

A biphasic batch and continuous flow synthesis of hydrophobic gold and silver nanoparticles

Monica Distaso,^{a,b} Wolfgang Peukert^{a,b}

^aInstitute of Particle Technology, Friedrich-Alexander-Universität Erlangen-Nürnberg, Cauerstraße 4, 91058 Erlangen (Germany);

^bInterdisciplinary Centre for Functional Particle Systems, Friedrich-Alexander-Universität Erlangen-Nürnberg, Haberstraße 9a 91058 Erlangen (Germany)

Summary

- 1 Additional ¹³C NMR spectra of OLAC and OLA in Tol-d8
- 2 SEM-EDX analysis of AgBr and AgCl particles

1. Additional ¹³C NMR spectra of OLAC and OLA in Tol-d8

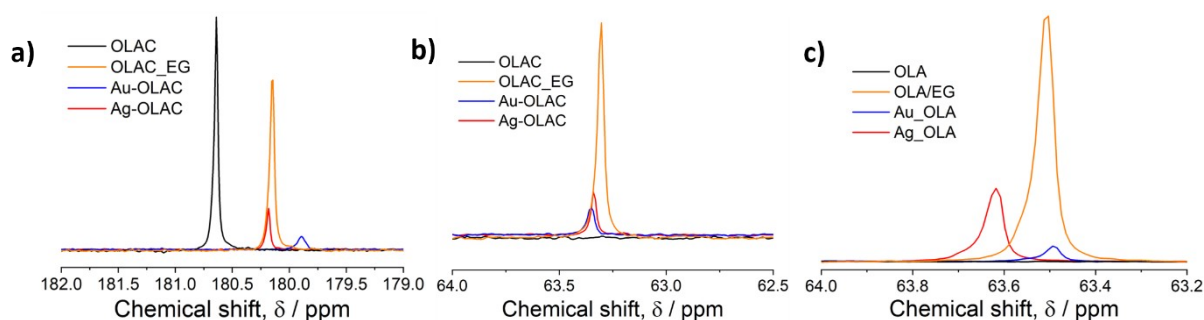


Fig. S1. Close up of the NMR spectra of ligands in Tol-d8 in the presence of EG, gold and silver precursors. a) Low field ¹³C NMR spectra of the experiments with OLAC, showing the shift of the carboxylic carbon atoms at higher magnetic fields upon transfer of EG, gold and silver precursors in Tol-d8; b) ¹³C NMR spectra of the experiments with OLAC showing the shift of the EG signal upon transfer of EG, gold and silver precursors in Tol-d8; c) ¹³C NMR spectra of the experiments with OLA showing the shift of the EG signal upon transfer of EG, gold and silver precursors in Tol-d8.

2. SEM-EDX analysis of AgBr and AgCl

The solid precipitated at the liquid-liquid interfaces and reported in Fig. 6c of the main manuscript was characterized by SEM-EDX analysis. An acceleration Voltage of 10 kV was used. The results show that the solid comprise Ag and Br in 1 to 1 ratio.

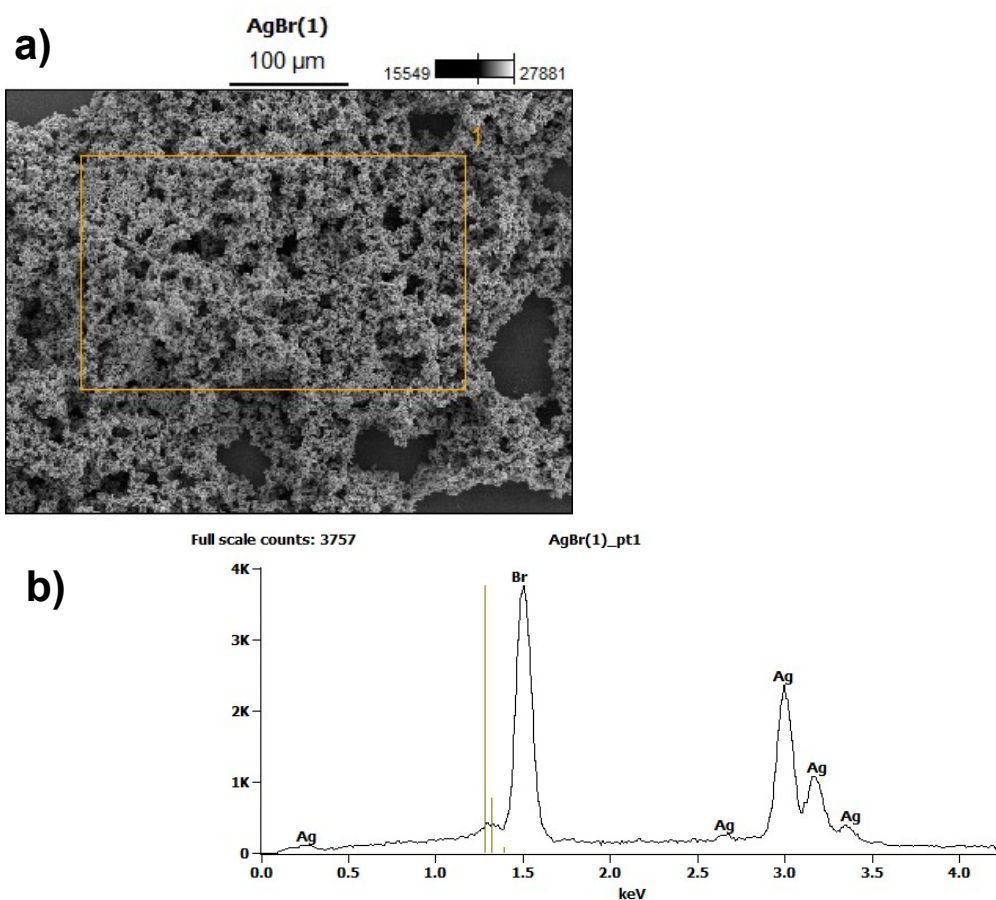


Fig. S2. a) SEM image of the solid isolated at the EG/Tol interface in the control experiment described in Fig 6c of the manuscript, with highlighted area of EDX analysis; b) corresponding EDX analysis.

Table S1. Quantitative evaluation of the SEM-EDX analysis of the solid isolated in the presence of D12DABr and reported in Fig. 6c of the main manuscript. The ratio 1 to 1 for Ag and Br is expected for AgBr particles.

Atom %

	<i>Br-L</i>	<i>Ag-L</i>
<i>AgBr(1)_pt1</i>	49.73	50.27

Atom % Error (+/- 1 Sigma)

	<i>Br-L</i>	<i>Ag-L</i>
<i>AgBr(1)_pt1</i>	±0.44	±0.76

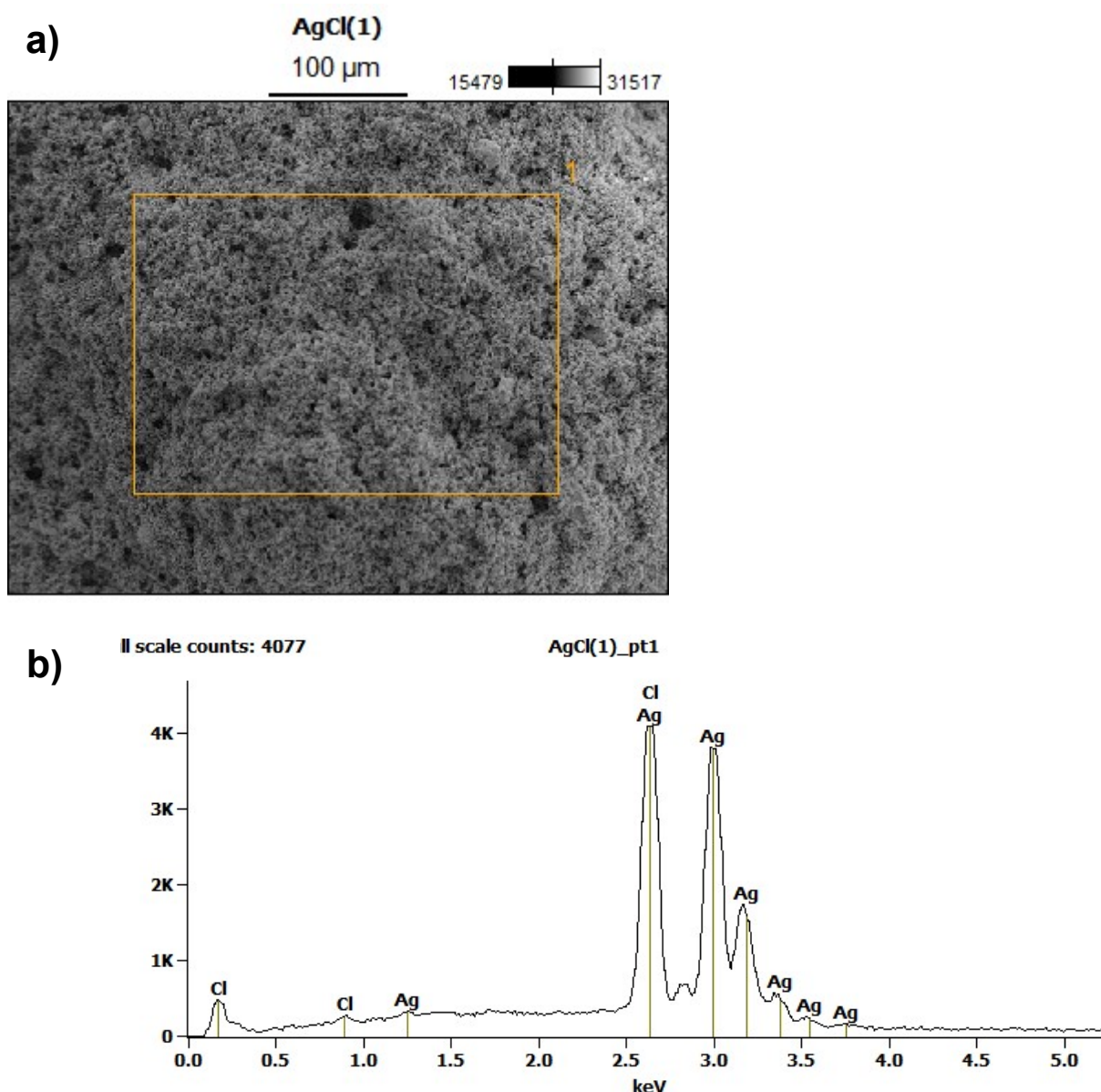


Fig. S3. a) SEM image of the solid isolated using D_{10} DACl as phase transfer agent without OLA or OLAC. On the highlighted area, EDX analysis was carried out; b) corresponding EDX analysis.

Table S2. Quantitative evaluation of the SEM-EDX analysis of the solid isolated using D_{10} DACl as phase transfer agent without OLA or OLAC. The ratio 1 to 1 for Ag and Cl is expected for AgCl particles.

Atom %

	<i>Cl-K</i>	<i>Ag-L</i>
AgCl(1)_pt1	50.45	49.55

Atom % Error (+/- 1 Sigma)

	<i>Cl-K</i>	<i>Ag-L</i>
AgCl(1)_pt1	± 0.49	± 0.66