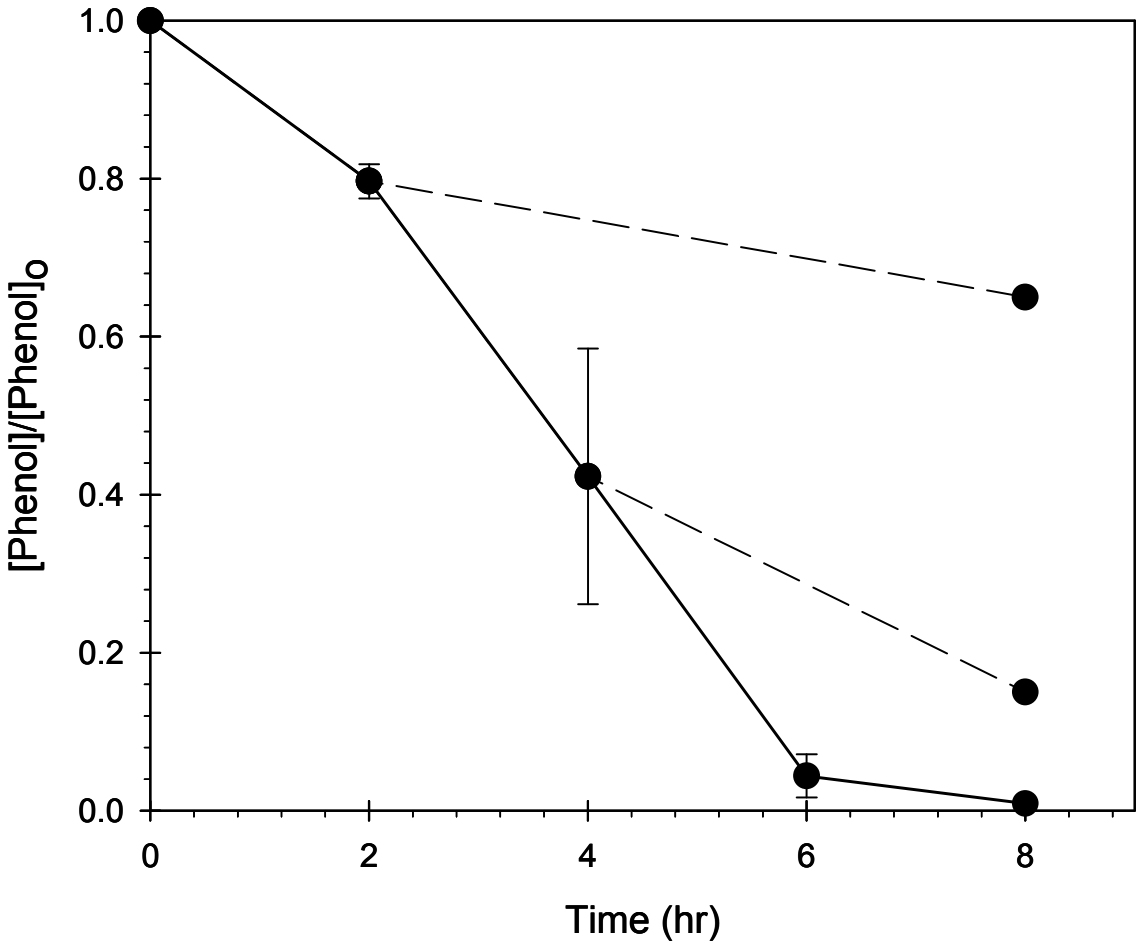

Figure SI 4. Phenol concentration as a function of time at pH 5.3. $[phenol]_o$ = 0.5 mM; $[H_2O_2]$ = 50 mM; [*FeAlSi-ox*] = 3 g/L. Phenol concentration was followed in the filtered samples (dashed lines).

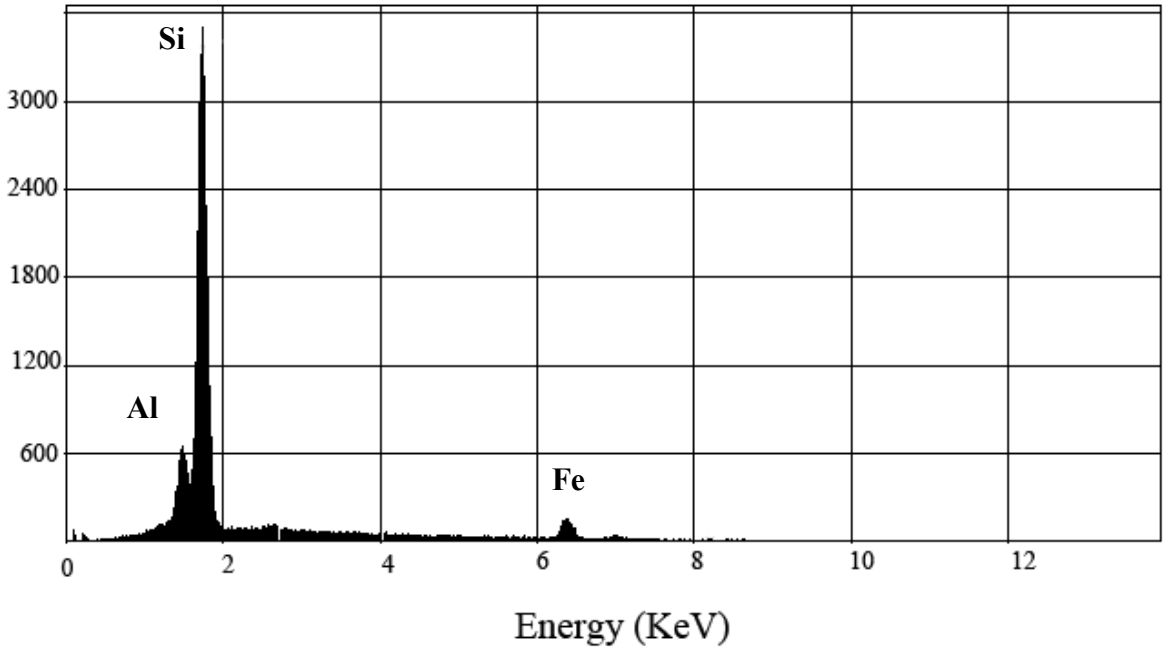

Figure SI 5. EDX spectra of *FeAlSi-ox*