

Supporting Information

Interaction of gold nanoparticles with thermoresponsive microgels: Influence of the cross-linker density on optical properties

Kornelia Gawlitza,^a Sarah T. Turner,^a Frank Polzer,^b Stefan Wellert,^a Matthias Karg,^c Paul Mulvaney,^d and Regine von Klitzing^a

Figure 1 shows the Zimm-plots of the synthesized microgel particles with different crosslinker contents for the determination of the molecular weight.

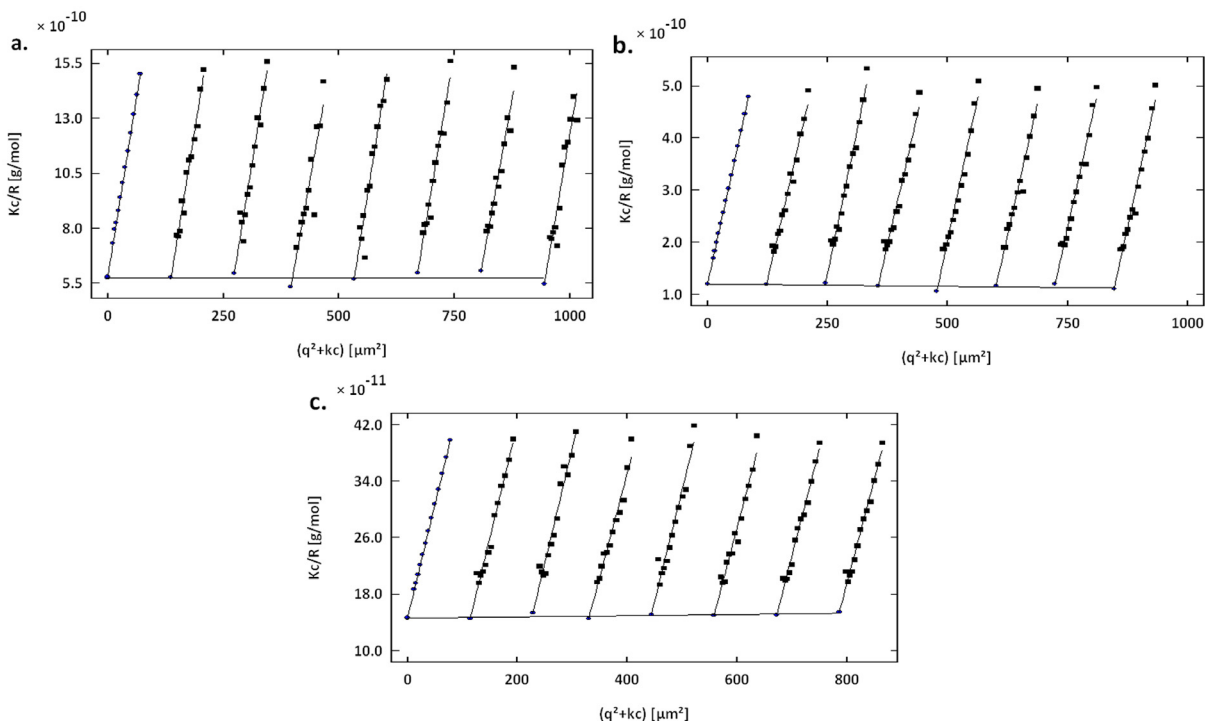


Figure 1: Zimm-plots of synthesized p-NIPAM_{0.25} (a), p-NIPAM₅ (b) and p-NIPAM₁₀ (c).

Figure 2 shows the scattering curve and the corresponding fit for the pure gold nanoparticle solution measured by SAXS.

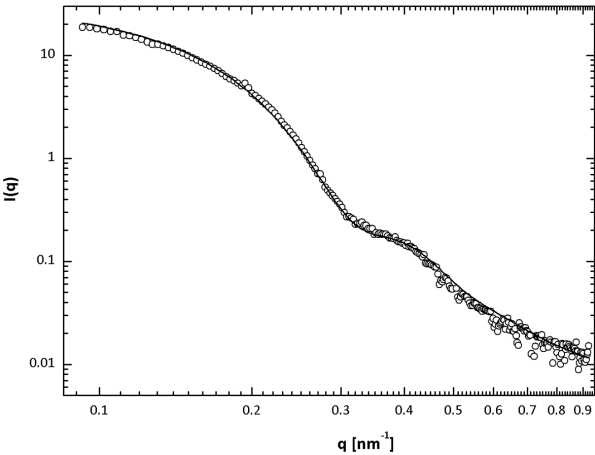


Figure 2: Scattering curve and the corresponding fit for the pure gold nanoparticle solution.

Figure 3 shows angle-dependent DLS measurements of the three microgel systems without and with Au-NPs.

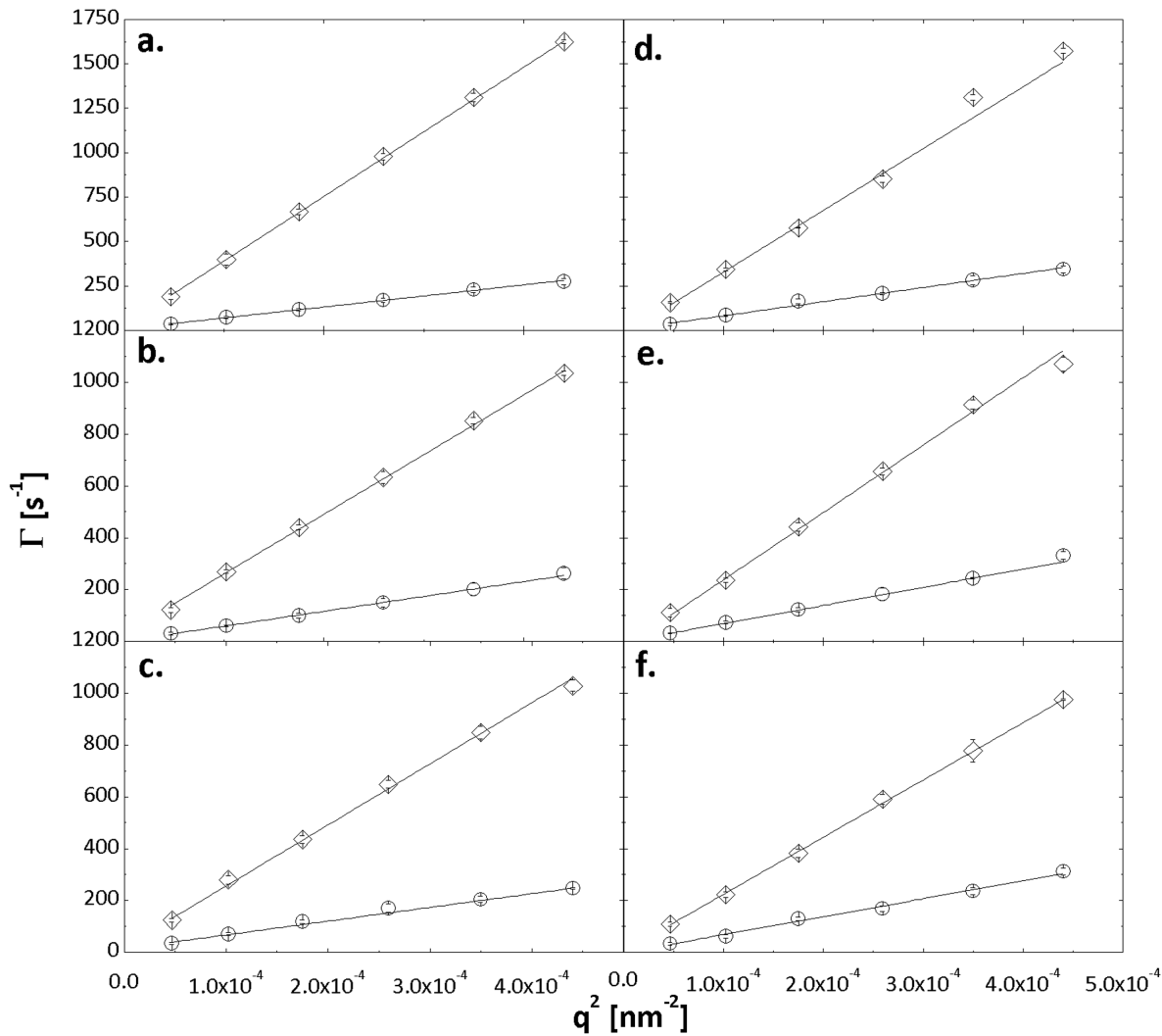


Figure 3: Angle-dependent DLS measurements of p-NIPAM_{0.25} (a), p-NIPAM₅ (b) and p-NIPAM₁₀ (c) and of Au-NP loaded p-NIPAM_{0.25} (d), p-NIPAM₅ (e) and p-NIPAM₁₀ (f) in the high loading regime at 15°C (circles) and 50°C (diamonds).

Figure 4 shows cryo-TEM images of three microgel particles loaded with Au-NPs in the high loading regime.

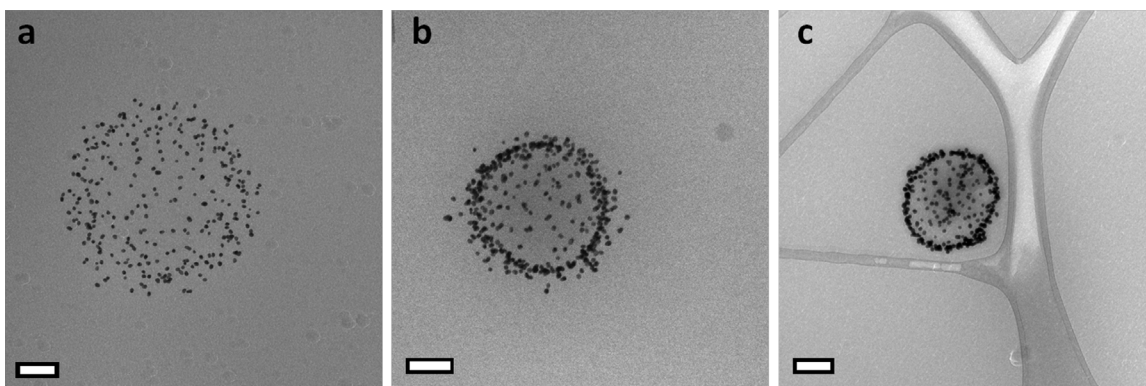


Figure 4: Cryo-TEM images (scale bar: 200 nm) of Au-NP loaded p-NIPAM_{0.25} (a), p-NIPAM₅ (b) and p-NIPAM₁₀ (c) in the high loading regime.