

Supplementary Material

Effect of CdS loading on the properties and photocatalytic activity of MoS₂ nanosheets

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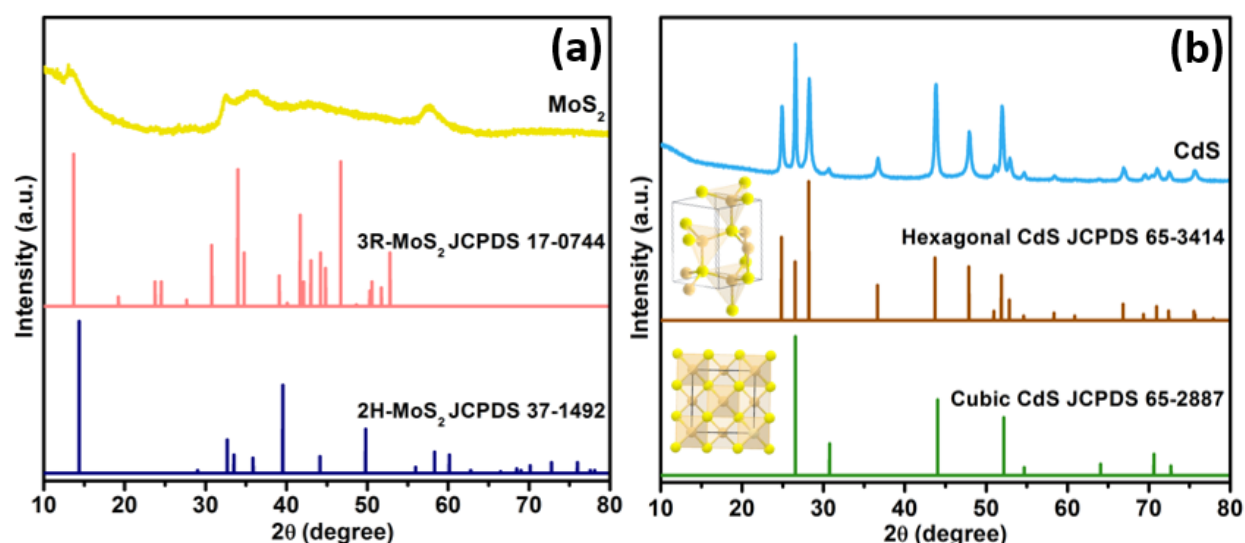


Figure S1. XRD patterns of (a) MoS₂ and (b) CdS with their respective standards.

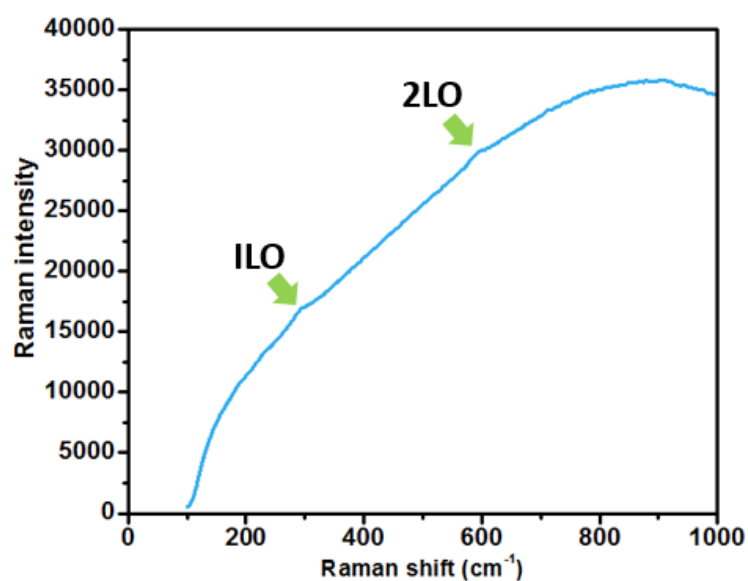


Figure S2. Raman spectrum of CdS.

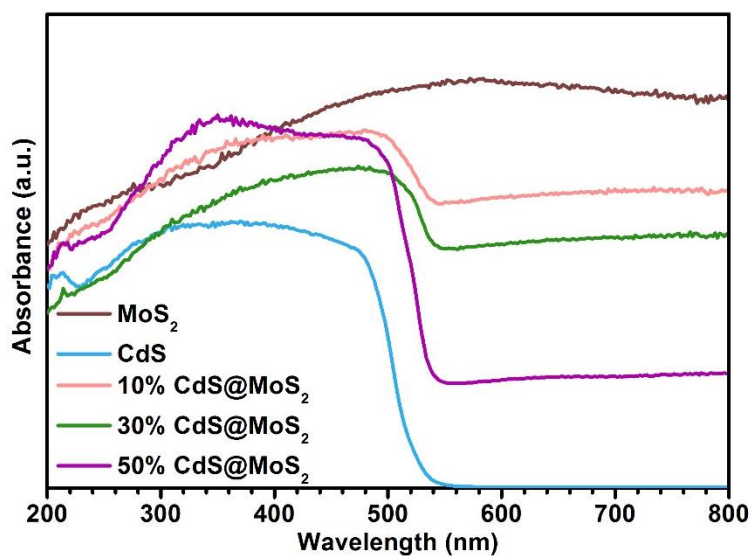


Figure S3. Absorbance (computed as the negative logarithm of the reflectance) spectra of MoS₂, CdS, 10% CdS@MoS₂, 30% CdS@MoS₂, and 50% CdS@MoS₂.

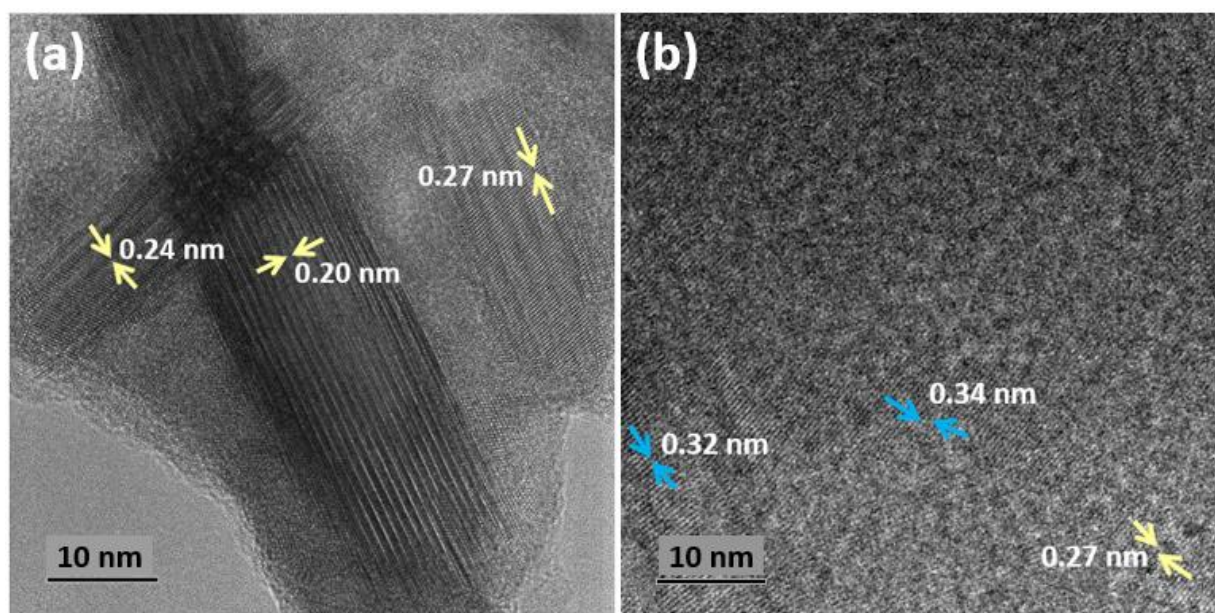


Figure S4. HR-TEM images of (a) MoS₂ and (b) 50% CdS@MoS₂ composite.

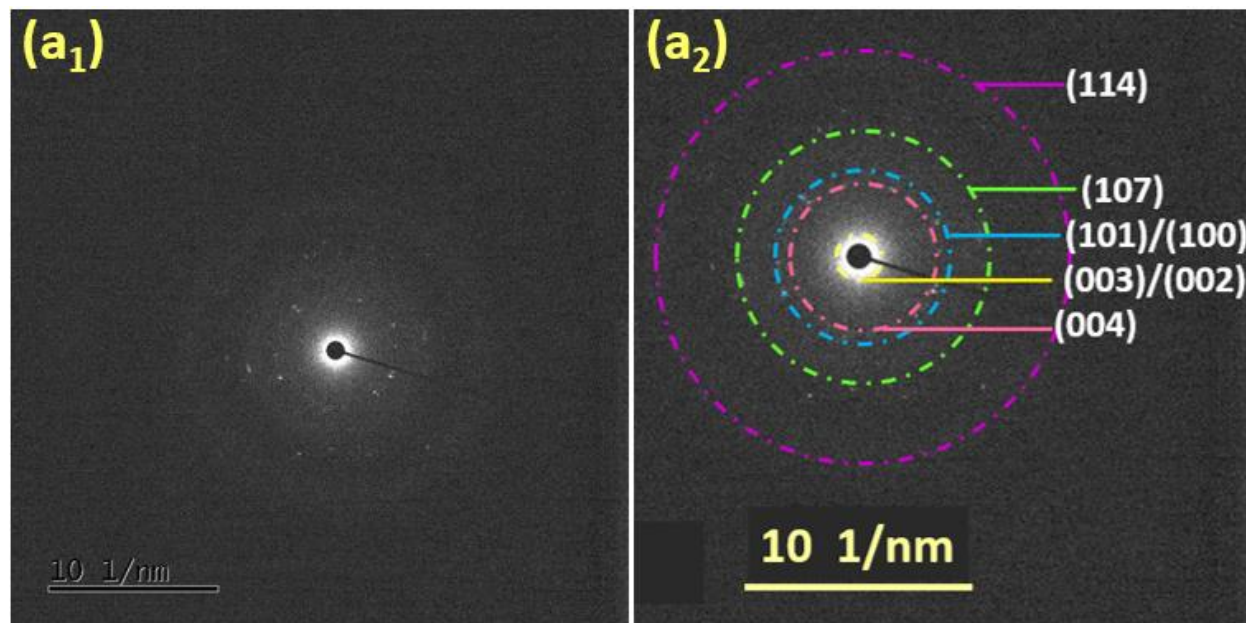


Figure S5. (a₁) Original and (a₂) indexed SAED patterns of MoS₂.

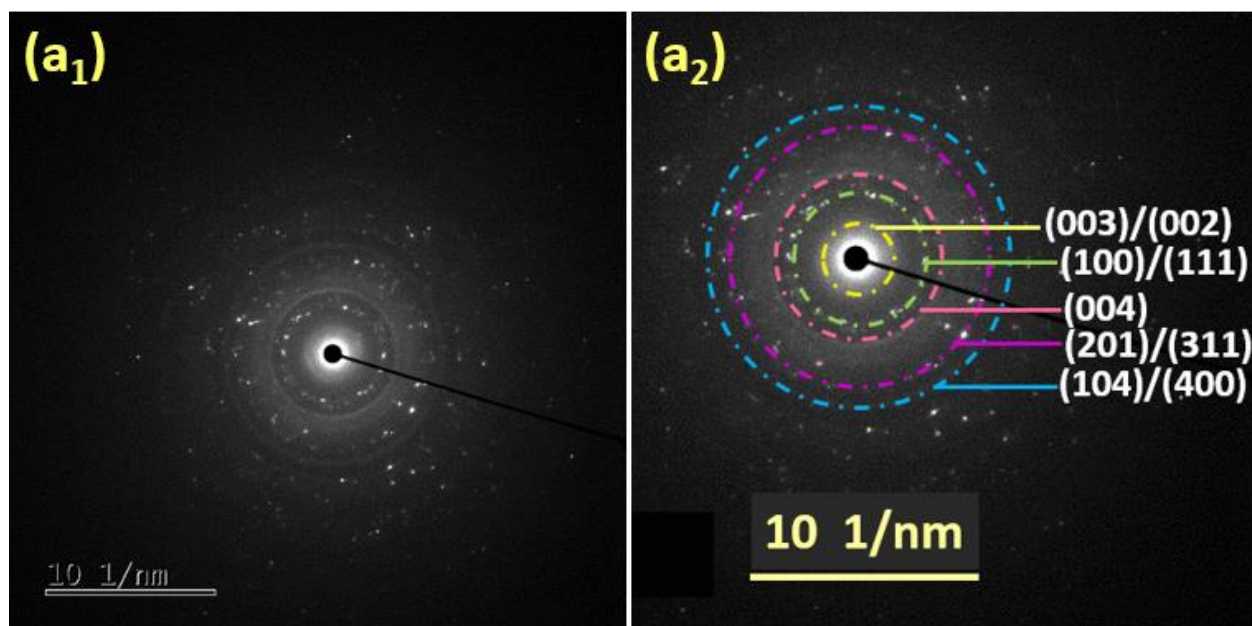


Figure S6. (a₁) Original and (a₂) indexed SAED patterns of 50% CdS@MoS₂.

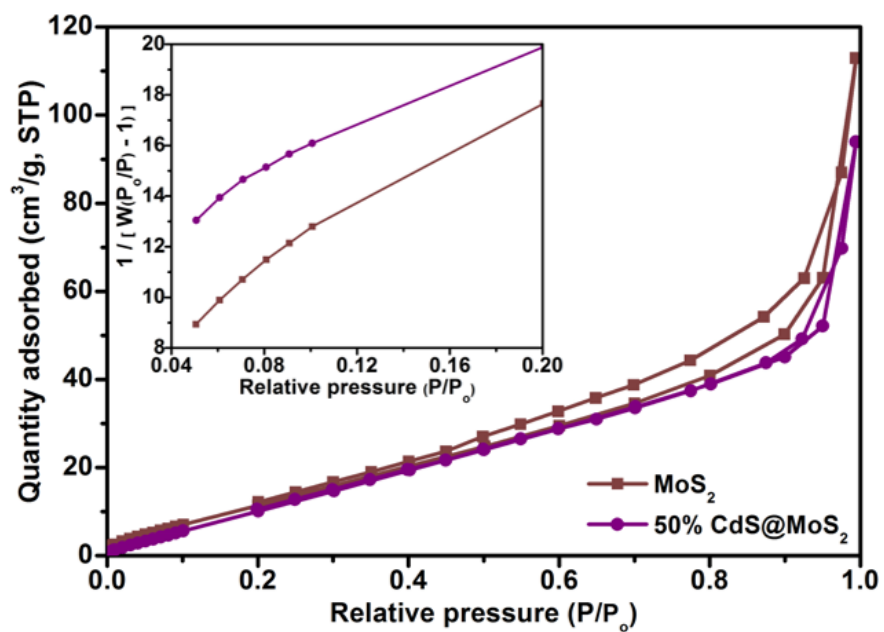


Figure S7. N₂ adsorption and desorption isotherms and multipoint BET plots (inset) of MoS₂ and 50% CdS@MoS₂.

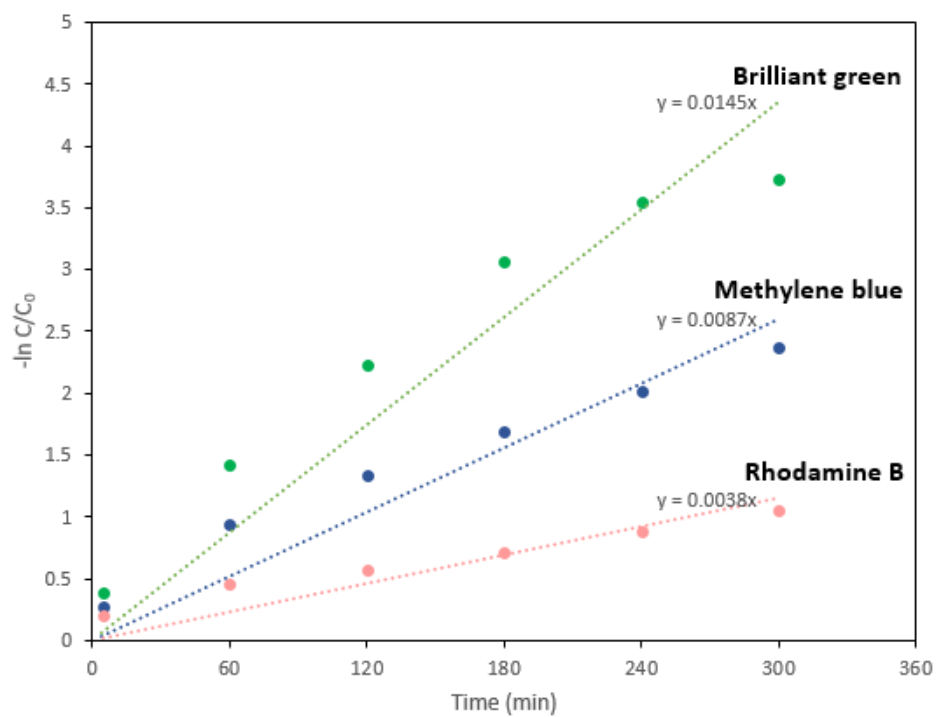


Figure S8. First order kinetic plots ($-\ln(C/C_0)$ vs. time) for the photocatalytic degradation of BG, MB, and RhB dyes using 50% CdS@MoS₂ under $\sim 14 \text{ mW/cm}^2$ UV-visible ($\lambda > 350 \text{ nm}$) light irradiation.