

## Supplementary Information

# Carbon Quantum Dots/ $\text{Ag}_3\text{PO}_4$ Complex Photocatalysts with Enhanced Photocatalytic Activity and Stability under Visible Light

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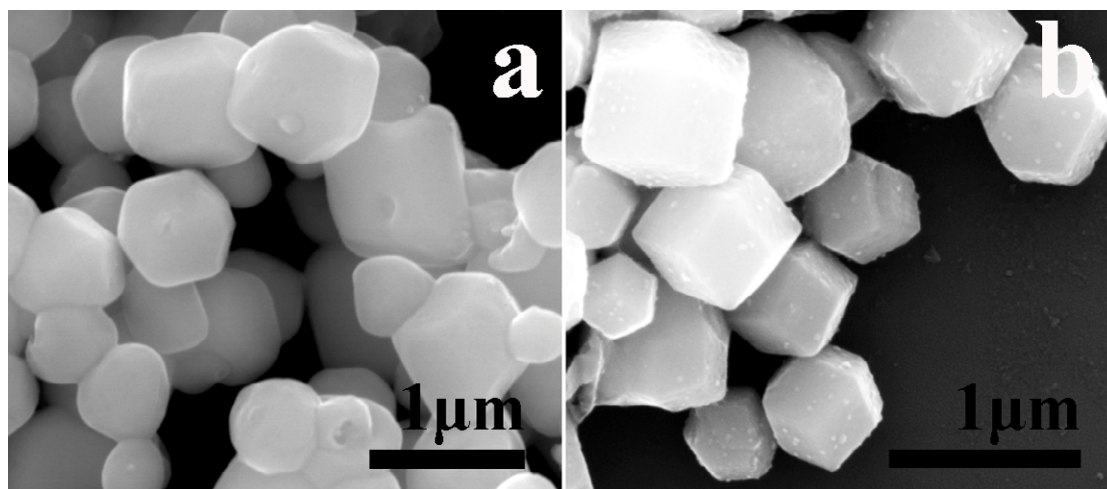


Fig. S1 SEM images of (a)  $\text{Ag}_3\text{PO}_4$  nanoparticles and (b)  $\text{Ag}/\text{Ag}_3\text{PO}_4$  composites.

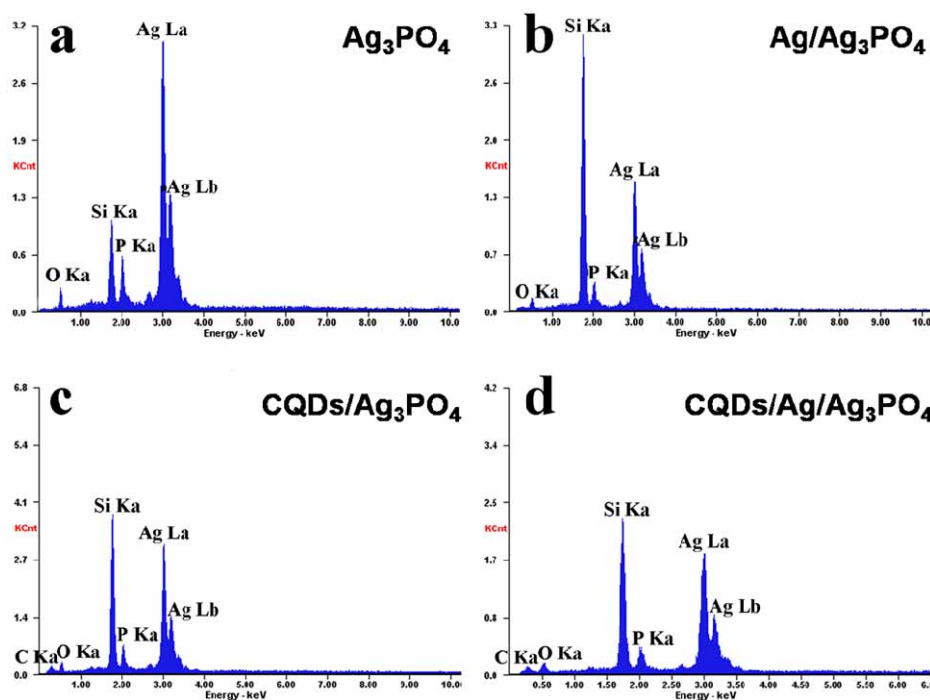
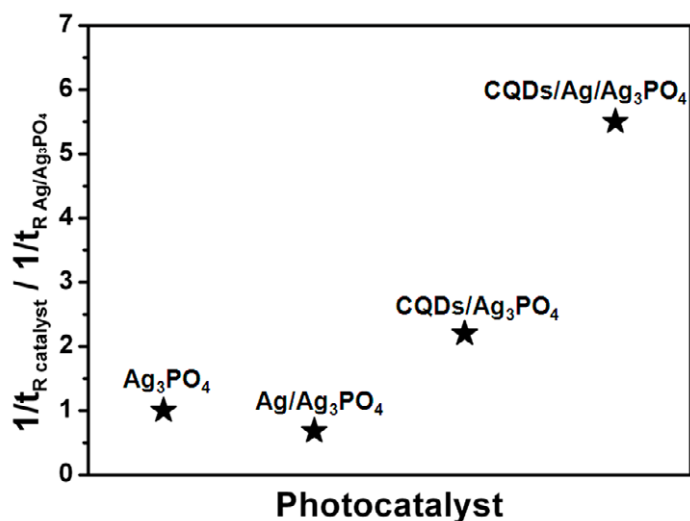
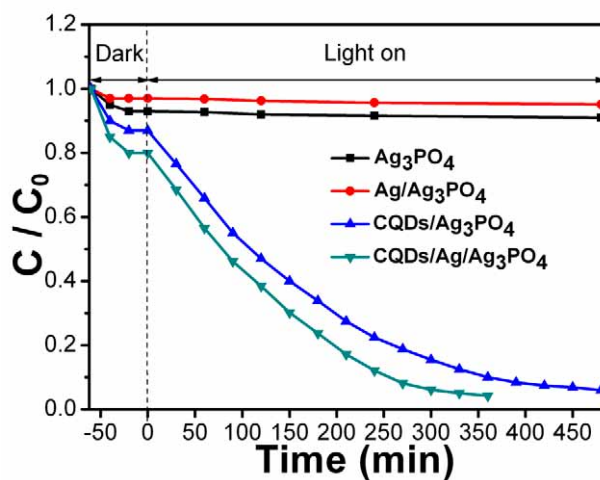


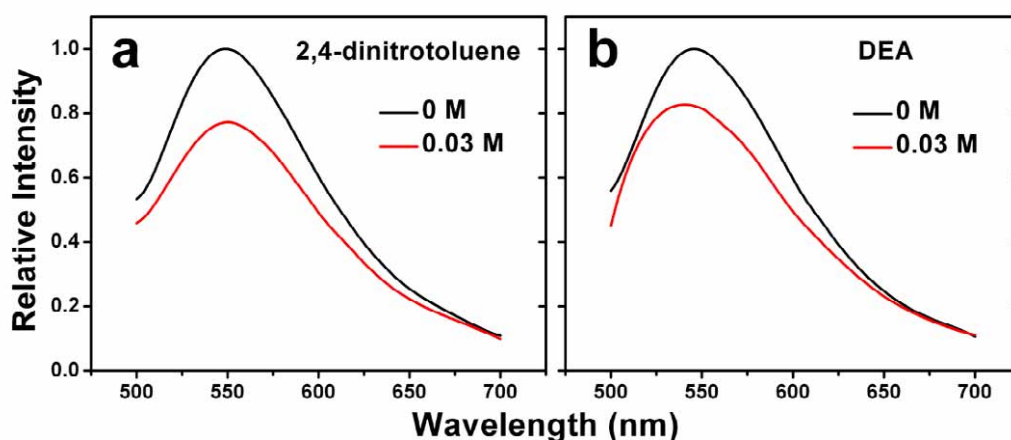
Fig. S2 EDS patterns of (a)  $\text{Ag}_3\text{PO}_4$  crystals; (b)  $\text{Ag}/\text{Ag}_3\text{PO}_4$  nanocomposites; (c) CQDs/ $\text{Ag}_3\text{PO}_4$  nanocomposites; (d) CQDs/ $\text{Ag}/\text{Ag}_3\text{PO}_4$  nanocomposites.



**Fig. S3** A detailed comparison on the photocatalytic ability of  $\text{Ag}/\text{Ag}_3\text{PO}_4$ ,  $\text{CQDs}/\text{Ag}_3\text{PO}_4$  and  $\text{CQDs}/\text{Ag}/\text{Ag}_3\text{PO}_4$  with  $\text{Ag}_3\text{PO}_4$ ,  $t_R$  is the reaction time for MO solution decomposed completely.



**Fig. S4** Photocatalytic activities of  $\text{Ag}_3\text{PO}_4$ ,  $\text{Ag}/\text{Ag}_3\text{PO}_4$ ,  $\text{CQDs}/\text{Ag}_3\text{PO}_4$  and  $\text{CQDs}/\text{Ag}/\text{Ag}_3\text{PO}_4$  for MO degradation under near-infrared-light ( $\lambda \geq 700 \text{ nm}$ ) irradiation



**Fig. S5** Luminescence emission spectra (485 nm excitation) of the CQDs in toluene without and with the quenchers (both 0.03 M)