## Supplementary figures S1-6.

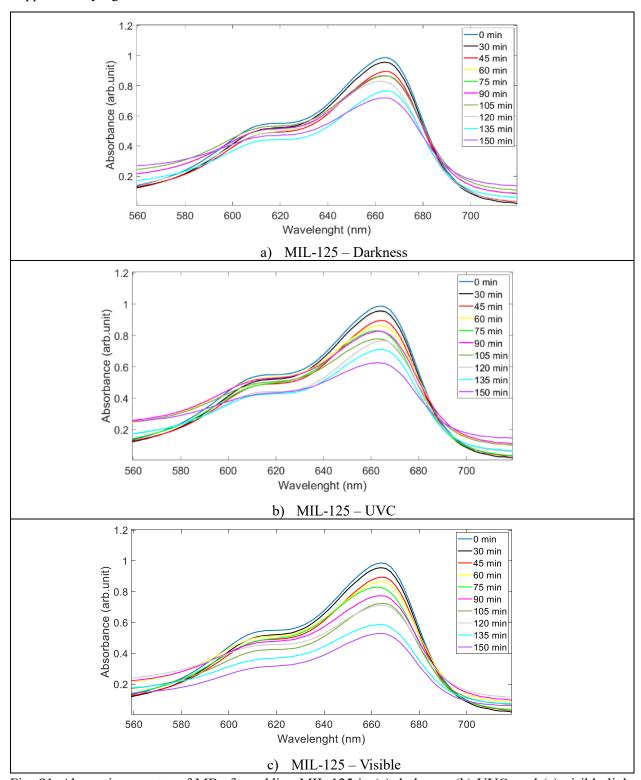


Fig. S1. Absorption spectra of MB after adding MIL-125 in (a) darkness, (b) UVC, and (c) visible light irradiation. In (b) and (c), the light was turned on only after 30 minutes.

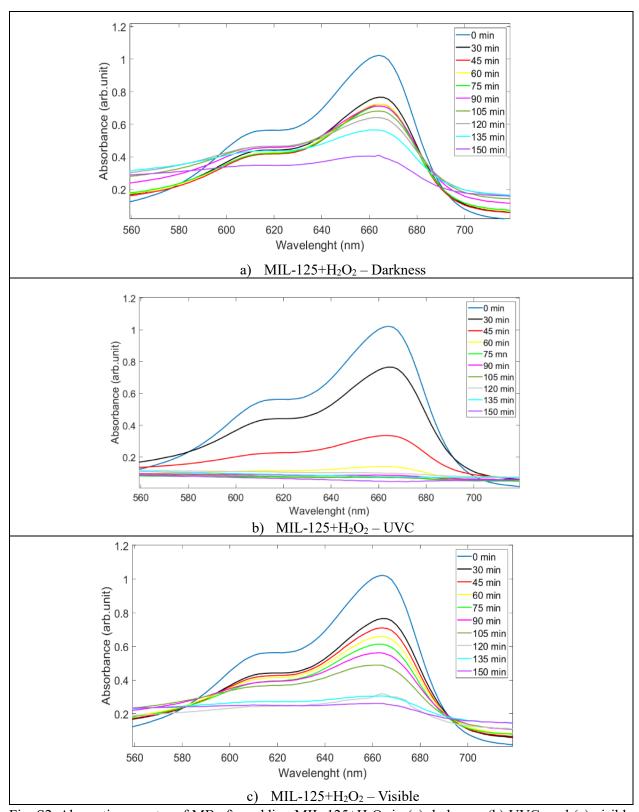


Fig. S2. Absorption spectra of MB after adding MIL-125+ $H_2O_2$  in (a) darkness, (b) UVC, and (c) visible light irradiation. In (b) and (c), the light was turned on only after 30 minutes.

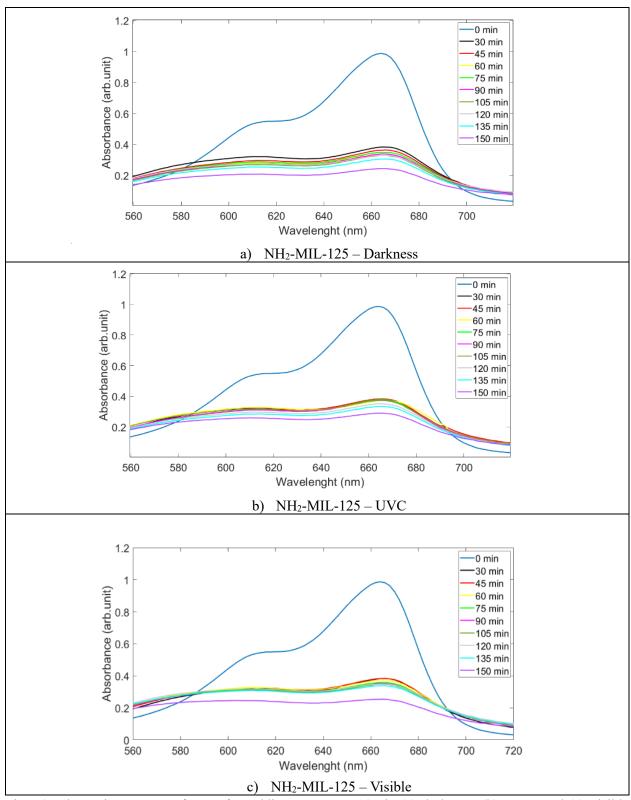


Fig. S3. Absorption spectra of MB after adding NH<sub>2</sub>-MIL-125 in (a) darkness, (b) UVC, and (c) visible light irradiation. In (b) and (c), the light was turned on only after 30 minutes.

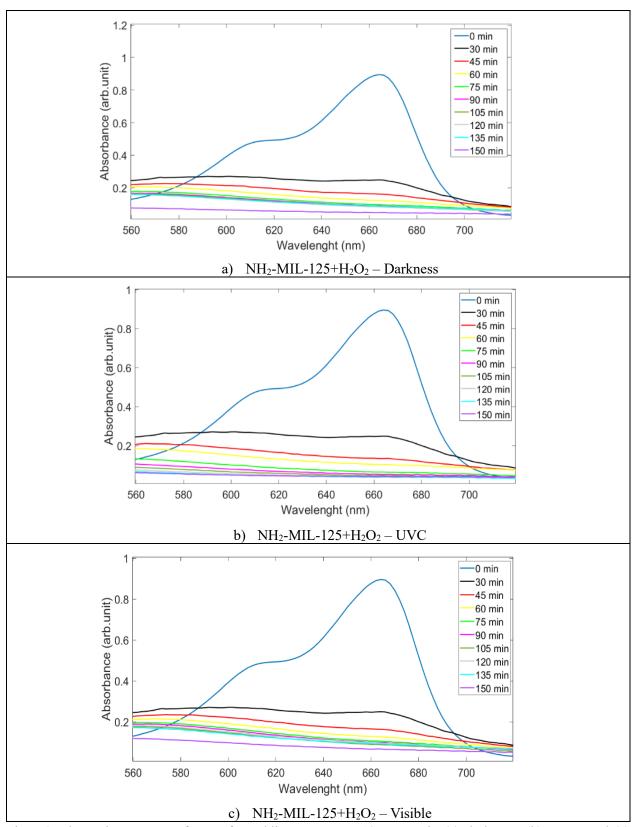


Fig. S4. Absorption spectra of MB after adding  $NH_2$ -MIL-125+ $H_2O_2$  in (a) darkness, (b) UVC, and (c) visible light irradiation. In (b) and (c), the light was turned on only after 30 minutes.

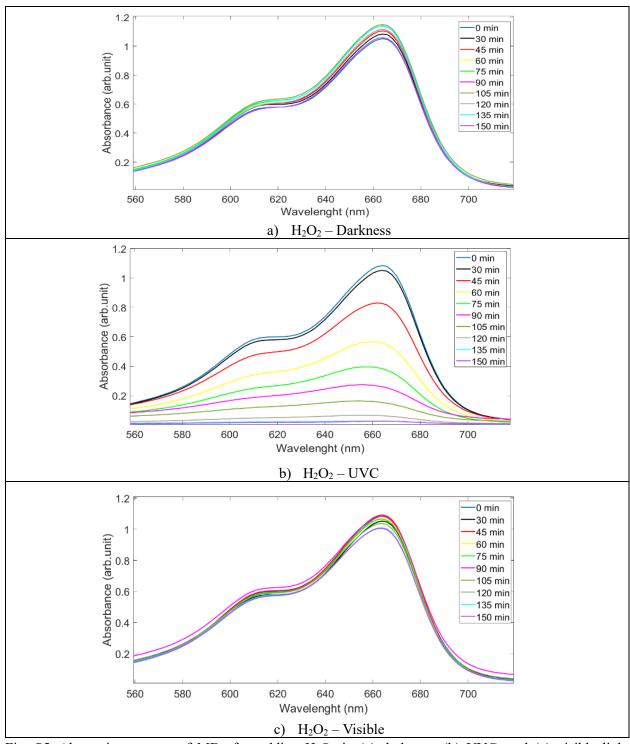


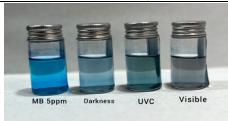
Fig. S5. Absorption spectra of MB after adding  $H_2O_2$  in (a) darkness, (b) UVC, and (c) visible light irradiation. In (b) and (c), the light was turned on only after 30 minutes.



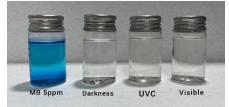
a) Photograph of the vials containing (from left to right): MB 5ppm (original solution), MB+MIL-125 after 150 min in darkness, under the UVC and visible light irradiation.



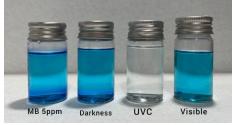
b) Photograph of the vials containing (from left to right): MB 5ppm (original solution), MB+MIL-125+H<sub>2</sub>O<sub>2</sub> after 150 min in darkness, under the UVC and visible light irradiation.



c) Photograph of the vials containing (from left to right): MB 5ppm (original solution), MB+NH<sub>2</sub>-MIL-125 after 150 min in darkness, under the UVC and visible light irradiation.



d) Photograph of the vials containing (from left to right): MB 5ppm (original solution), MB+NH<sub>2</sub>-MIL-125+H<sub>2</sub>O<sub>2</sub> after 150 min in darkness, under the UVC and visible light irradiation.



e) Photograph of the vials containing (from left to right): MB 5ppm (original solution), MB+H<sub>2</sub>O<sub>2</sub> after 150 min in darkness, under the UVC and visible light irradiation.

Fig. S6. Photograph of the vials containing MB and (a) MIL-125, (b) MIL-125+H<sub>2</sub>O<sub>2</sub>, (c) MB+NH<sub>2</sub>-MIL-125, (d) NH<sub>2</sub>-MIL-125+H<sub>2</sub>O<sub>2</sub>, and (e) H<sub>2</sub>O<sub>2</sub>, after 150 min in darkness, under the UVC and under visible light irradiation.