

Electronic Supplementary Information *for*

Hydrophobicity-Guided Self-Assembled Particles of Silver Nanoclusters with Aggregation-Induced Emission and Their Use in Sensing and Bioimaging

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1. **Figure S1.** PL spectra of silver nanoclusters synthesized using different ratios of thiosalicylic acid to silver ion from 1:1 to 1:8.
2. **Figure S2.** Time-resolved luminescence decay curve of AgNCs dispersion in ethanol, AgNC AIE particles and AgNCs powder and their corresponding fit curves.
3. **Figure S3.** PL spectra of AgNC AIE particles assembled in solutions with different ratios of ethanol to water.
4. **Figure S4.** PL spectra of AgNC AIE particles assembled in water with different ultrasonic time from 10 min to 70 min.
5. **Figure S5.** Calibration curve between luminescence intensity of AgNC AIE particles and solution temperature in the range of 0.0 – 80.0 °C.
6. **Figure S6.** Time-resolved luminescence decay curves of AgNC AIE particles at different temperatures ranging from 0.0 – 80.0 °C with the interval of 10 °C.
7. **Figure S7.** Effect of thiosalicylic acid on the viability of human A549 cells.

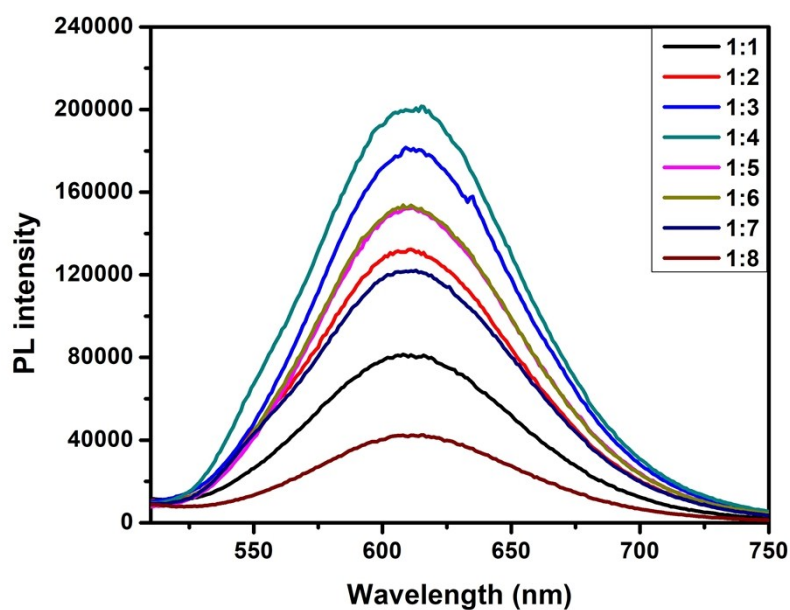


Figure S1. PL spectra of silver nanoclusters synthesized using different ratios of thiosalicylic acid to silver ion from 1:1 to 1:8.

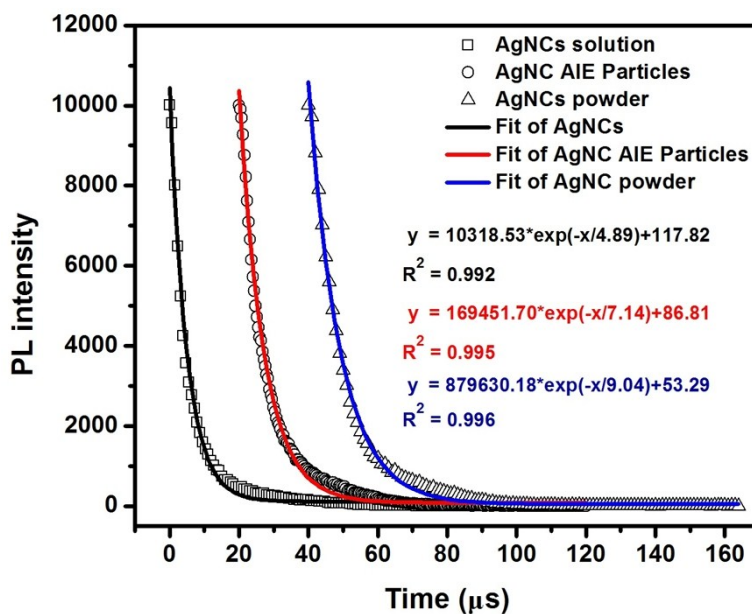


Figure S2. Time-resolved luminescence decay curve of AgNCs dispersion in ethanol, AgNC AIE particles and AgNCs powder and their corresponding fit curves.

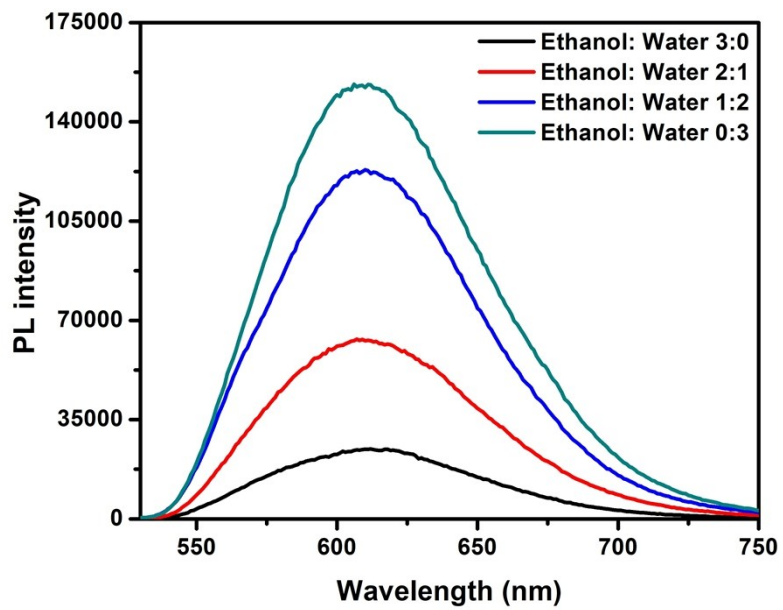


Figure S3. PL spectra of AgNC AIE particles assembled in solutions with different ratios of ethanol to water.

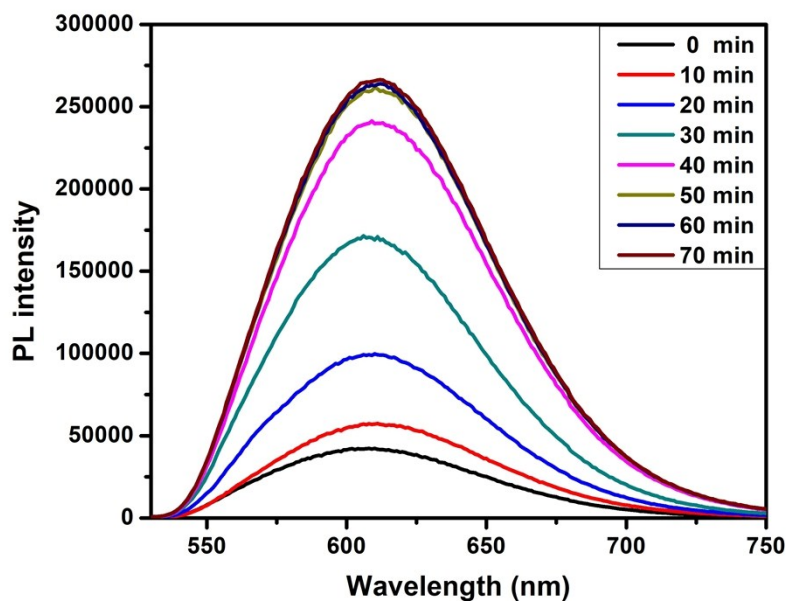


Figure S4. PL spectra of AgNC AIE particles assembled in water with different ultrasonic time from 0 min to 70 min.

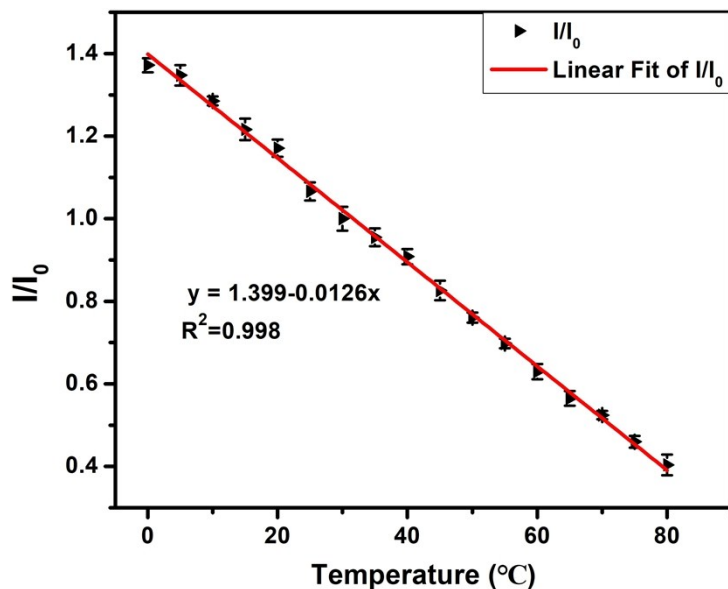


Figure S5. Calibration curve between luminescence intensity of AgNC AIE particles and solution temperature in the range of 0.0 – 80.0 $^{\circ}\text{C}$.

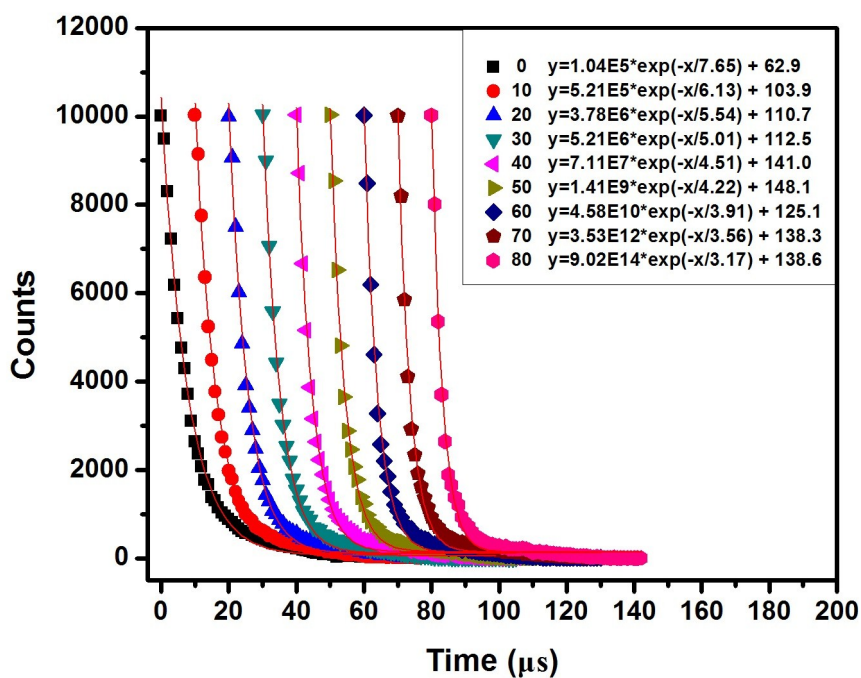


Figure S6. Time-resolved luminescence decay curves of AgNC AIE particles at different temperatures ranging from 0.0 – 80.0 $^{\circ}\text{C}$ with the interval of 10 $^{\circ}\text{C}$. The lifetimes at these temperatures are determined to be 7.65, 6.13, 5.54, 5.01, 4.51, 4.22, 3.91, 3.56 and 3.17 μs , respectively.

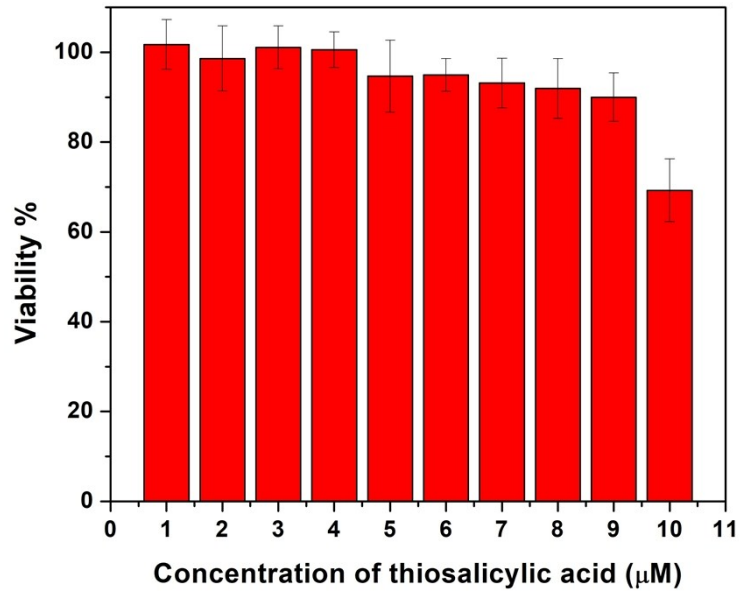


Figure S7. Effect of thiosalicylic acid on the viability of human A549 cells.