

Supporting Information

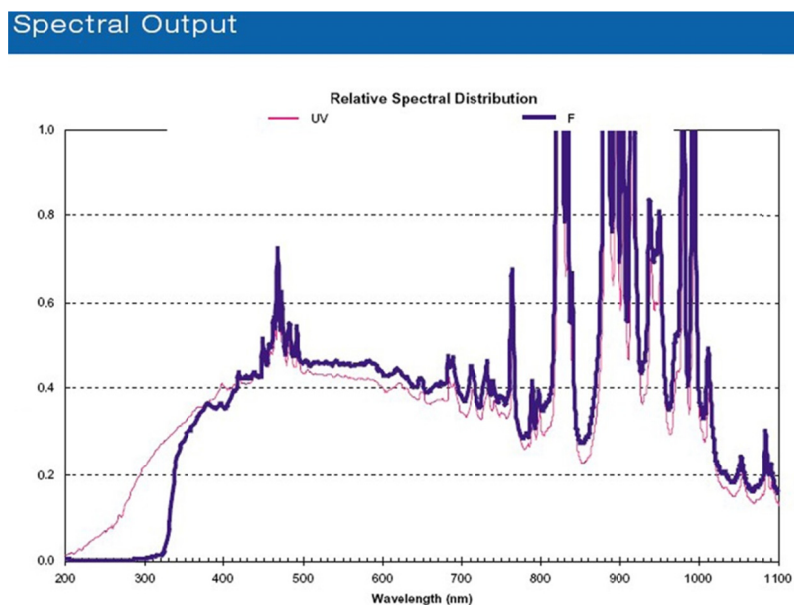


Fig. S1. Spectral output of the Xe lamp (model: PLS-SXE-300 (blue line), PerfectLight Technology, Co., Ltd.) used in the photocatalytic experiments. This image was adapted from the operating instruction of the Xe lamp with permission. It indicates that the lamp can provide strong NIR irradiation around 800-1000 nm.

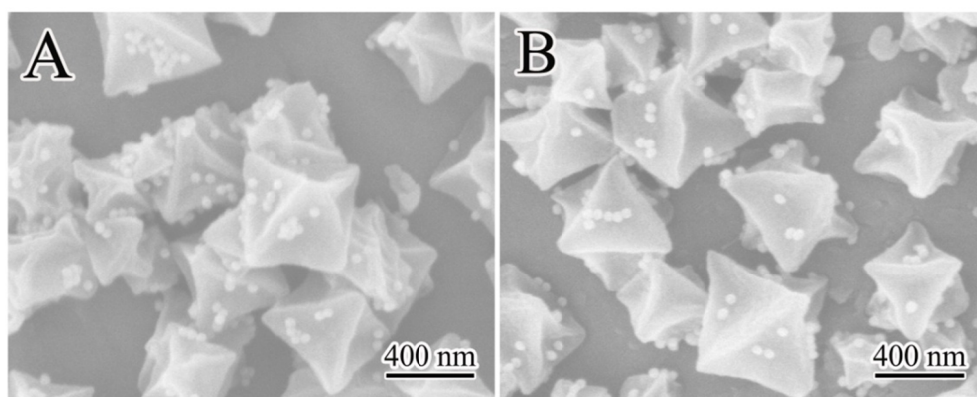


Fig. S2. SEM images of MIL-53(Fe)/UCNP after five-cycle photocatalytic experiment. These images confirm the structural stability of the prepared photocatalysts.

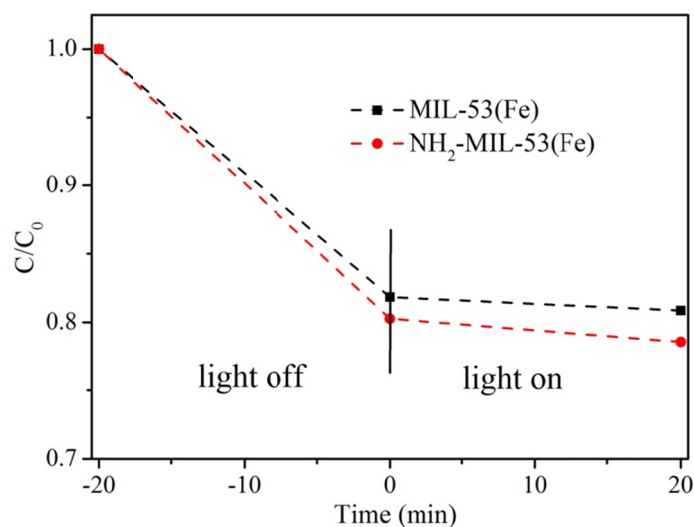


Fig. S3. Adsorption profiles of the repaired MIL-53(Fe) and NH₂-MIL-53(Fe) octahedrons prior to light irradiation. After modified with amino groups, the NH₂-MIL-53(Fe) particles show an improved adsorption to dye molecules due to the addition of polar groups in the MOF pores.

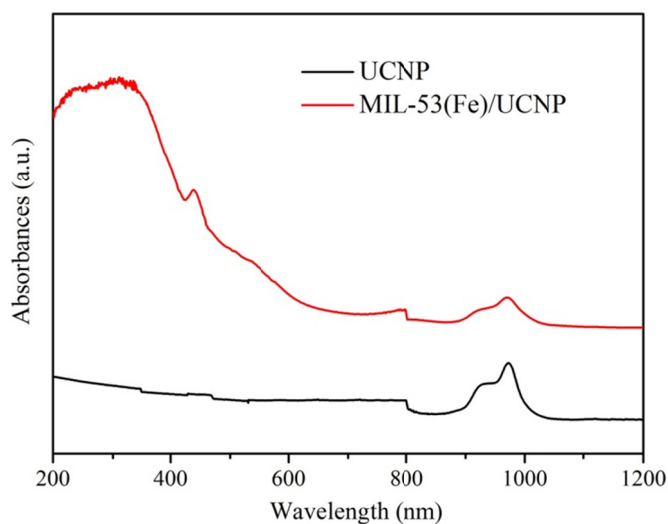


Fig. S4. UV-Vis-NIR absorption spectra of the UCNPs and MIL-53(Fe)/UCNP. The absorption band around 980 nm is originated from the UCNPs. There is gap at 800 nm which is resulted by the spectrometer due to the change of irradiation source from the Vis to NIR.