

Supplementary Information

Figure S1. Tuning the PDMAEMA brush thickness by varying the polymerization time or the CuCl/CuCl₂ ratio. The data are measured at ambient conditions using ellipsometry.

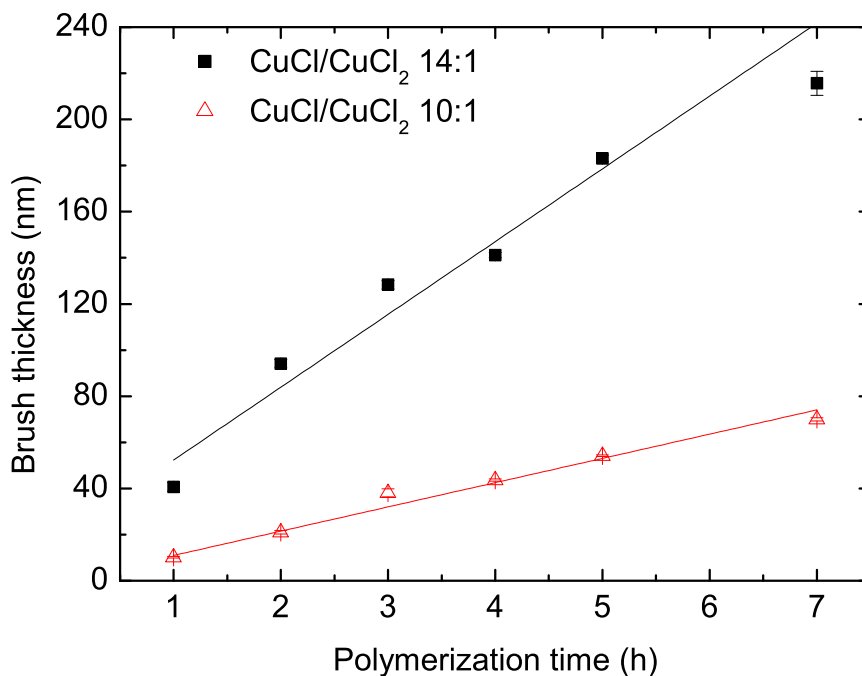


Figure S2. TEM images of citrate-stabilized gold particles with (a) ~13 nm and (b) ~5 nm diameter.

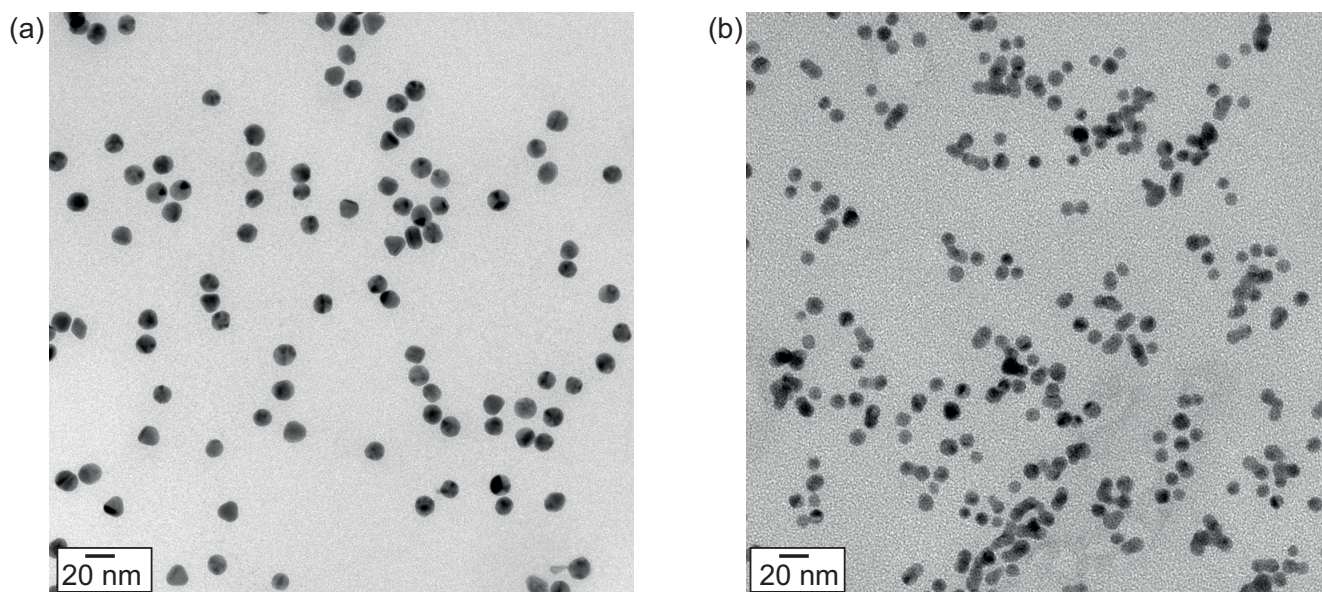


Figure S3. X-ray reflectivity data and fit for a PDMAEMA brush (thickness 63 nm, electron density $\rho_e = \text{SLD}_{\text{Xray}}/r_e = 0.37 \text{ \AA}^{-3}$).

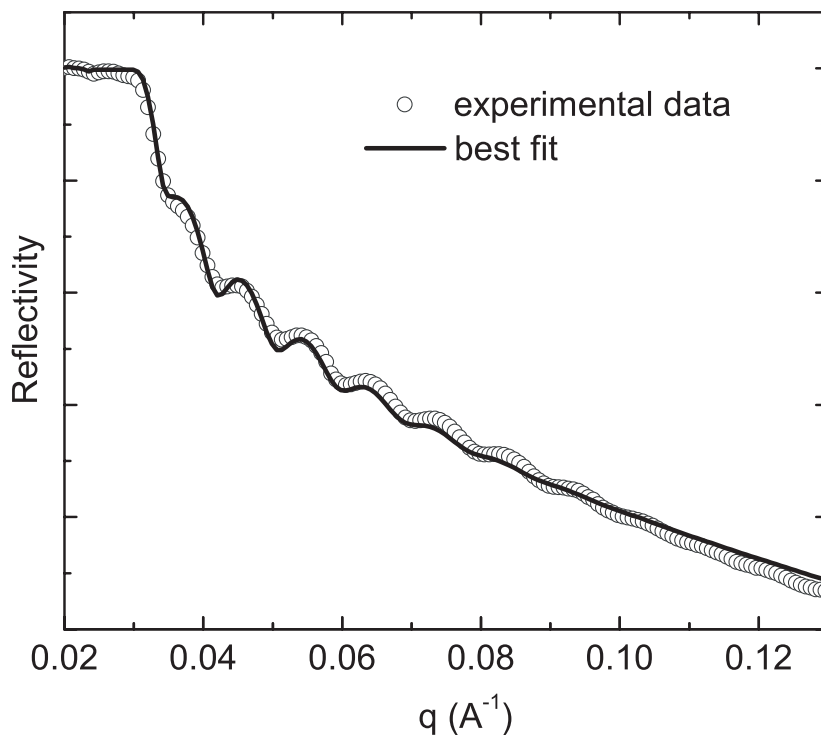


Figure S4. Refractive indices determined by ellipsometry in dependence of relative humidity for a brush with a dry thickness of 43.02 nm.

