

ASSOCIATED CONTENT

Supporting Information.

Achieving Plasmon Reproducibility from Surfactant Free Gold Nanostar Synthesis

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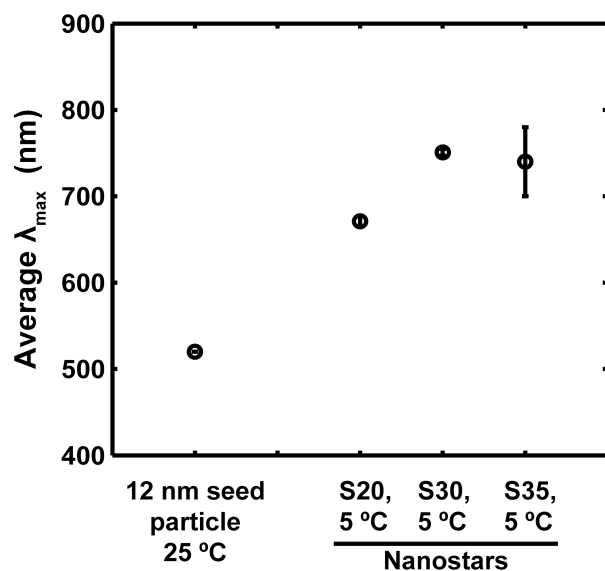


Figure S1. Average plasmon λ_{max} as a function of silver concentration during nanostar synthesis at 5 °C and comparison to the seed solution. S20 (n = 3) nanostars used 20 μM AgNO_3 for synthesis, S30 (n = 4), used 30 μM AgNO_3 for synthesis, and S35 (n = 3) used 35 μM AgNO_3 for synthesis (all concentrations were the final concentration in reaction vessel). The average λ_{max} red shifts with respect to the seed solution (n = 4) as silver content was increased during synthesis. Beyond 30 μM AgNO_3 no significant red shift was observed and reproducibility of λ_{max} was lost at 5 °C. Error bars represent \pm one standard deviation unit; in some cases the error bars are the same size or smaller than the symbol.

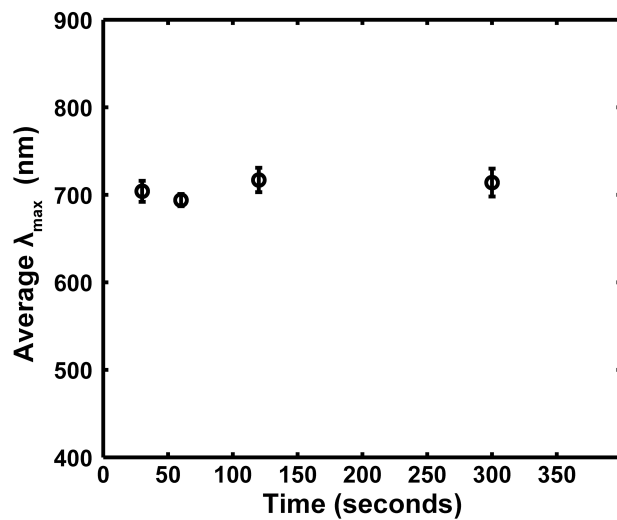


Figure S2. Plot of the S30 nanostars average λ_{max} vs. reaction time in seconds. No statistical difference in the average λ_{max} was observed between the time points. We concluded from this data that the reaction was complete within the first 30 seconds. The error bars represent \pm one standard deviation unit (n = 3); in some cases the error bars were the same size as the symbol.

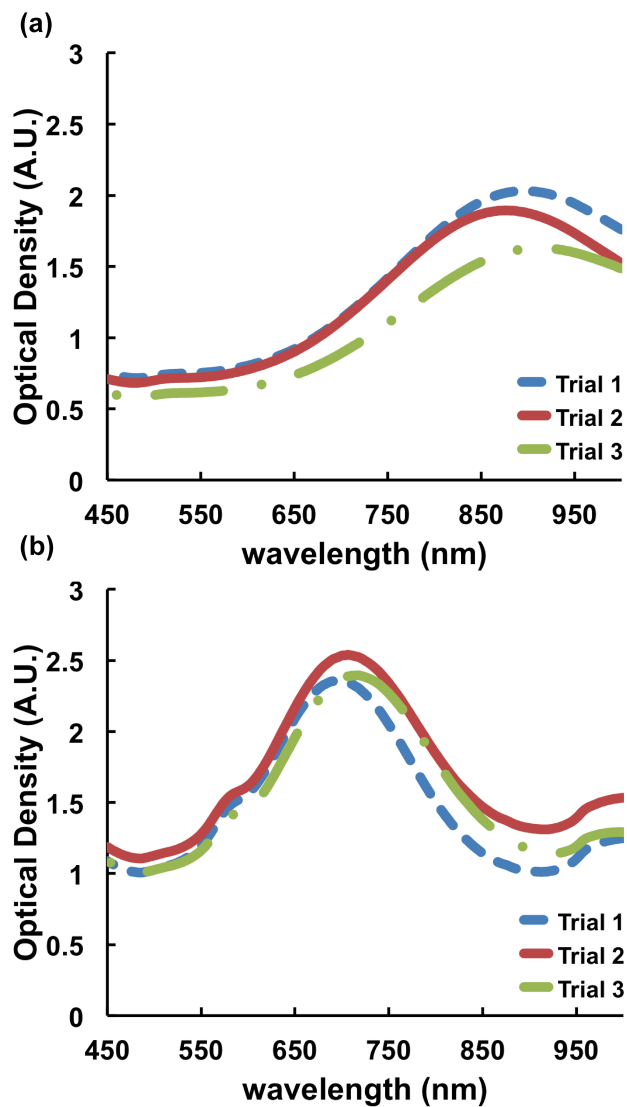


Figure S3. Concentration matched samples using data from Nanosight. (a) 25 °C nanostars showed similar optical density signals after diluting samples to the same concentration (4.74×10^{10} nanostars/mL). (b) 5 °C nanostars showed similar optical density signals after diluting samples to the same concentration (1.25×10^{11} nanostars/mL).