

# Data on Particle Size Measurements of Gold Nanoparticles for "Continuous Synthesis of Precision Gold Nanoparticles Using a Flow Reactor"

## Title of Manuscript

Continuous Synthesis of Precision Gold Nanoparticles Using a Flow Reactor

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## Data Description

The Excel spreadsheet contains the raw data used to plot the three trials of biphasic flow experiments in Fig. 9 of the manuscript. The data is dynamic light scattering (DLS) measurements of colloidal gold nanoparticles (AuNPs) synthesized in the biphasic flow experiments. The measurements are the particle size distribution of the AuNP samples. The mean particle size, standard deviation, and polydispersity index of each sample are obtained from the data. Each column of data represents a measurement of an AuNP sample, which shares the common X-axis that is Column A of each sheet.

## Instrument

Malvern Zetasizer Ultra

## Measurement condition

Particle suspended in water at 25 °C.

Concentration: 45 ppm or > 300 kilo counts per second

Backscattering particle size measurement

## Experimental condition

The molar ratio of sodium citrate to gold chloride = 3.2

Reaction temperature =  $100 \pm 1$  °C

Reactor pressure =  $3 \pm 1$  bar

The volumetric flow rate ratio of sodium citrate to gold chloride to silicone oil = 1: 1: 2

Total flow rate =  $2.00 \pm 0.04$  mL/min

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## Nomenclature

T1, T2, and T3 are the abbreviation for Trial 1, Trial 2, and Trial 3

Int: Intensity distribution

Vol: Volume distribution

Num: Number distribution