

Supporting Information

Fig. S1 The spectrum of the LED lamp used in the catalytic reaction

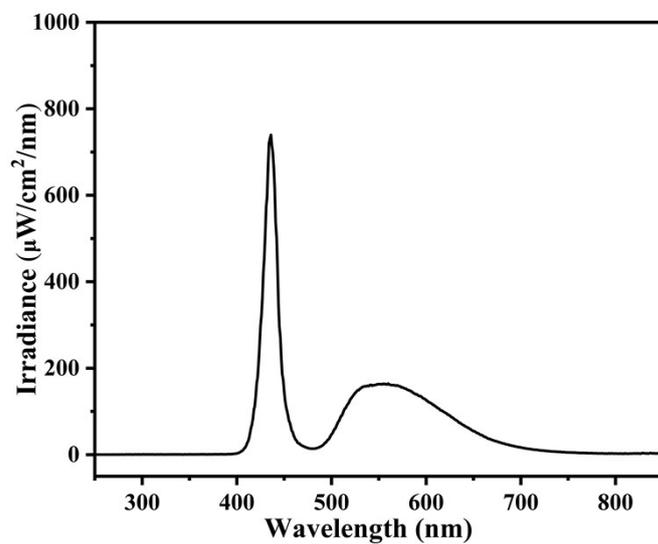


Fig. S2 GC graphs of standard materials and the product after the reaction (a) o-phenylenediamine; (b) 2-methylbenzimidazole; (c) filtrate obtained after reaction over MIL-101(Fe); (d) filtrate obtained after reaction over Au/MIL-101(Fe)

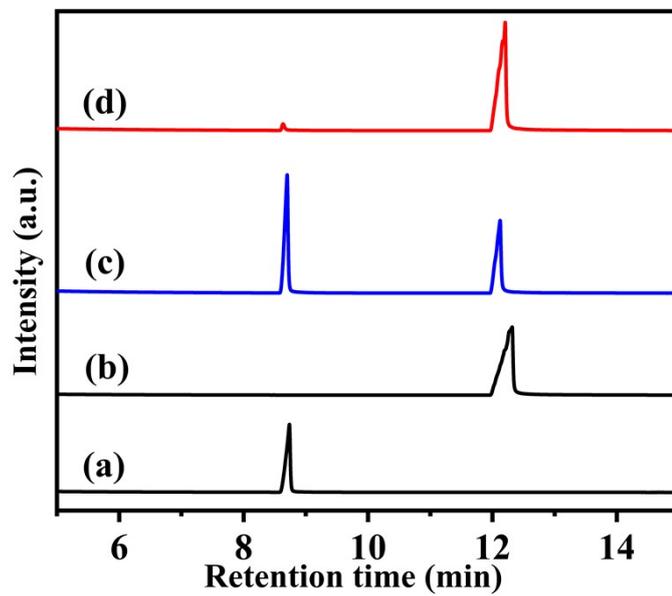


Fig. S3 Powder XRD patterns of the as-synthesized MIL-101(Fe) and calculated MIL-101(Fe).

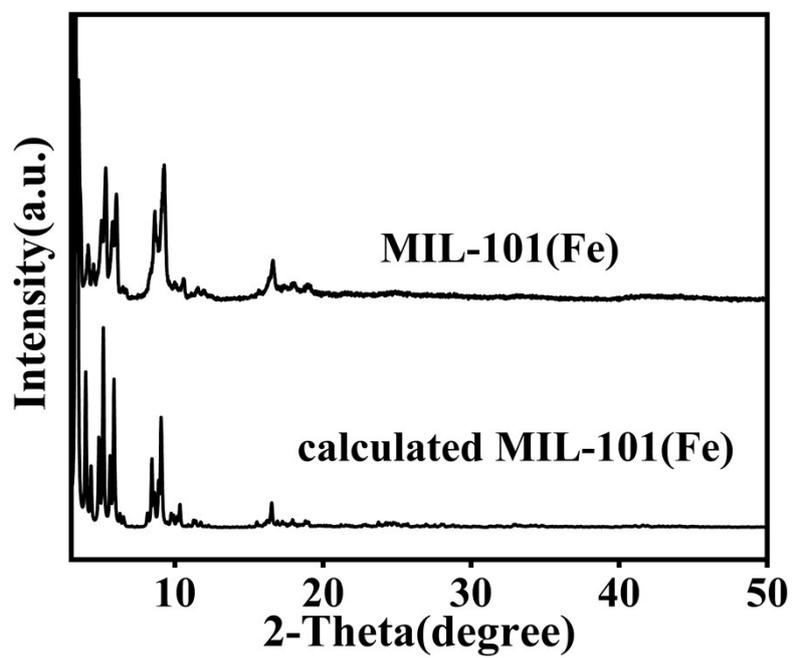


Fig. S4 N₂ adsorption/desorption isotherms of MIL-101(Fe) and 1.0 wt % Au/ MIL-101(Fe) nanocomposite obtained at 77K

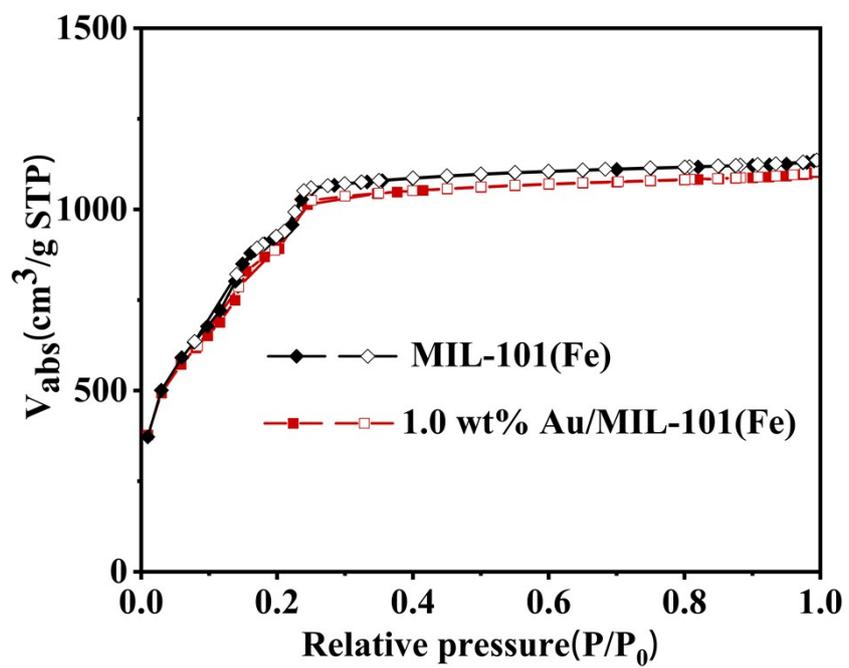


Fig. S5 TEM image of MIL-101(Fe)

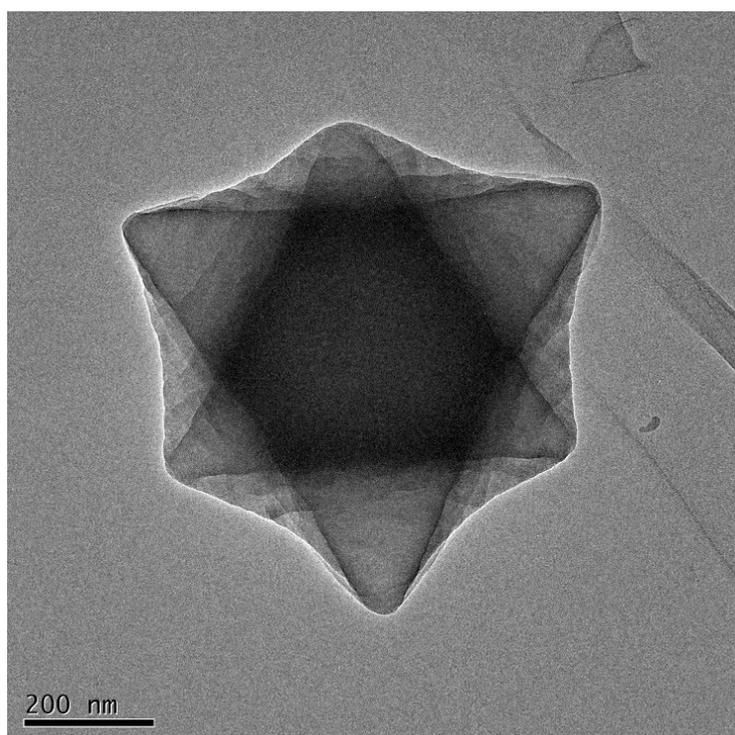


Fig. S6 TEM image of Au colloids.

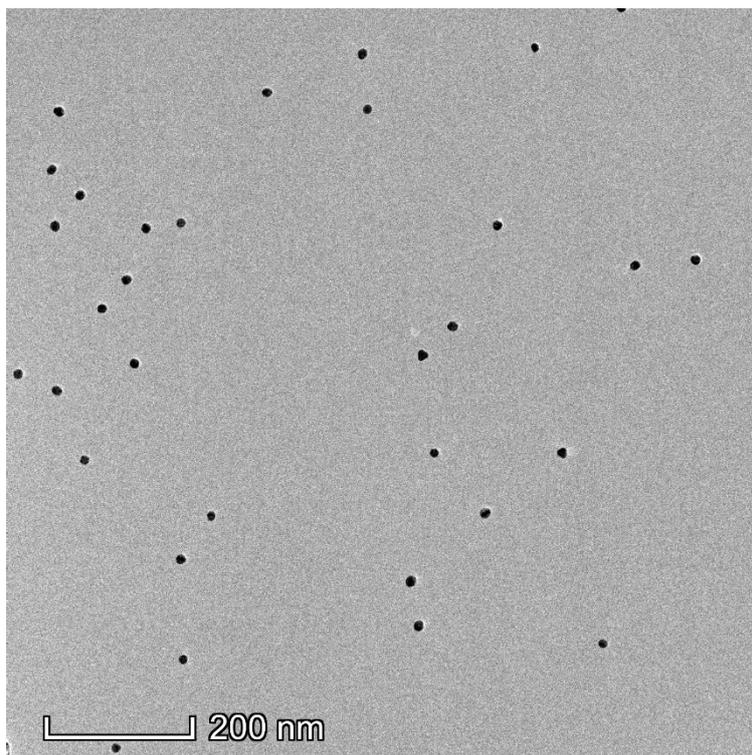


Fig. S7 UV-visible absorption spectrum of Au colloids.

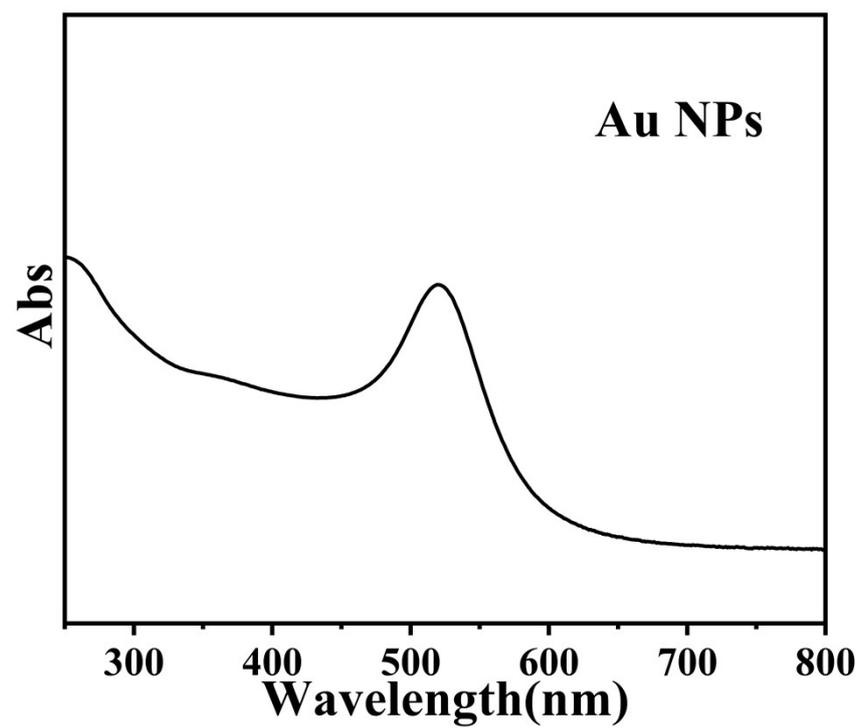


Fig. S8 Zeta potentials of Au colloids and MIL-101(Fe).

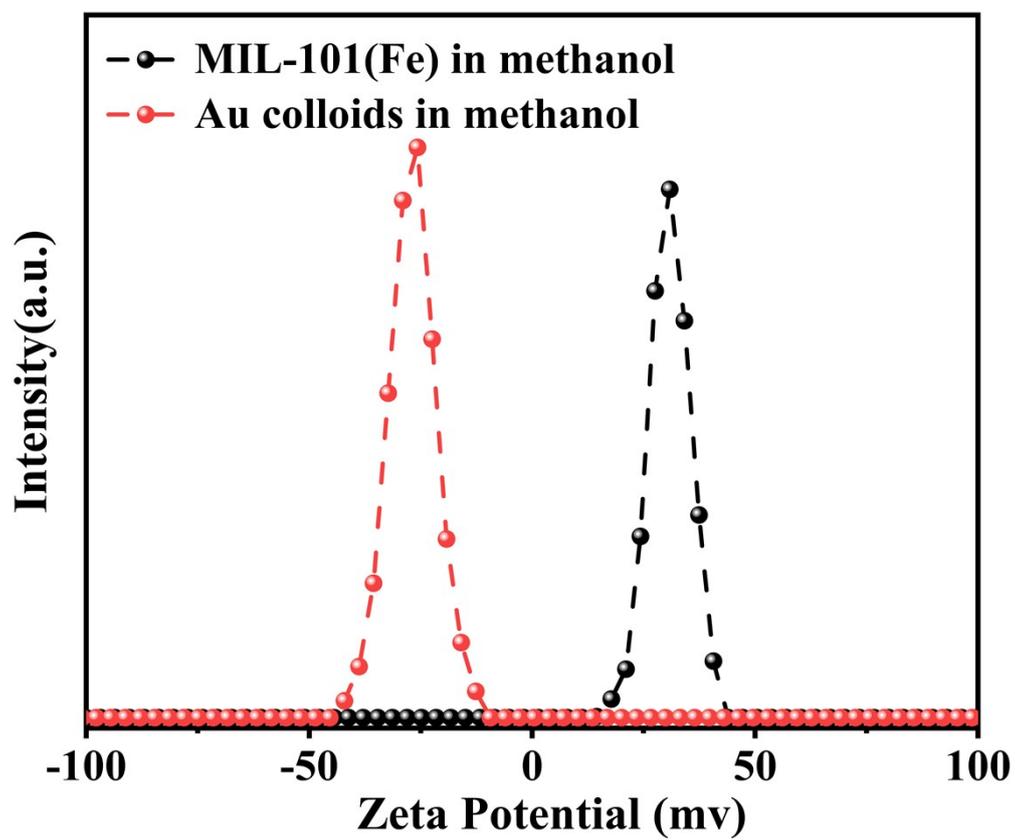


Fig. S9 DMPO spin-trapping ESR spectra of the reaction system containing o-phenylenediamine, ethanol, DMPO and photocatalysts under different light intensity (a) MIL-101(Fe); (b) 1wt% Au/MIL-101(Fe).

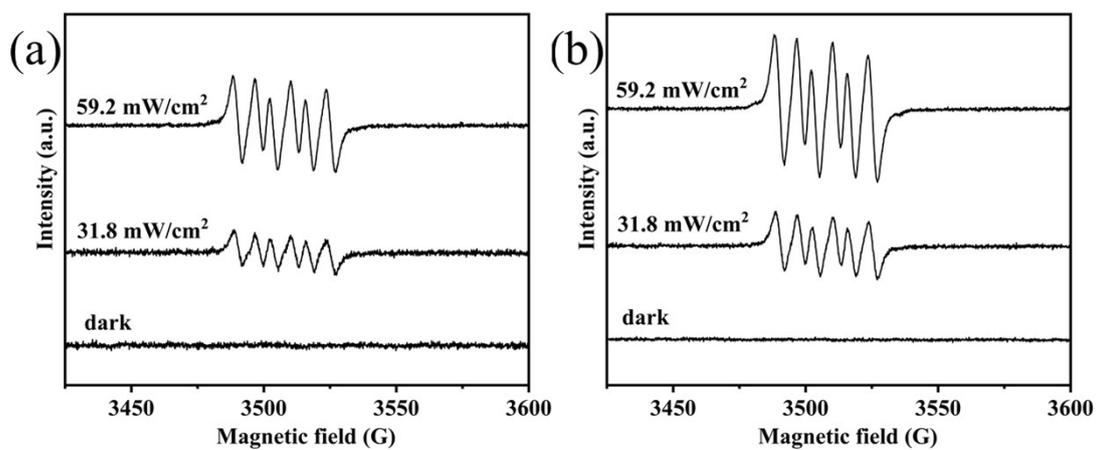


Fig. S10 XRD patterns of fresh 1.0 wt% Au/MIL-100(Fe) and the used one.

