

Supplementary information

One-step controllable synthesis of three-dimensional WO₃ hierarchical architectures with different morphologies decorated with silver nanoparticles: enhancing the photocatalytic activity

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Results and Discussion

We are investigating the evolution of $\text{WO}_3\cdot\text{Ag}$ as function of hydrothermal temperature. The results as function of hydrothermal reaction temperature show an evolution Ag-NPs decorated WO_3 nanospheres to urchin-like architecture and finally spiky ball-like structure, as presented in FEG image below for $\text{WO}_3\cdot 0.20\text{Ag}$. Increasing the temperature promotes the growth and the hierarchical structures were observed in $\text{WO}_3\cdot\text{Ag}$.

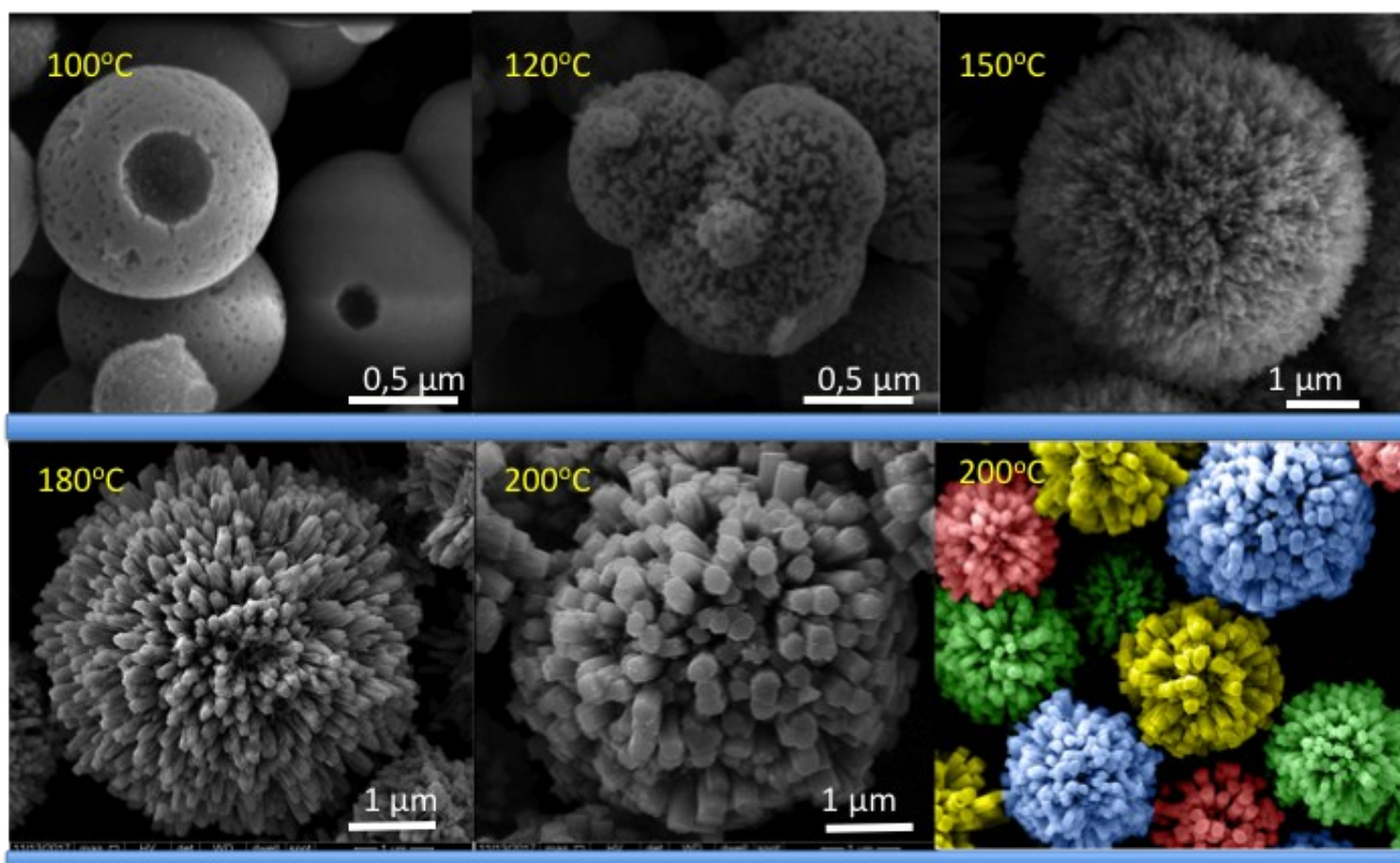


Fig. S1. FEGSEM images of sample ($\text{WO}_3\cdot 0.20\text{Ag}$) synthesized by the hydrothermal method at different reaction temperatures for 2 hours. Nanospheres (100°C-120°C), urchin-like structure (150°C-180°C) and spiky ball-like structure (200°C).