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Supporting information for article:

Free-film SANS – a novel container-free *in situ* sample environment with minimized H/D-exchange

Sebastian W. Krauss, Ralf Schweins, Andreas Magerl and Mirijam Zobel



Figure S1 Photograph of the free-film setup in the laboratory, pumping an aqueous CdS nanoparticle suspension for better visibility of the free-film between the wires in the enlarged area.

Figure S2



Figure S3

Figure S2 Photograph of the free-film setup at beamline D11 with the Helium bag (top-view)

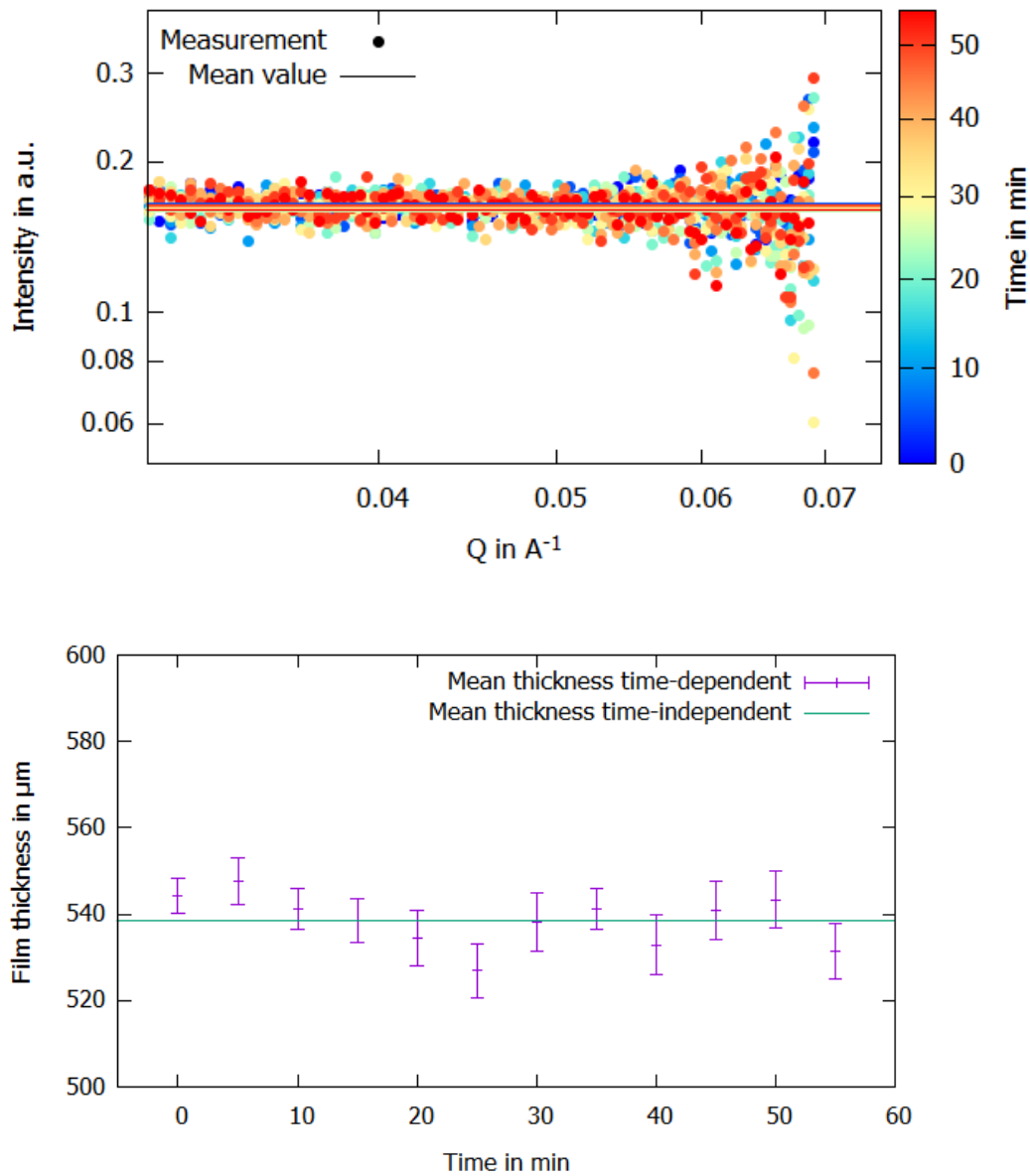


Figure S3 Top: SANS data of D70 for a detector distance of 13 m over a time of 55 min in 5 min intervals together with constants fitted to the individual data sets for an isotopic mixture with $H/D = 3/7$. Bottom: Film thicknesses as determined from equation (1) showing that the film thickness only slightly fluctuates around the average value.

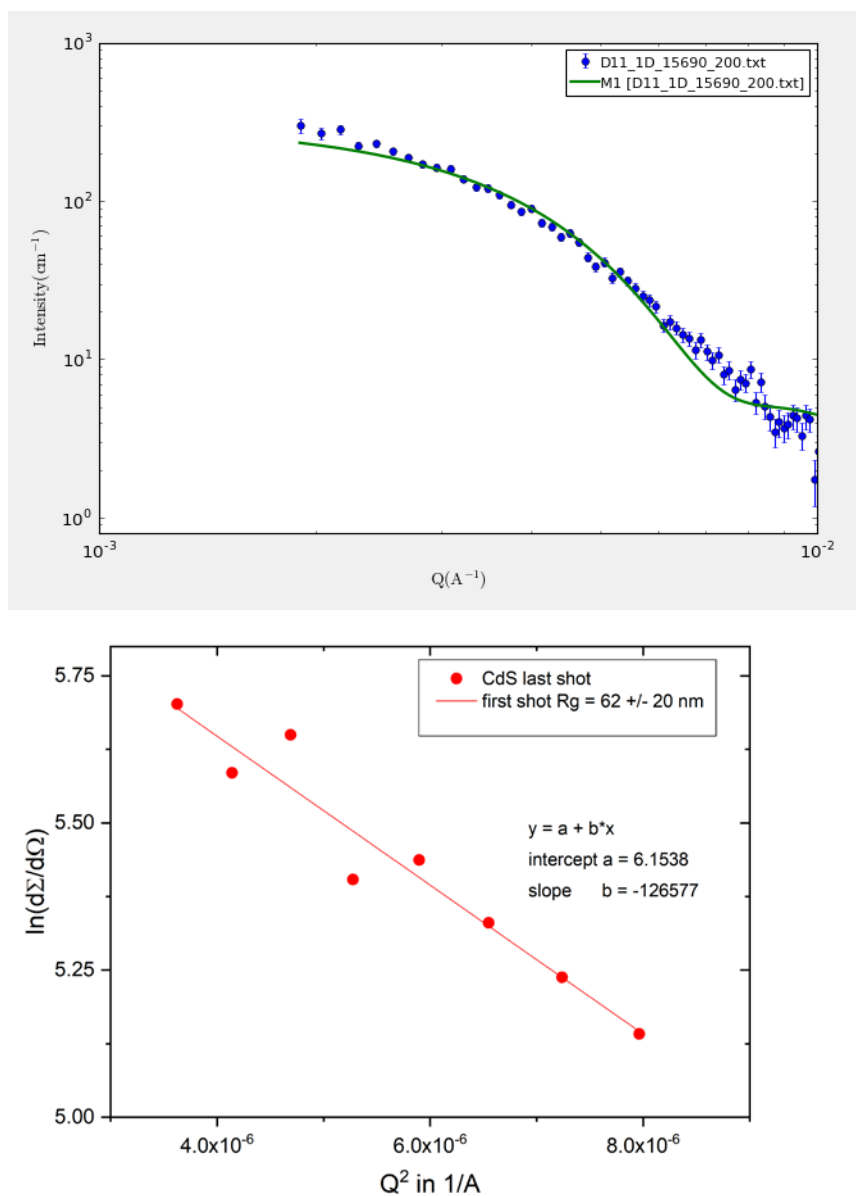


Figure S4 SANS data of EDTA-stabilized CdS nanoparticles in water during the in-situ particle formation of CdS nanoparticles after a reaction time of 190 min in aqueous solution from CdCl₂ and Na₂S in presence of EDTA (ethylenediaminetetraacetic acid), all equimolar [Cd²⁺] = [S²⁻] = [EDTA]. Top: The solid line represents a fit with a spherical shape factor (preliminary) yielding a radius of 66.2 nm +/- 0.6 nm. Bottom: Guinier fit resulting in Guinier radius of 62 +/- 20 nm.