Supporting information

Carbon Nanotube/Prussian Blue Nanocomposite Film as a New Electrode Material for Environmental Treatment of Water Samples

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Competitive reactions that can also occur affecting the total Fenton process:

\begin{align*}
\text{Fe}^{3+} + \text{HOO}^- & \rightarrow \text{Fe}^{2+} + \text{H}^+ + O_2 \quad k_3 = 1.2 \times 10^6 \text{ mol L}^{-1} \text{ s}^{-1} \quad (S1) \\
\text{Fe}^{2+} + \cdot \text{OH} & \rightarrow \text{Fe}^{3+} + \text{OH}^- \quad k_4 = 3.2 \times 10^8 \text{ mol L}^{-1} \text{ s}^{-1} \quad (S2) \\
\text{H}_2\text{O}_2 + \cdot \text{OH} & \rightarrow \text{H}_2\text{O} + \text{HOO}^- \quad k_5 = 3.3 \times 10^7 \text{ mol L}^{-1} \text{ s}^{-1} \quad (S3) \\
\text{HO}_2^- + \cdot \text{OH} & \rightarrow \text{H}_2\text{O} + \text{O}_2 \quad (S4)
\end{align*}
Figure S1. Experimental setup for photochemical-Fenton (PF) process

Figure S2. Cyclic voltammogram obtained for a CNT/PB film in a 0.1 mol L$^{-1}$ KCl aqueous solution with a scan rate of 50 mV s$^{-1}$. 
Figure S3. Scanning electron microscopy image obtained from the CNT/PB film.

Figure S4. Raman spectra ($\lambda = 632.8$ nm) of the CNT (a) and CNT/PB film (b).
Figure S5. Influence of KCl concentration (a) 0.05, (b) 0.1 and (c) 0.2 mol L\(^{-1}\) on MO degradation using a PEF process.

Figure S6. Normal probability plot of residuals \textit{versus} MO degradation percentages.
Figure S7. UV-Vis spectra derived from a PB film on ITO before (a) and after (b) MO degradation using a PEF process.