

Continuous flow synthesis of citrate capped gold nanoparticles using UV induced nucleation

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SUPPLEMENTARY INFORMATION

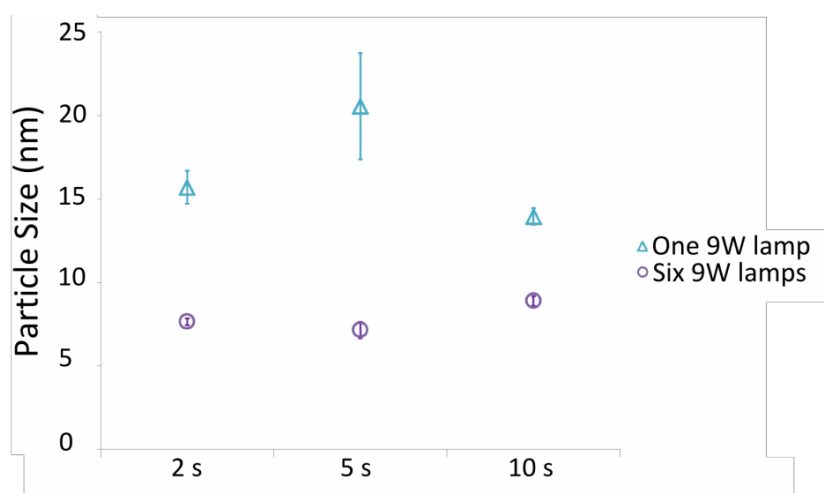


Figure S1: Average particle size of AuNPs produced from repeat experiments with different exposure times to low and high intensity UV light (1 and 6 UVC lamps respectively). Data obtained by DCS analysis. Error bars refer to average particle size standard deviation between 2 different experimental runs.

Table S1: Summary of particle sizes obtained from all experimental conditions, as determined by DCS analysis

Average particle size obtained by varying UV intensity (10 s UV exposure time, 20 min heat at 80°C)

UV Intensity	0 lamps	1 lamp	2 lamps	3 lamps	6 lamps
Particle size	20.3 ± 2.6 nm	13.6 ± 2.1 nm	9.8 ± 1.5 nm	8.7 ± 1.4 nm	8.7 ± 1.4 nm

Average particle sizes obtained by varying growth reactor temperature (10 s UV exposure time, 20 min heat)

Growth Temperature	60°C	70°C	80°C	90°C	100°C
No UV	36.1 ± 6.9 nm	24.2 ± 4.2 nm	20.3 ± 2.6 nm	13.9 ± 3.2 nm	14.2 ± 6.4 nm
Particle size at low UV intensity (1 lamp)	13.2 ± 1.8 nm	14.3 ± 2.1 nm	13.6 ± 2.1 nm	8.2 ± 1.1 nm	7.4 ± 0.9 nm
Particle size at high UV intensity (6 lamps)	9.5 ± 1.3 nm	9.1 ± 1.3 nm	8.7 ± 1.4 nm	6.6 ± 1.1 nm	6.6 ± 0.8 nm

Average particle sizes obtained by varying UV exposure time (20 min heat at 80°C)

UV Exposure Time	2 s	5 s	10 s	20 s	40s
Particle size at low UV intensity (1 lamp)	15.0 ± 3.3 nm	18.3 ± 2.8 nm	13.6 ± 2.1 nm	11.8 ± 1.8 nm	11.5 ± 2.2 nm
Particle size at high UV intensity (6 lamps)	7.5 ± 1.3 nm	6.8 ± 1.2 nm	8.7 ± 1.4 nm	9.3 ± 1.4 nm	8.5 ± 1.7 nm