



Supporting Information

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Hydrothermal Cation Exchange Enabled Gradual Evolution of Au@ZnS–AgAuS Yolk–Shell Nanocrystals and Their Visible Light Photocatalytic Applications

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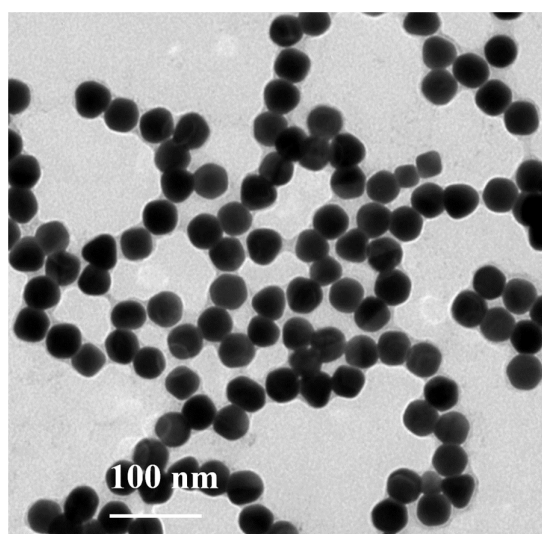


Figure S1 TEM image of Au core.

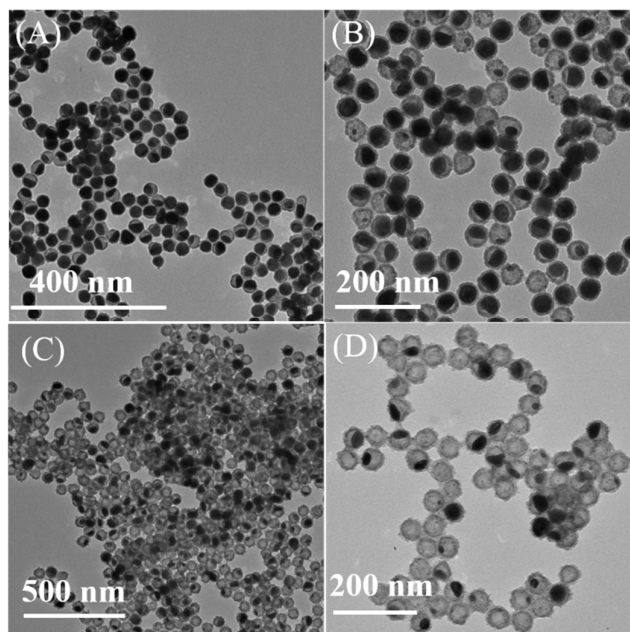


Figure S2 Large-scale TEM images of A) Au@ZnS-AgAuS (120 °C 2 h), B) Au@ZnS-AgAuS (120 °C 4 h), C) Au@ZnS-AgAuS (140 °C 4 h) and D) Au@ZnS-AgAuS (160 °C 4 h) Y-S NCs

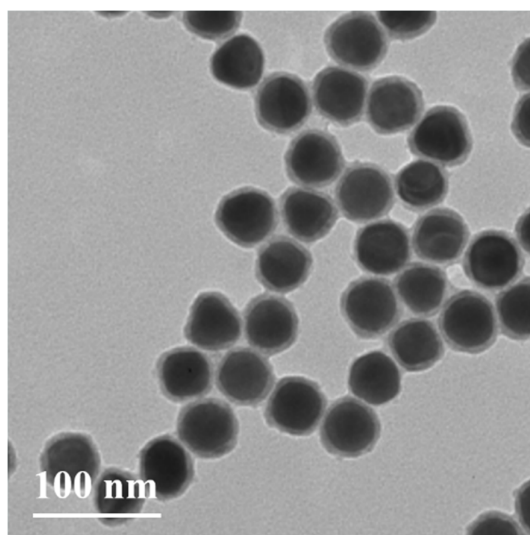


Figure S3 TEM image of Au@ZnS-AgAuS NCs, which were obtained at 120 °C for 30 min.

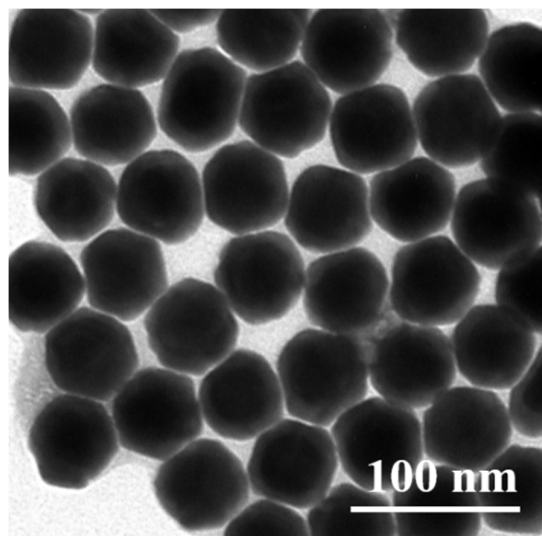


Figure S4 TEM image of Au@AgAuS, obtained at 140 °C for 4 h. (absence of Zn²⁺ and TBP)

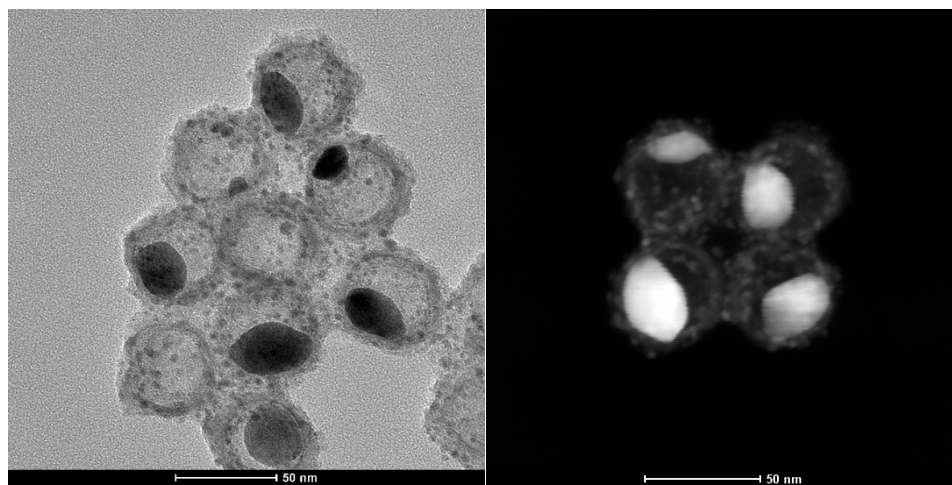


Figure S5 TEM and STEM images of Au@ZnS-AgAuS (140 °C 4 h) Y-S NCs.

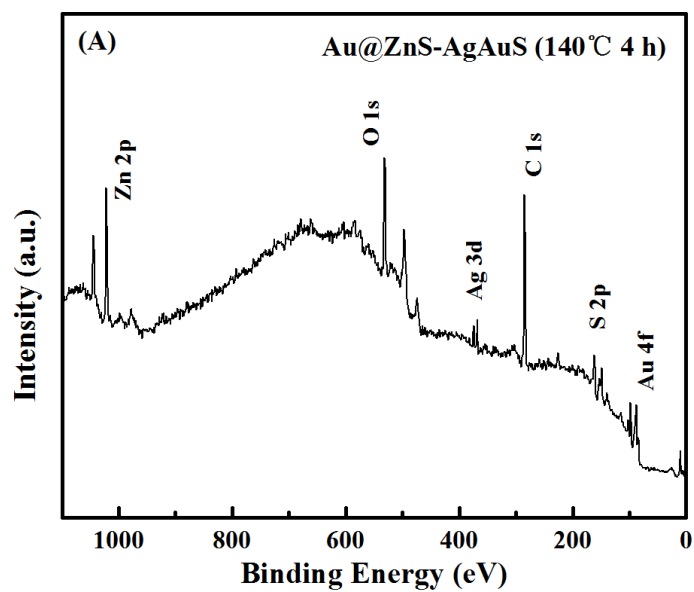


Figure S6 XPS spectra of Au@ZnS-AgAuS (140 °C 4 h) Y-S NCs

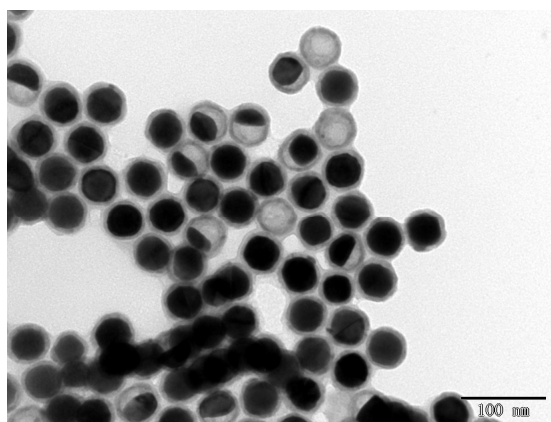


Figure S7 TEM image of Au@ZnS-AgAuS Y-S NCs in the presence of CTAC. (150 °C for 4 h)

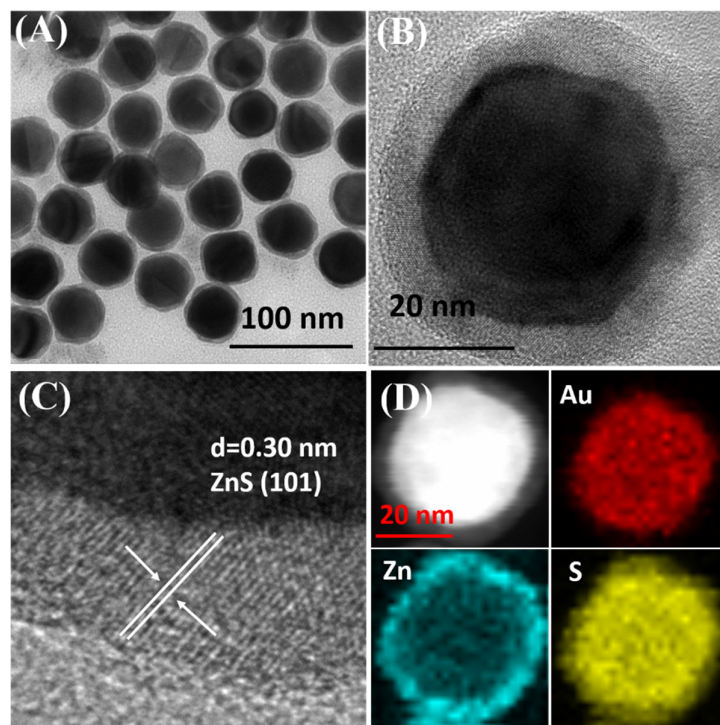


Figure S8 A, B) TEM image and of Au@ZnS core-shell NCs. C) HRTEM image D) STEM-EDS elemental maps of Au@ZnS core-shell NCs.