

Simultaneous Reduction of Metal Ions by Multiple Reducing Agents Initiate the Asymmetric Growth of Metallic Nanocrystals

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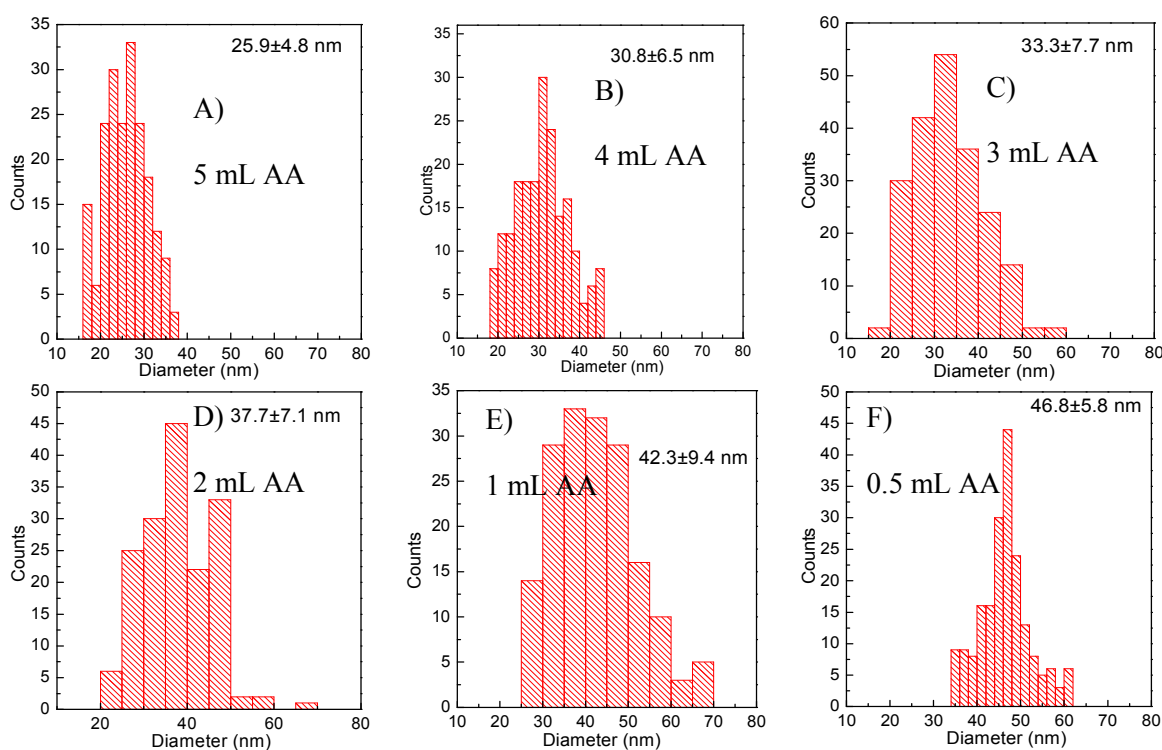


Figure S1 Statistical analysis of the diameters of AgNDs prepared by SMART at different concentrations of AA; the amount of AA was decreased from Figure 1 A through F. ImageJ was used to determine the diameters of the AgNDs measured from 3 TEM images for each batch.

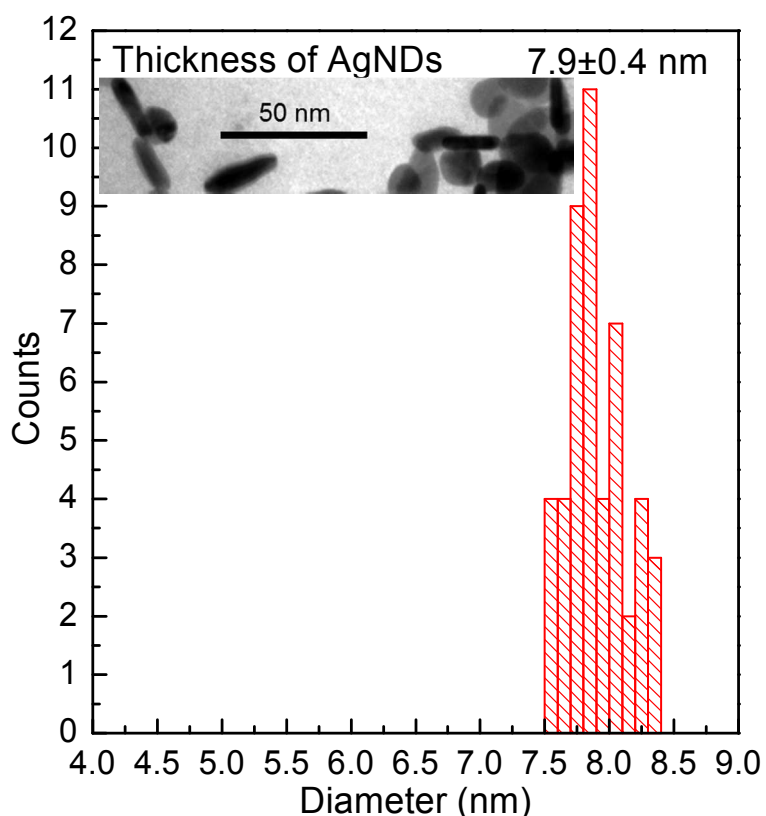


Figure S2 Statistical analysis of the thickness of the 30.8±6.5 nm AgNDs, prepared by SMART. The analysis carried out for 48 particles measured from 5 TEM images. The inset is TEM image of the 30.8±6.5 nm AgNDs. The thickness of the AgNDs was found to be 7.9±0.2 nm

Table S1. The final concentration of silver nitrate, polyvinyl pyrrolidone (PVP, MW=55,000), L-ascorbic acid, and sodium borohydride after mixing them.

Diameter of AgNDs (nm)	Silver Nitrate (mM)	PVP (mM)	L-Ascorbic Acid (mM)	Sodium Borohydride (mM)
25.9±4.8	17.89×10 ⁻²	14.41×10 ⁻²	0.194	29.82×10 ⁻⁴
30.8±6.5	17.85×10 ⁻²	14.38×10 ⁻²	0.387	29.74 ×10 ⁻⁴
33.3±7.7	17.76×10 ⁻²	14.31×10 ⁻²	0.770	29.60×10 ⁻⁴
37.7±7.1	17.67×10 ⁻²	14.24×10 ⁻²	1.149	29.45×10 ⁻⁴
42.3±9.4	17.58×10 ⁻²	14.17×10 ⁻²	1.524	29.31×10 ⁻⁴
46.8±5.8	17.50×10 ⁻²	14.10×10 ⁻²	1.896	29.17×10 ⁻⁴

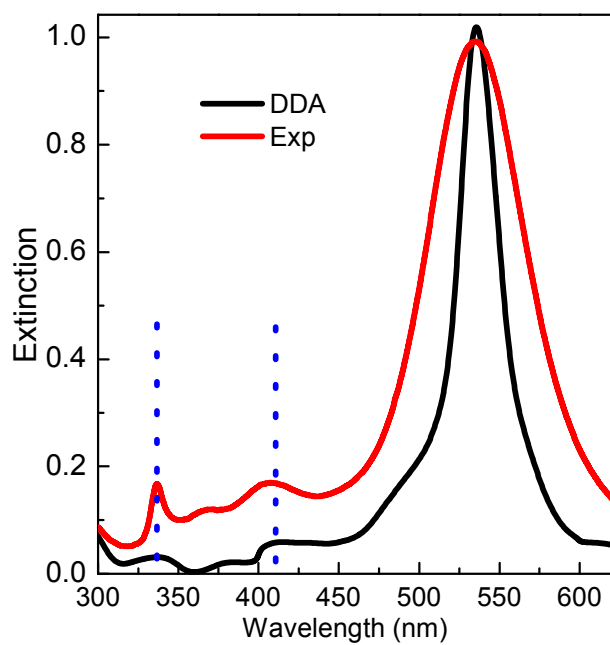


Figure S3. LSPR spectrum of 30 nm AgND of 8 nm thickness calculated by DDA technique (black) and LSPR spectrum measured for 30.8 ± 6.5 nm AgNDs.