Supplementary Information (SI) for RSC Advances.
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Facile synthesis of C-TiO_2-MoS_2 nanocomposite based on commercial TiO_2 nanopowder for photodegradation of methylene blue

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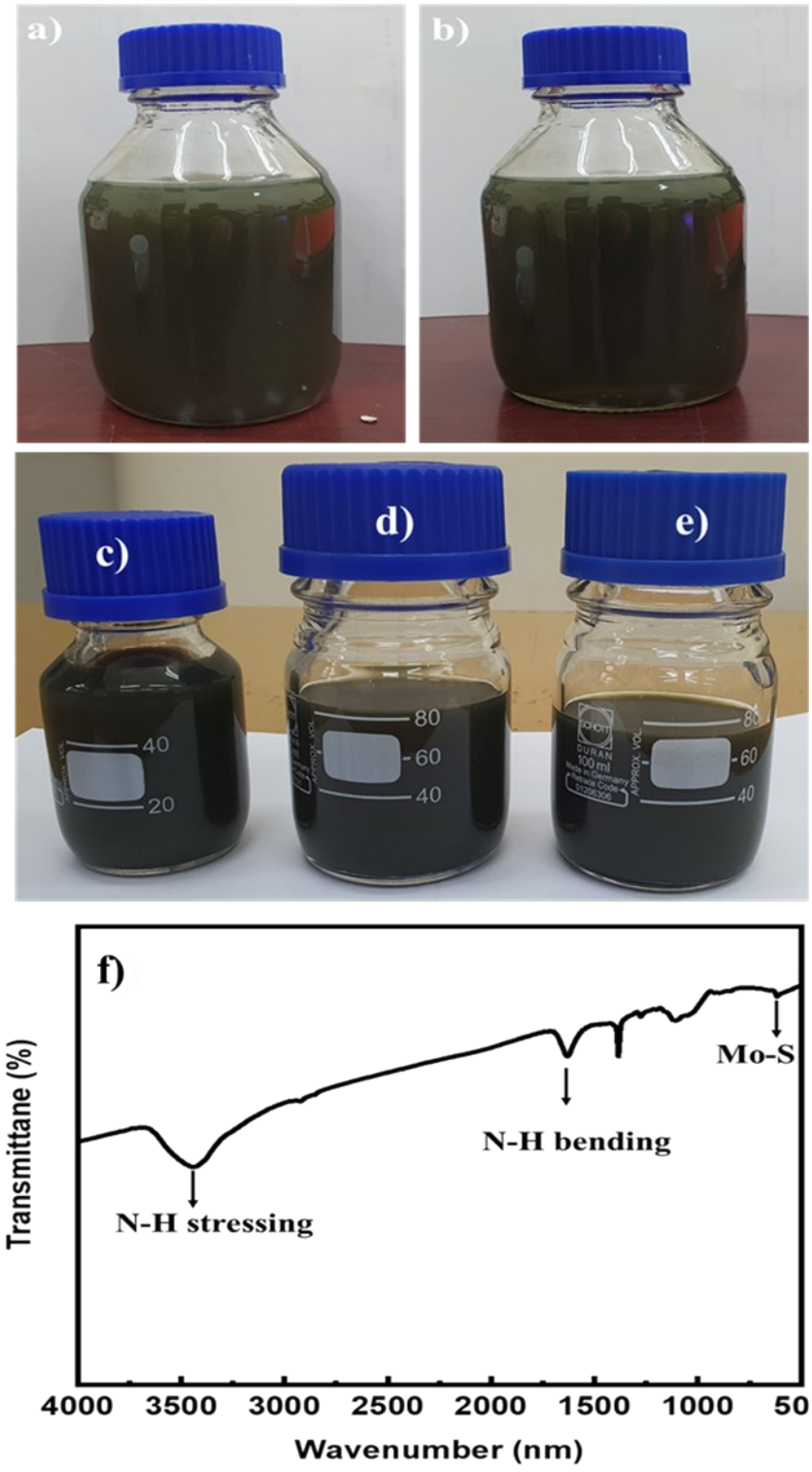

Figure S1. The dispersibility of the exfoliated MoS_2 sample in DI water. a) After dispersing, b) After 6 months. The dispersion of as-exfoliated MoS_2 sample in different solvents. c) DI water, d) Ethanol, e) Iso-propanol. FTIR spectrum of as-exfoliated MoS_2 sample (f).

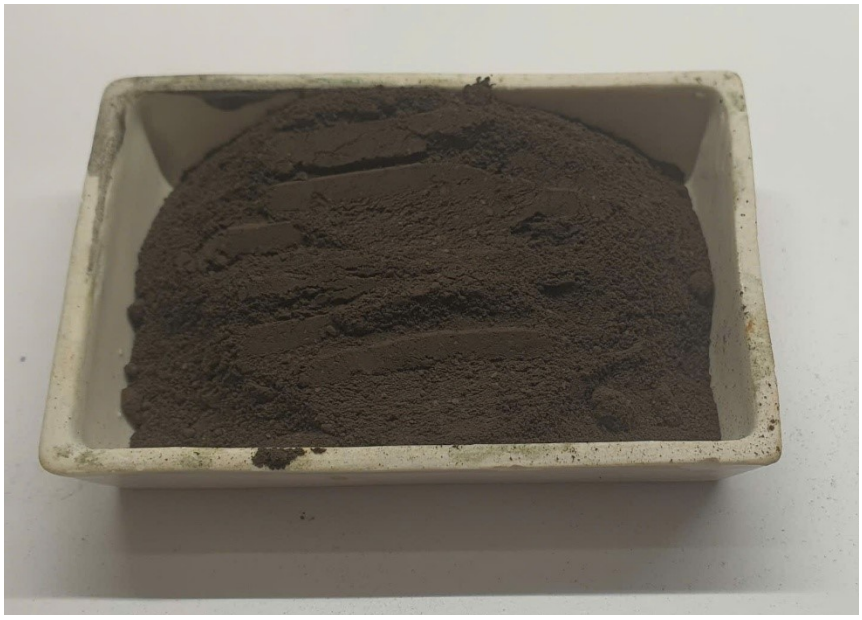

Figure S2. A digital photo of the C-TiO_2-MoS_2 composite after thermal annealing

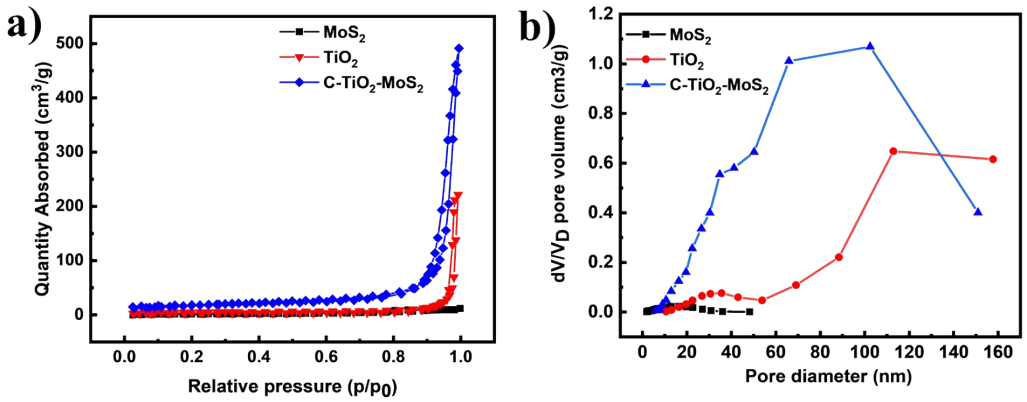

Figure S3. N_2-adsorption/desorption isotherm curves (a) and BJH pore size distribution plots (b) of MoS_2, TiO_2, and C-TiO_2-MoS_2, respectively

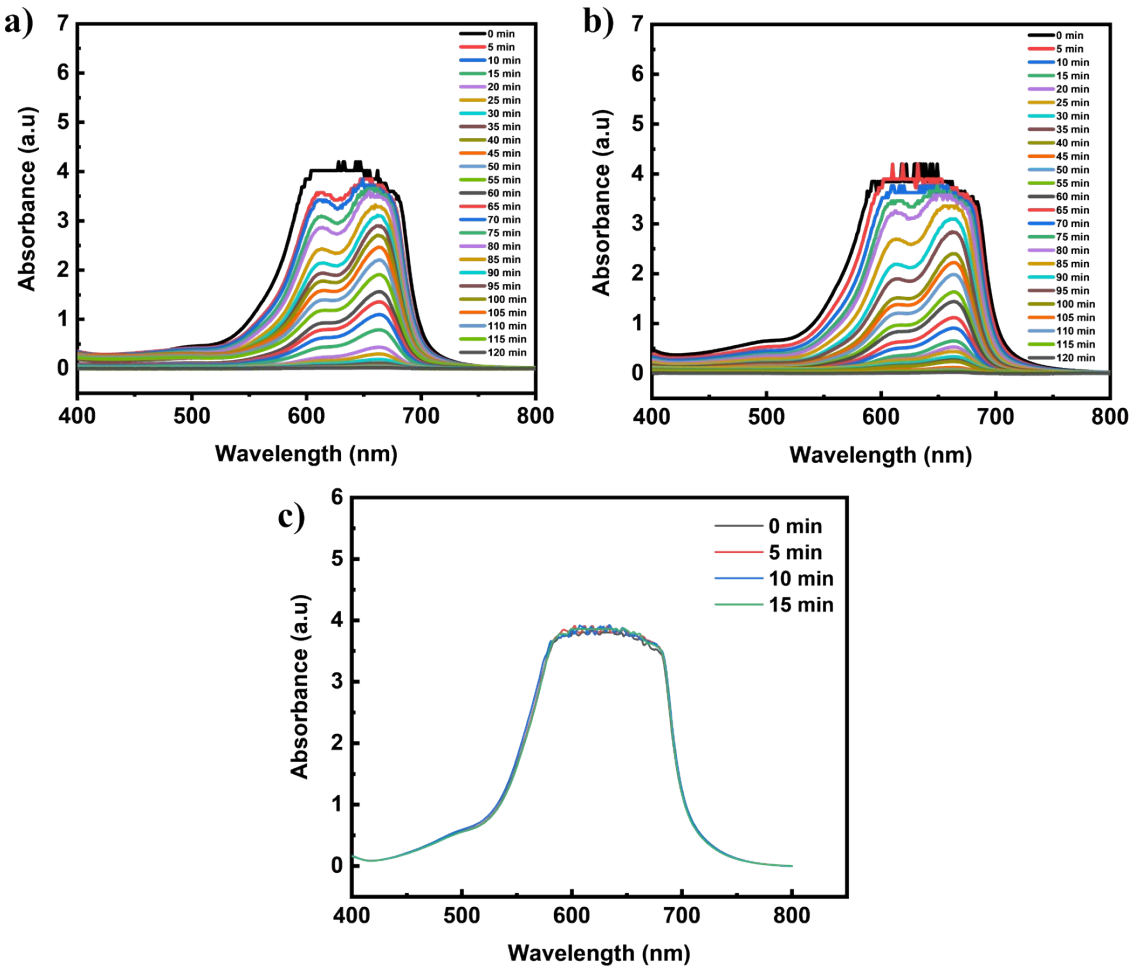

Figure S4. Time-dependent UV-vis absorbance spectra of MB degradation by as-exfoliated MoS_2 (a) and TiO_2 sample (b), only UV light without any catalysts (c)

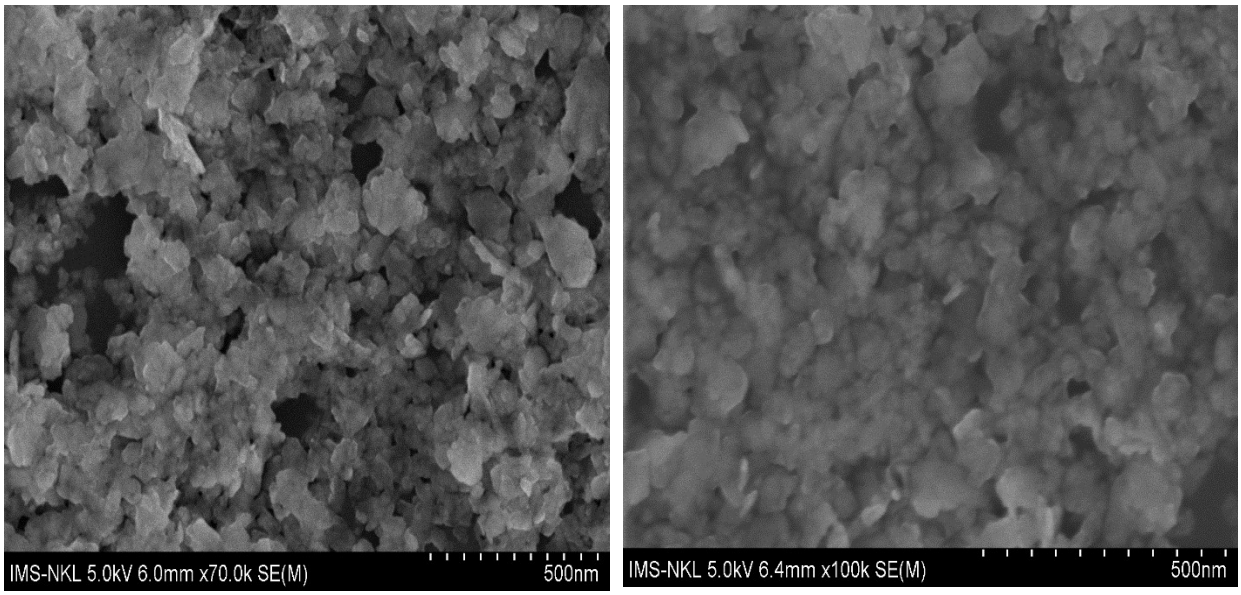

Figure S5. SEM images with higher magnification of as-exfoliated MoS_2

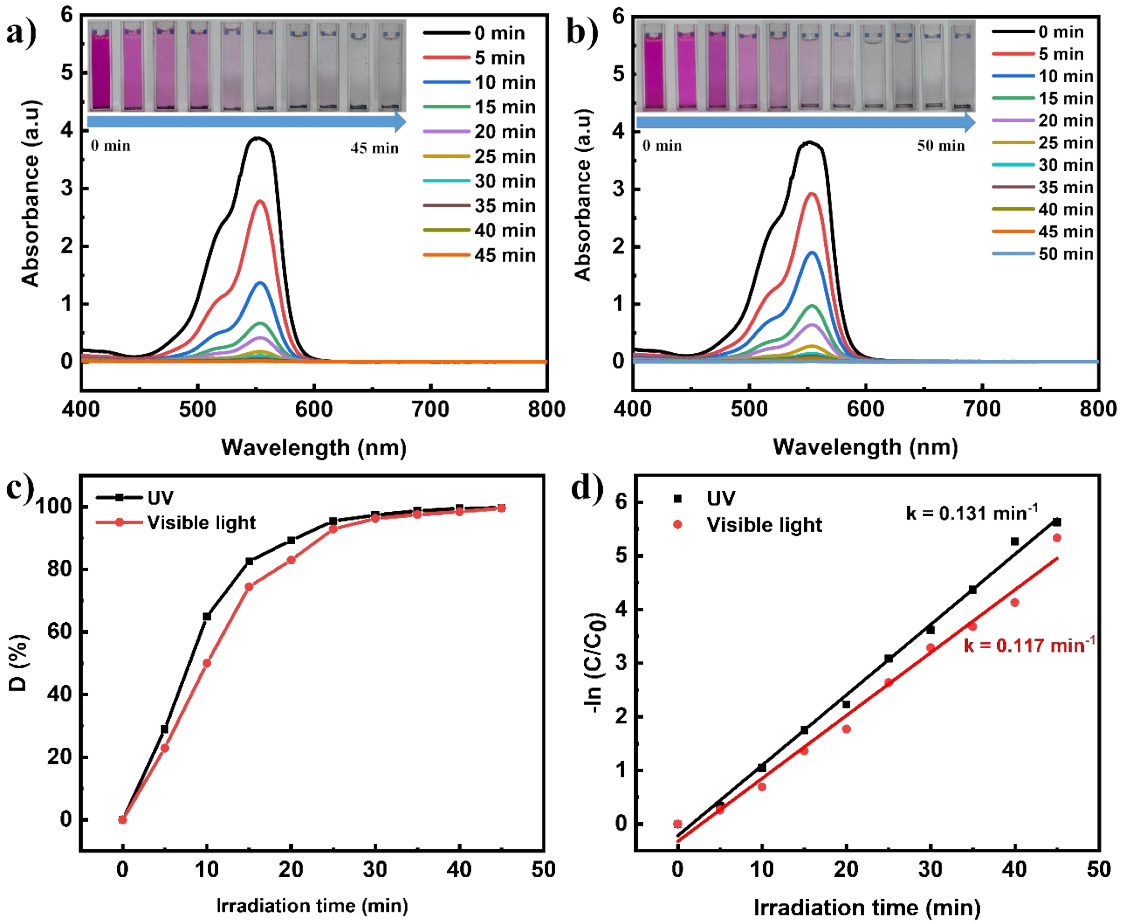

Figure S6. Time-dependent UV-vis absorbance spectra of RhB degradation by the nanocomposite under UV light (a), visible light (b), (c, d) are the degradation percentage and degradation rate of the nanocomposite under UV light and visible light, respectively.