

Supporting Information

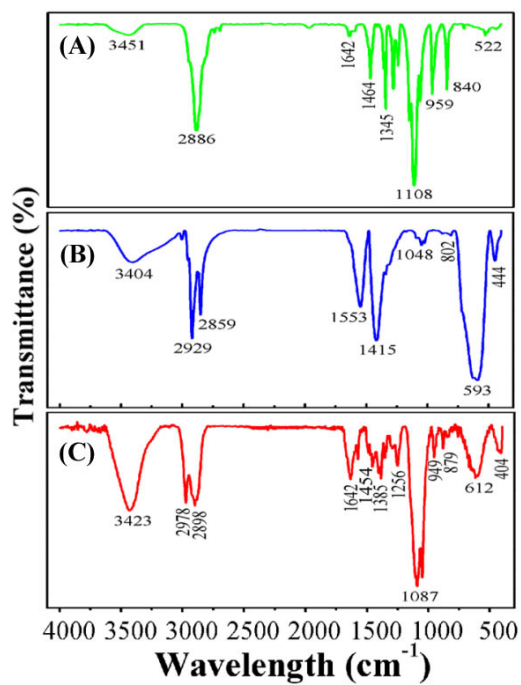


Fig. S1 Fourier transform infrared (FT-IR) spectra of (A) DIB-PEG-NH₂, (B) 4 nm MnFe₂O₄ NPs, and (C) **1a**

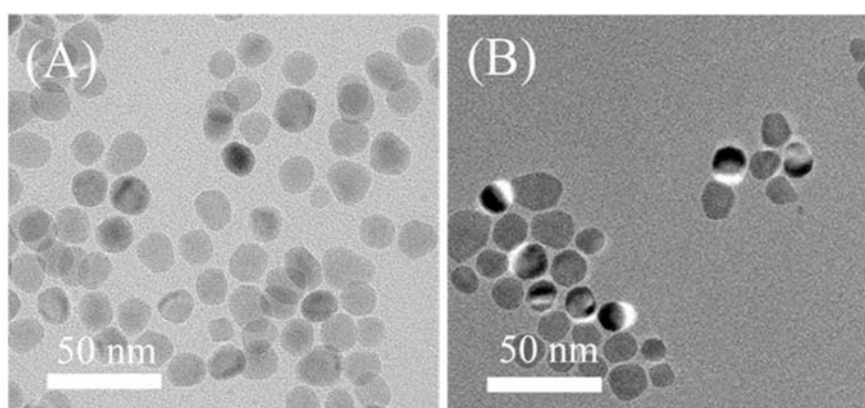


Fig. S2 TEM images of (A) the 18 nm MnFe₂O₄ NPs, (B) MnFe₂O₄-DIB-PEG-NH₂ (**1b**)

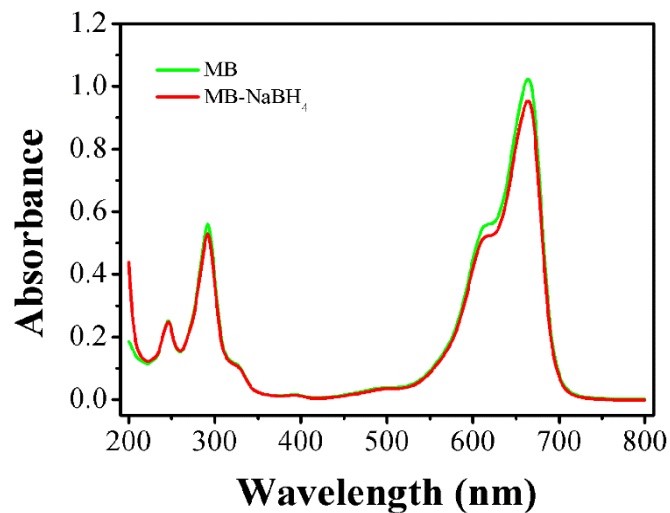


Fig. S3 UV-vis absorption spectra of MB alone and MB in the presence of NaBH_4

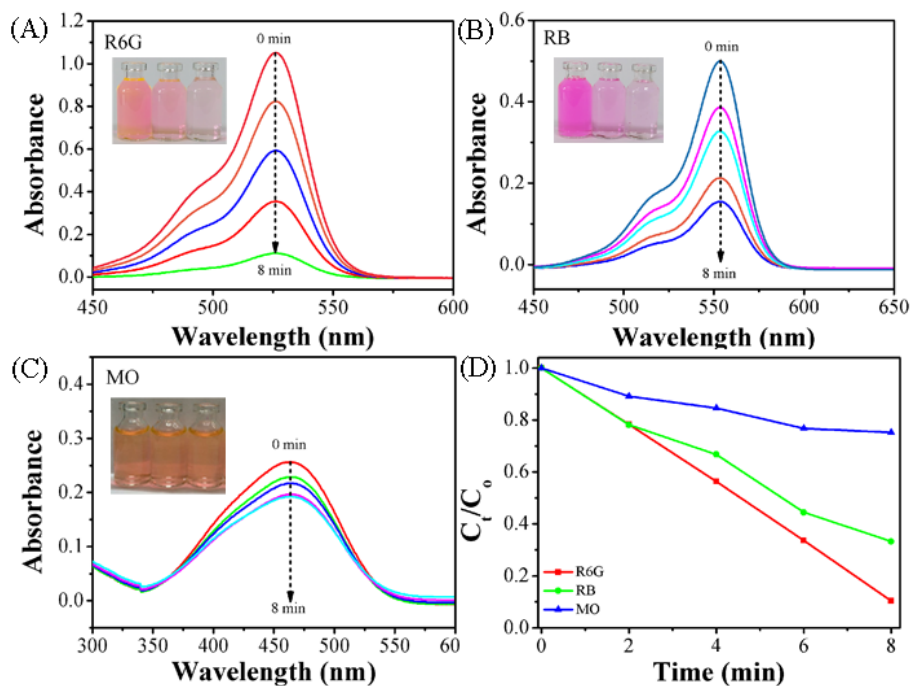


Fig. S4 UV-vis absorption spectra of the optimal experimental result: (A) R6G, (B) RB, (C) MO, (D) The C_t/C_0 of **1a** to R6G, RB and MO

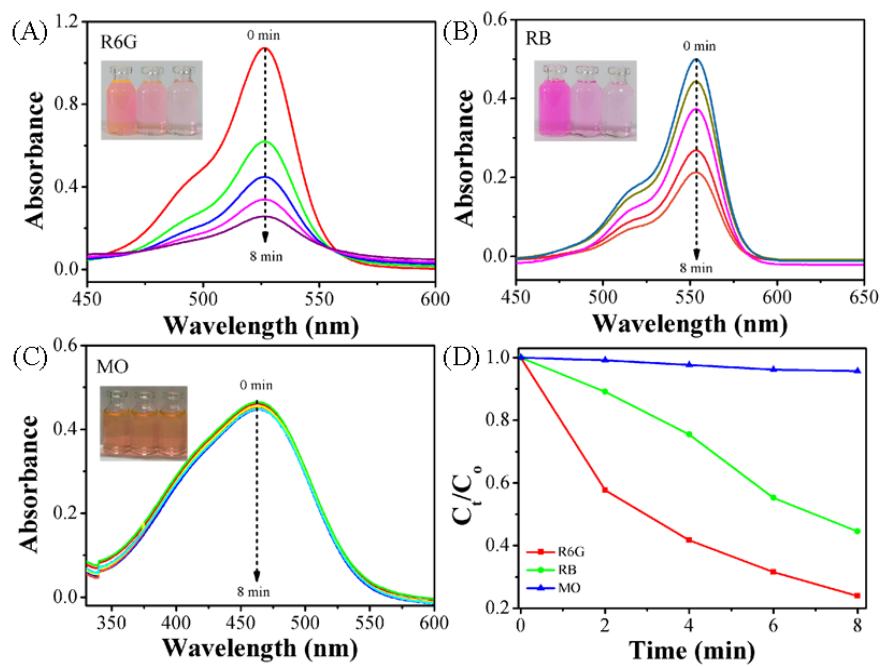


Fig. S5 UV-vis absorption spectra of the optimal experimental result: (A) R6G, (B) RB, (C) MO, (D) The C_t/C_0 of **1b** to R6G, RB and MO

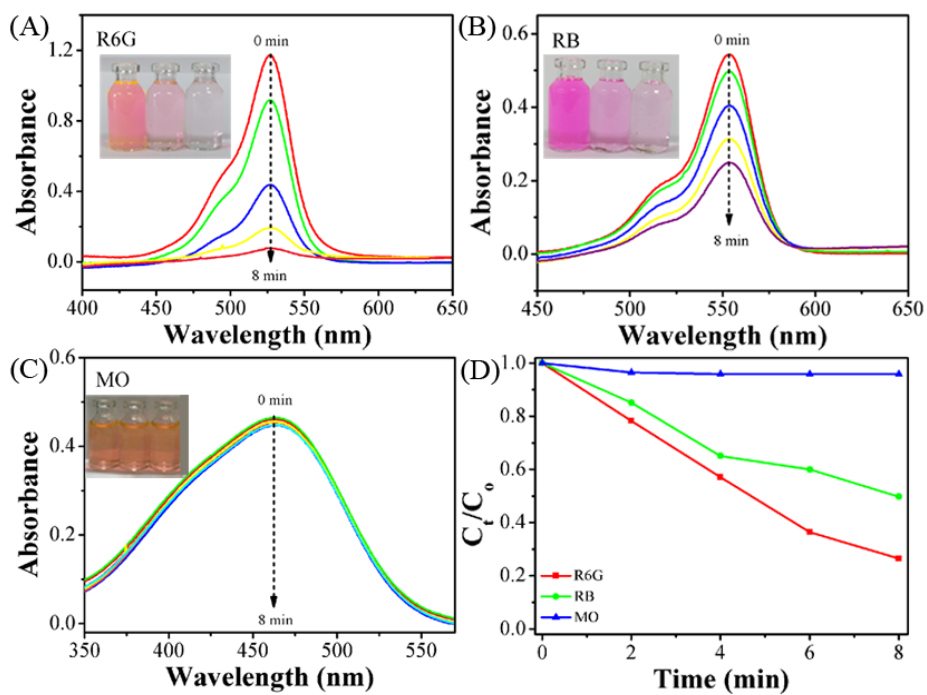


Fig. S6 UV-vis absorption spectra of the optimal experimental result: (A) R6G, (B) RB, (C) MO, (D) The C_t/C_0 of **1c** to R6G, RB and MO

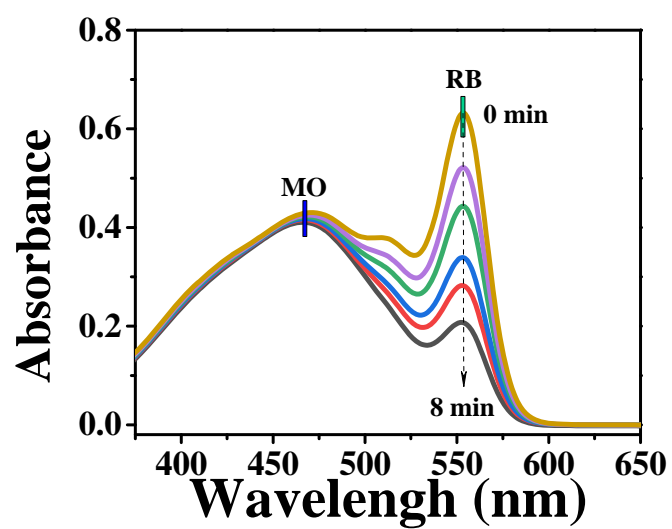


Fig. S7 UV-vis absorption spectra of the mixed dye solution of RB and MO degradation catalyzed by **1c** in the presence of NaBH₄

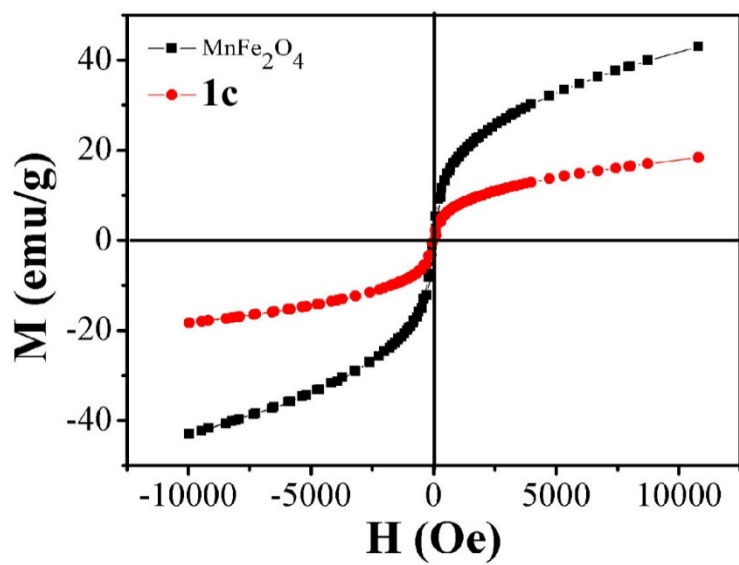


Fig. S8 VSM of 27 nm MnFe₂O₄ and **1c** at 300K

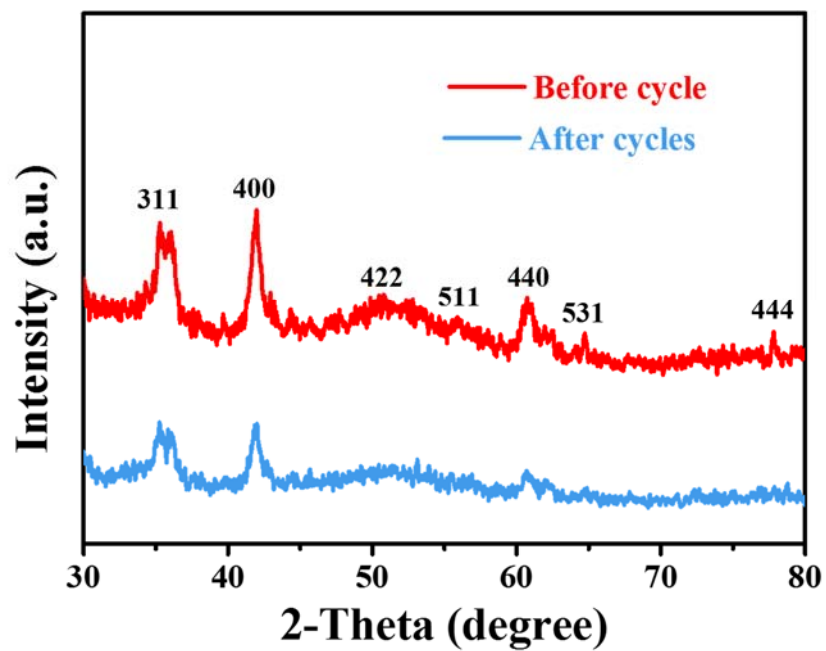


Fig. S9 XRD pattern of **1c** after ten successive cycles

Table S1 The k , k' , and R^2 of MnFe_2O_4 -DIB-PEG- NH_2 in different sizes

Kinetic parameters	4 nm	18 nm	27 nm
k (min^{-1})	1.034	0.440	0.329
k' ($\text{min}^{-1}\cdot\text{mol}^{-1}$)	587083	249822	186799
R^2	0.975	0.977	0.992