Supporting Information

Versatile Hierarchical Cu/Fe₃O₄ Nanocatalysts for Efficient Degradation of Organic Dyes Prepared by Facile, Controllable Hydrothermal Method

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Fig. S1 XRD patterns of Cu/Fe₃O₄ with different initial addition amount of Cu precursor: (a) 0.1 mM, (b) 0.3 mM, (c) 0.5 mM, (d) 0.7 mM, (e) 1.0 mM, (f) 1.3 mM.
**Fig. S2** Time-dependent UV-vis absorption spectra of CR in the presence of Cu/Fe$_3$O$_4$ (A), without catalyst (B); with Fe$_3$O$_4$ as catalyst (C); with Cu as catalyst (D). Time-dependent UV-vis absorption spectra over Cu/Fe$_3$O$_4$ prepared at different dosage of Cu precursor: Cu$_{0.1}$/Fe$_3$O$_4$ (E), Cu$_{0.3}$/Fe$_3$O$_4$ (F), Cu$_{0.5}$/Fe$_3$O$_4$ (G), Cu$_{0.7}$/Fe$_3$O$_4$ (H), Cu$_{1.3}$/Fe$_3$O$_4$ (I). (J) The relationship between ln($A_t$/A$_0$) and the reaction time under different conditions.
Fig. S3 Time-dependent UV-vis absorption spectra of MB in the presence of Cu/Fe$_3$O$_4$ (A); without catalyst (B); with Fe$_3$O$_4$ as catalyst (C); with Cu as catalyst (D). Time-dependent UV-vis absorption spectra over Cu/Fe$_3$O$_4$ prepared at different dosage of Cu precursor: Cu$_{0.1}$/Fe$_3$O$_4$ (E), Cu$_{0.3}$/Fe$_3$O$_4$ (F), Cu$_{0.5}$/Fe$_3$O$_4$ (G), Cu$_{0.7}$/Fe$_3$O$_4$ (H). (I) The relationship between ln($A_t/A_0$) and the reaction time under different conditions.
Fig. S4 XRD patterns of Cu/Fe$_3$O$_4$ before reaction (a) and after reused six times for 4-NP (b), CR (c), MB (d), respectively.