

Supporting Information

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

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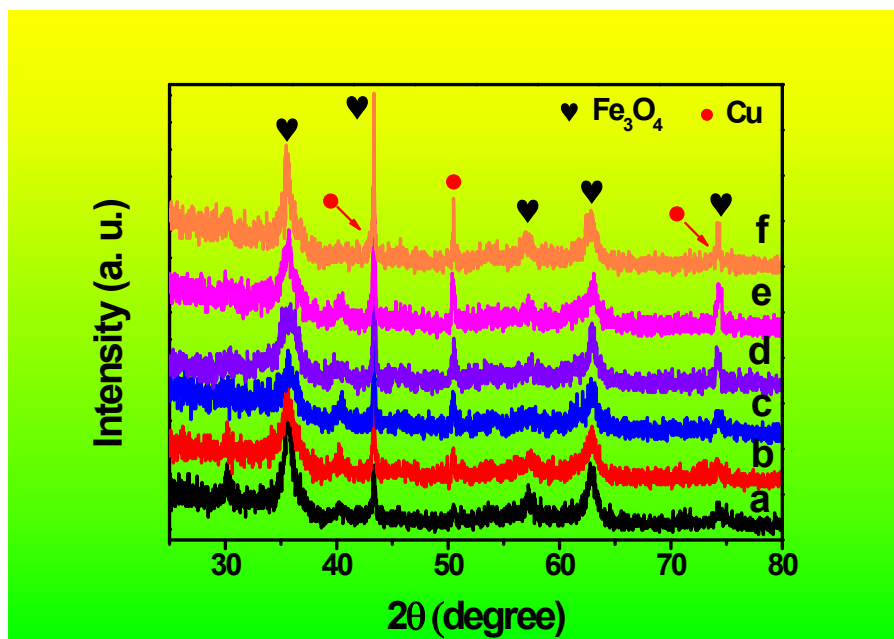
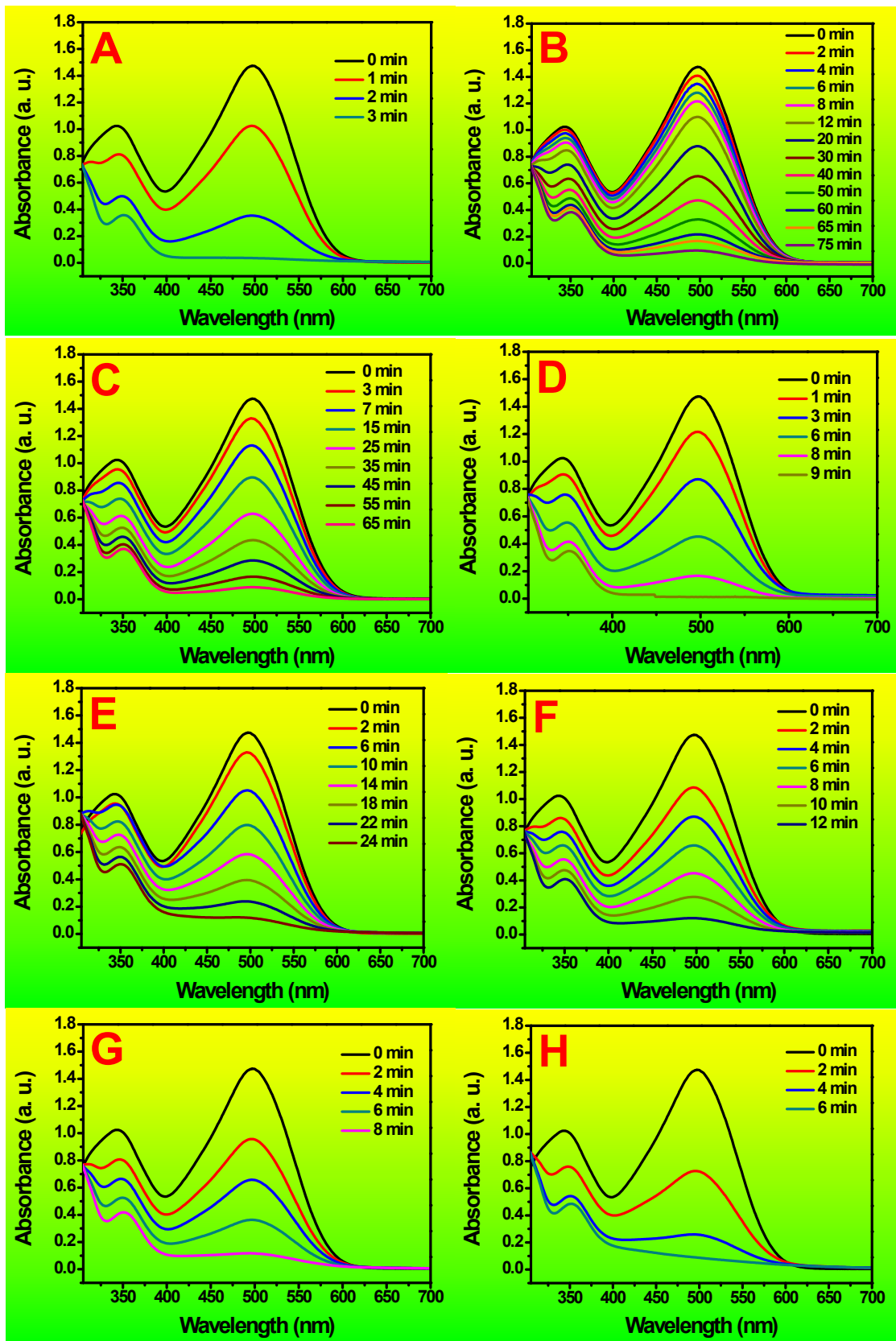


Fig. S1 XRD patterns of Cu/Fe₃O₄ with different initial addition amount of Cu precursor: (a) 0.1 mM, (b) 0.3 mM, (c) 0.5 mM, (d) 0.7 mM, (e) 1.0 mM, (f) 1.3 mM.



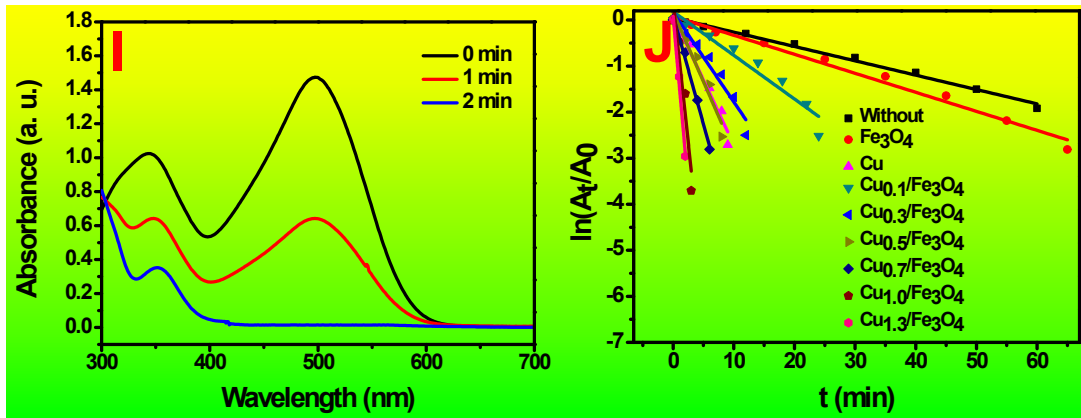
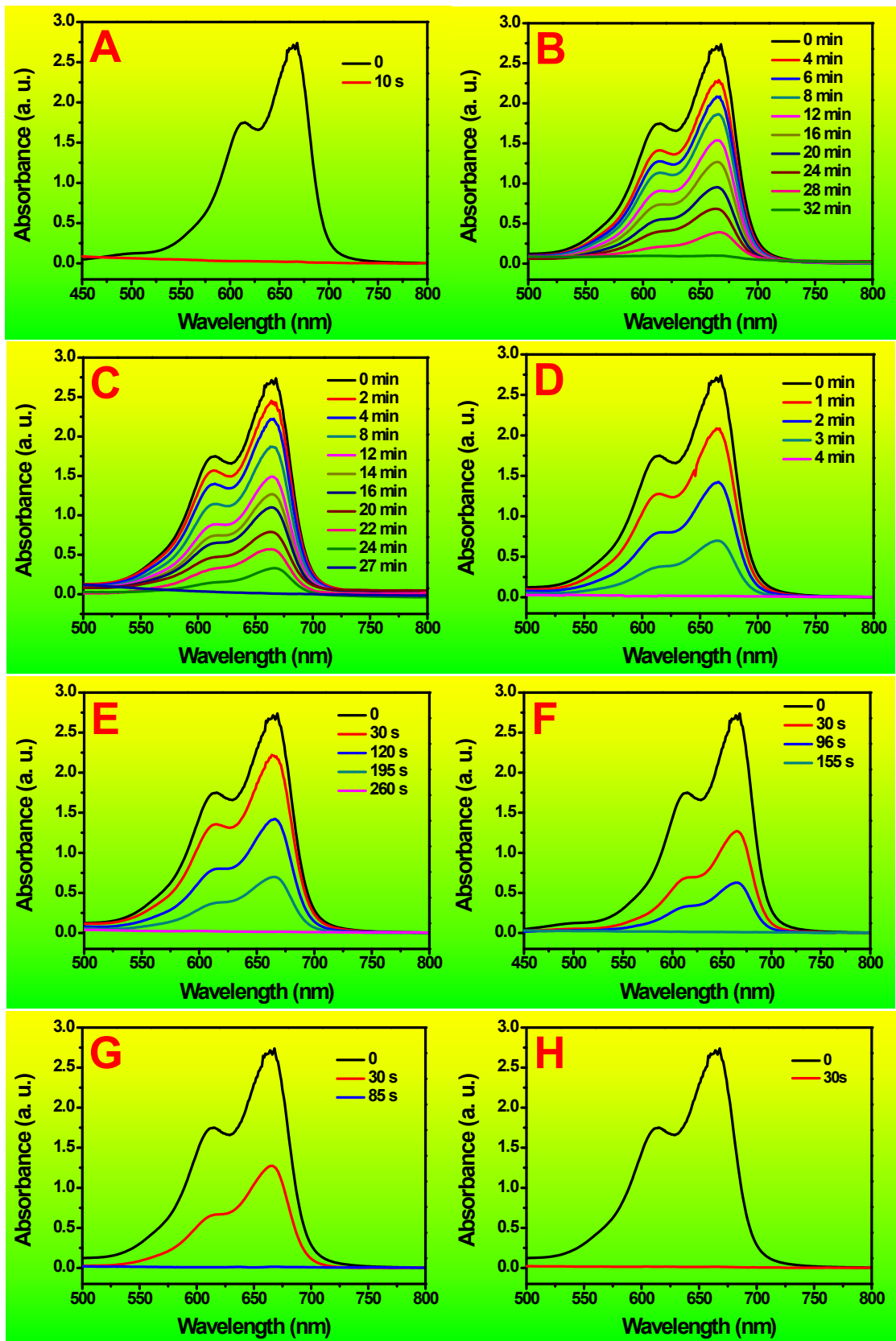


Fig. S2 Time-dependent UV-vis absorption spectra of CR in the presence of $\text{Cu}/\text{Fe}_3\text{O}_4$ (A), without catalyst (B); with Fe_3O_4 as catalyst (C); with Cu as catalyst (D). Time-dependent UV-vis absorption spectra over $\text{Cu}/\text{Fe}_3\text{O}_4$ prepared at different dosage of Cu precursor: $\text{Cu}_{0.1}/\text{Fe}_3\text{O}_4$ (E), $\text{Cu}_{0.3}/\text{Fe}_3\text{O}_4$ (F), $\text{Cu}_{0.5}/\text{Fe}_3\text{O}_4$ (G), $\text{Cu}_{0.7}/\text{Fe}_3\text{O}_4$ (H), $\text{Cu}_{1.3}/\text{Fe}_3\text{O}_4$ (I). (J) The relationship between $\ln(A_t/A_0)$ and the reaction time under different conditions.



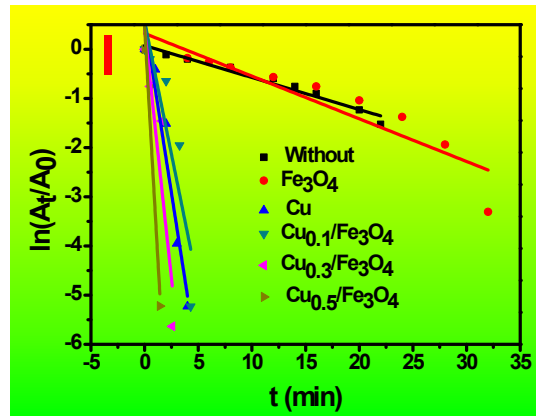


Fig. S3 Time-dependent UV-vis absorption spectra of MB in the presence of Cu/Fe₃O₄ (A); without catalyst (B); with Fe₃O₄ as catalyst (C); with Cu as catalyst (D). Time-dependent UV-vis absorption spectra over Cu/Fe₃O₄ prepared at different dosage of Cu precursor: Cu_{0.1}/Fe₃O₄ (E), Cu_{0.3}/Fe₃O₄ (F), Cu_{0.5}/Fe₃O₄ (G), Cu_{0.7}/Fe₃O₄ (H). (I) The relationship between $\ln(A_t/A_0)$ and the reaction time under different conditions.

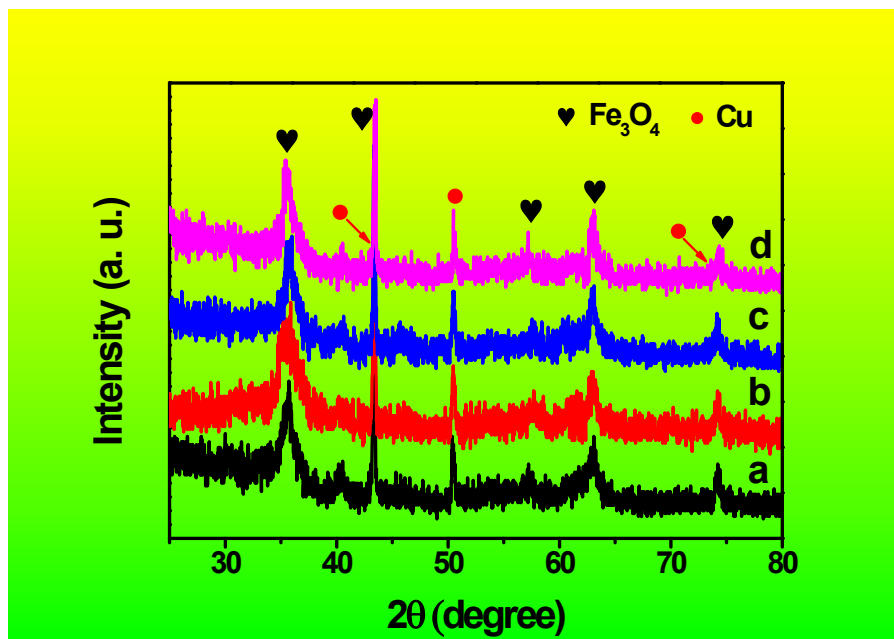


Fig. S4 XRD patterns of Cu/Fe₃O₄ before reaction (a) and after reused six times for 4-NP (b), CR (c), MB (d), respectively.