## **Support Information**

## Facet-dependent photocatalytic and antibacterial properties in α-Ag<sub>2</sub>WO<sub>4</sub> crystals: Combining experimental data and theoretical insights

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(b)





Fig. 1S(a–d).  $\alpha$ –Ag<sub>2</sub>WO<sub>4</sub> microcrystals at different perspectives of their crystallographic planes modeled from experimental data computationally.



Fig. 2S(a). Crystals shape theoretical modeled by the Wulff theorem and their energy surface, respectively.



Fig. 2S(b). Clusters coordination and uncoordination numbers at (010) and (100) surfaces.



Fig. 2S(c). Clusters coordination and uncoordination numbers at (001) and (110) surfaces.



Fig. 2S(c). Clusters coordination and uncoordination numbers at (101) and (011) surfaces.