**Electronic Supplementary information**

**UV-light-driven photocatalytic degradation and antimicrobial properties of efficient ternary semiconductor CdxAg1-xS nanocomposites**

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**Figure S1.** The UV-vis absorption spectra of the photocatalytic degradation of (a-b) MLT, (c-d) MCP and (e-f) CPS in the absence and presence of Cd0.5Ag0.5S composites under 1 h UV light irradiation, respectively





**Figure S2.** Five cycling runs on the photocatalytic degradation of (a) MCP and (b) CPS using Cd0.5Ag0.5S nanocomposite under 1 h UV light irradiation

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**Figure S3.** Effects of the addition of different scavengers on the photocatalytic degradation of (a) MCP and (b) CPS using Cd0.5Ag0.5S nanocomposite under 1 h UV light irradiation