

Supplementary Information

Synthesis of silver nanoparticles in microfluidic coaxial flow reactors

Razwan BABER¹, Luca MAZZEI¹, Nguyen TK THANH^{2,3}, Asterios GAVRIILIDIS^{1,*}

¹ Department of Chemical Engineering, University College London, UK

² UCL Healthcare Biomagnetic and Nanomaterials Laboratories

³ Biophysics Group, Department of Physics and Astronomy, University College London, UK

* Corresponding author: a.gavriilidis@ucl.ac.uk

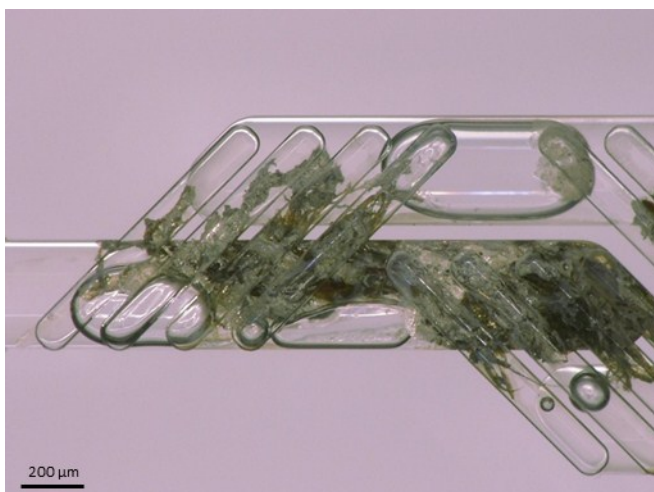


Fig. S1: Microscope image showing the fouling of the channel in a split and recombine micromixer after synthesis of silver nanoparticles using silver nitrate, sodium borohydride and trisodium citrate.

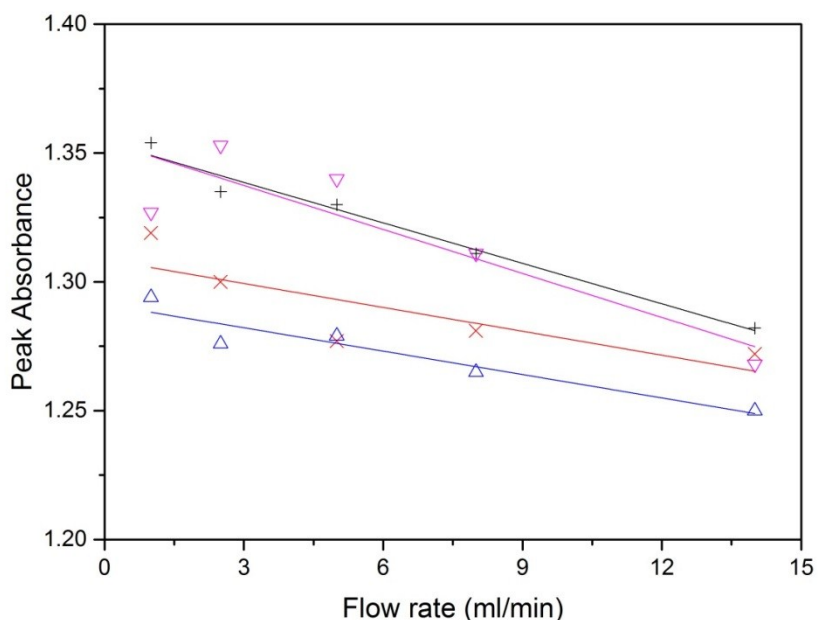


Fig. S2: Peak absorbance of silver NPs synthesised at various total flow rates in the range 1-14 ml/min. Synthesis was repeated four times for each flow rate. Concentrations of silver nitrate 0.2 mM, trisodium citrate 0.2 mM, sodium borohydride 0.3 mM. 0.798 mm inner tube I.D.

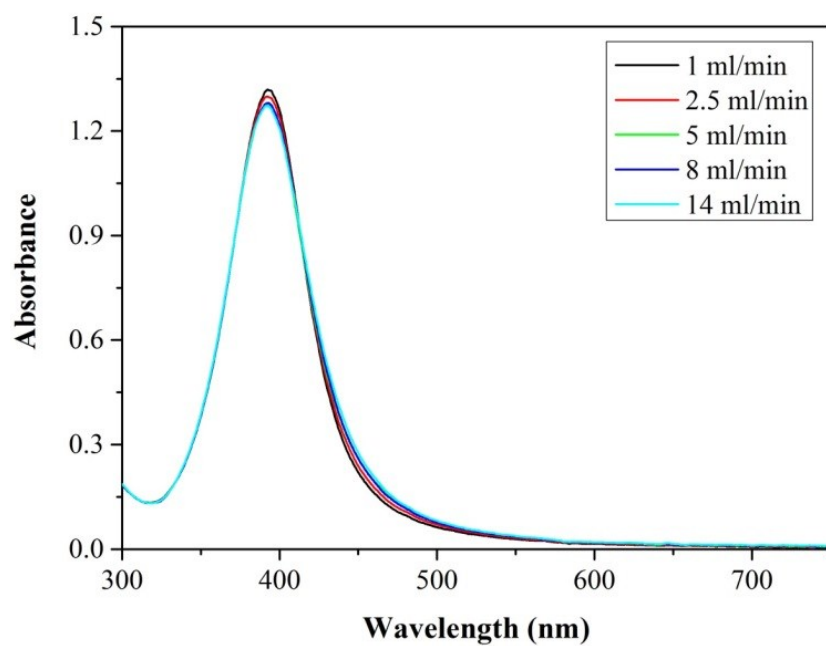


Fig. S3: UV-vis spectra of silver NPs synthesised at various total flow rates in the range 1-14 ml/min. Concentrations of silver nitrate 0.2 mM, trisodium citrate 0.2 mM, sodium borohydride 0.3 mM. 0.798 mm inner tube I.D.

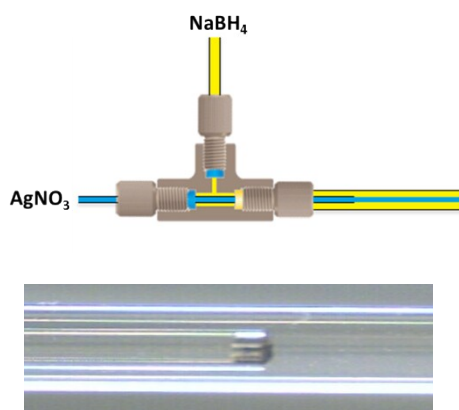


Fig. S4: Fouling on the inner wall of the inner tube when silver nitrate solution flowed through the inner tube

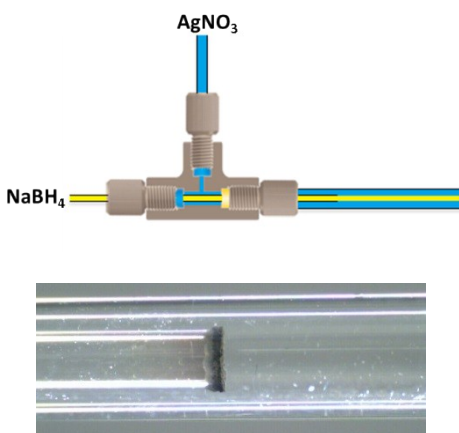


Fig. S5: Fouling on the outer wall of the inner tube when silver nitrate solution flowed through the outer tube