Supporting Information.

Fig. S1 UV-vis spectra of xylenol orange during photo-Fenton process (A) without H$_2$O$_2$; (B) without Fe$_3$O$_4$ nanospheres and (C) without UV-irradiation.

Fig. S2 UV-vis spectra of xylenol orange during the photo-Fenton process using the
as-synthesized Fe₃O₄ nanospheres.

Fig. S3 UV-vis spectra of xylenol orange during the photo-Fenton process using Fe₃O₄ nanospheres synthesized with different initial reactants ratio.
Fig. S4 UV-vis spectra of XO during photo-Fenton degradation with different initial amounts of H$_2$O$_2$. 
Fig. S5 UV-vis spectra of xylenol orange during photo-Fenton degradation by Fe$_3$O$_4$ at different pH values.
Fig. S6 XRD patterns of the magnetic Fe₃O₄ nanospheres before and after the reaction.