Supporting Information

Chemically modified graphene oxide-wrapped quasi-micro Ag decorated silver trimolybdate nanowires for photocatalytic applications

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Fig. S1. XRD patterns of the Ag$_2$Mo$_3$O$_{10}$ Ws (a) and Ag@Ag$_2$Mo$_3$O$_{10}$ Ws (b).
Fig. S2. TEM images of the Ag$_2$Mo$_3$O$_{10}$ Ws (a) and Ag@Ag$_2$Mo$_3$O$_{10}$ Ws (b).
Fig. S3. SEM images of the Ag@Ag$_2$Mo$_3$O$_{10}$/GO (a) and (b), element mapping (c) and (d), and EDS line analysis (e).
Fig. S4. XRD patterns of the GO and Ag@Ag$_2$Mo$_3$O$_{10}$/activated GO composite.
**Fig. S5.** FT-IR spectra of the GO, activated GO and 20% Ag@Ag$_2$Mo$_3$O$_{10}$/activated GO composite. Inset is magnification of the peaks from 1500 to 1800 cm$^{-1}$. 
Fig. S6. UV-vis absorption spectra change of Rh.B concentration against the 20% Ag@Ag₂Mo₃O₁₀/activated GO composite under solar light (Insets show the fade of the Rh.B)
Fig. S7. SEM images of the Ag@Ag$_2$Mo$_3$O$_{10}$/RGO.
Fig. S8. UV absorption spectra of Ag@Ag$_2$Mo$_3$O$_{10}$/activated GO composite with different photo-irradiated time.
Fig. S9. Deconvolution of Ag (3d) XPS spectra of the Ag@Ag$_2$Mo$_3$O$_{10}$/activated GO composite at 1 and 5 h solar irradiation time.
Fig. S10. UV absorption spectra of 4-CP over 20% Ag@Ag$_2$Mo$_3$O$_{10}$/activated GO (a) and Ag@Ag$_2$Mo$_3$O$_{10}$ (b) under solar light irradiation as function time.
Fig. S11. Plots of $(\alpha E)^{1/2}$ against the photon energy (E) for GO.