

Supporting information

CdSe QDs @ UIO-66 composite with enhanced photocatalytic activity towards RhB degradation under visible-light irradiation

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Fig.S1 N₂ isothermal adsorption at 77K. (⊙) UIO-66; (●) CdSe QDs @ UIO-66-0.05; (◆) CdSe QDs @ UIO-66-0.1; (□) CdSe QDs @ UIO-66-0.2; (⊙) CdSe QDs @ UIO-66-0.4.

Fig.S2. Plots of $(\alpha h\nu)^2$ versus energy ($h\nu$) to obtain the band gap energy of different catalyst samples. a. Pure UIO-66; b. Pure CdSe; c. CdSe QDs @ UIO-66-0.05; d. CdSe QDs @ UIO-66-0.1; e. CdSe QDs @ UIO-66-0.2; f. CdSe QDs @ UIO-66-0.4.

Fig.S3 Comparison of the reaction rate constant (k) in the presence of different catalysts according to the pseudo-first-order kinetic model. (●) CdSe QDs @ UIO-66-0.4, $Y=0.0639x-0.0576$, $R^2=0.972$; (◆) CdSe QDs @ UIO-66-0.2, $Y=0.0557x-0.0104$, $R^2=0.990$; (●) CdSe QDs @ UIO-66-0.1, $Y=0.0489x-0.0799$, $R^2=0.969$; (⊙) CdSe QDs @ UIO-66-0.05, $Y=0.0309x+0.102$, $R^2=0.978$; (X) the control experiment, $Y=0.0219x+0.118$, $R^2=0.943$.

Fig.S4 PXRD patterns of as-synthesized and reacted CdSe QDs @UIO-66-0.2.

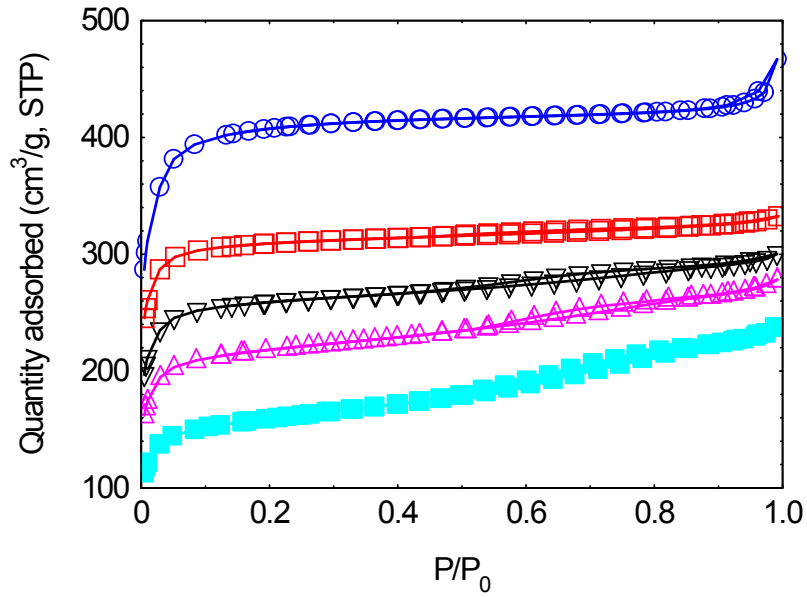


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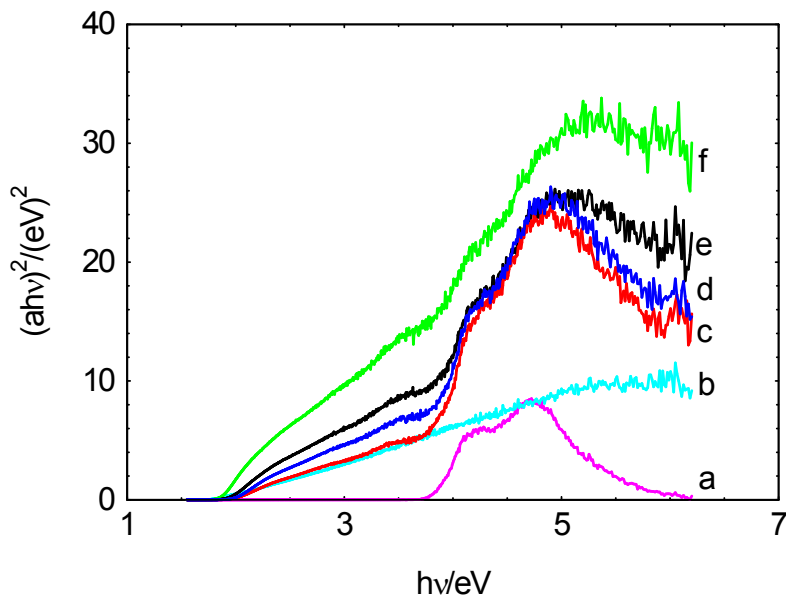


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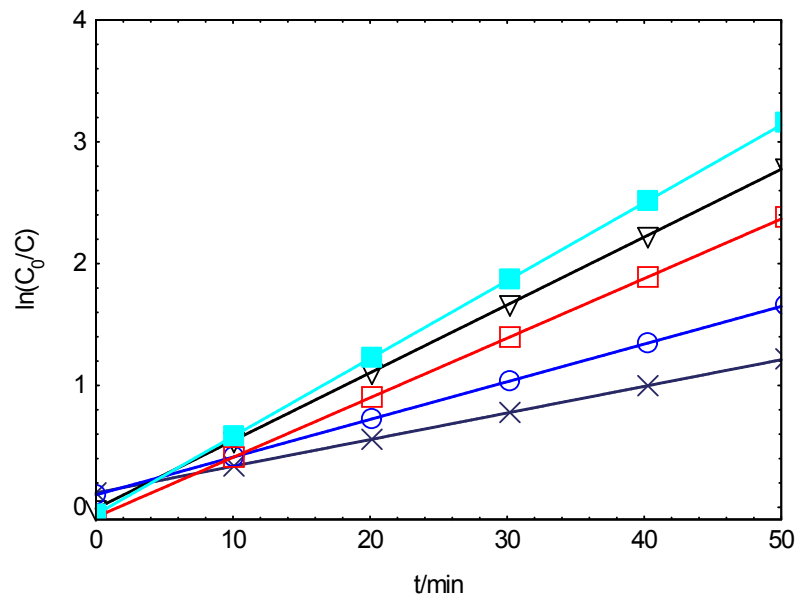


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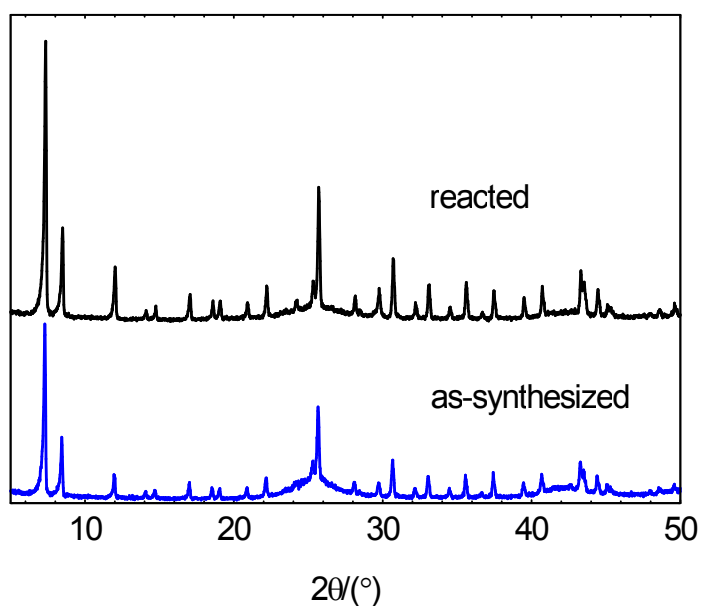


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