2D Assembliess of Gold-PNIPAM Core-Shell Nanocrystals

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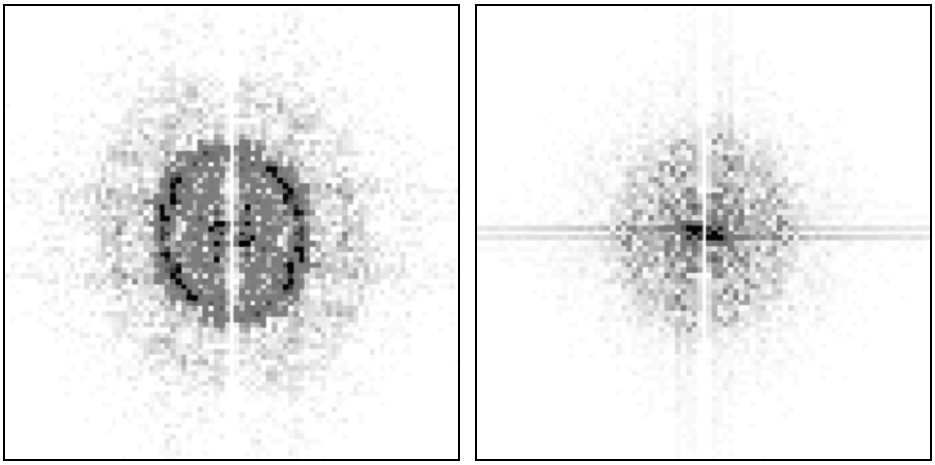
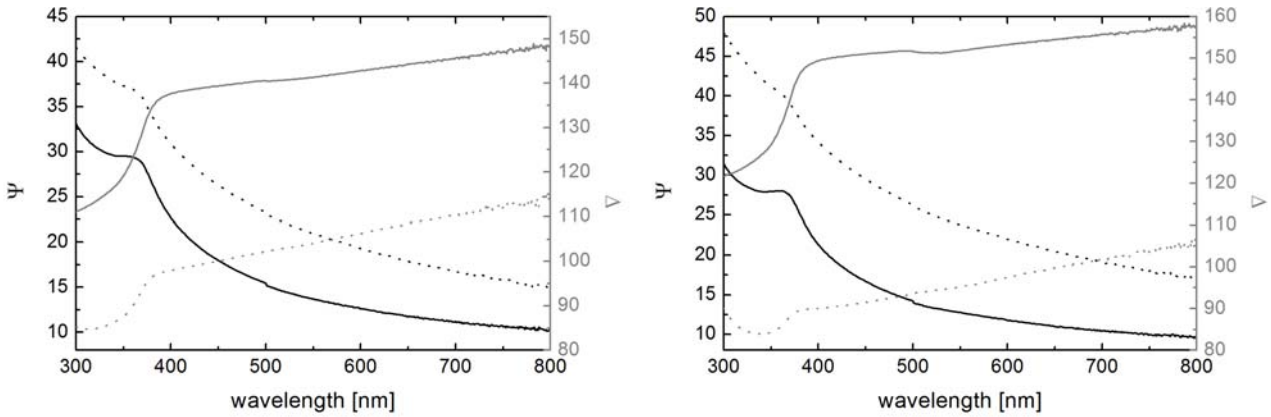
supplementary information



SI-Fig. 1 FFT images obtained from AFM height profiles of monolayers of Au-PNIPAM-1. Left: Monolayer prepared by convective assembly on a polyelectrolyte-coated silicon wafer. Right: Monolayer prepared by convective assembly on bare silicon wafer.

Figure 1 shows FFT images generated from AFM height profiles of monolayers prepared by convective assembly using the core-shell sample Au-PNIPAM-1. Here, two FFT images are compared, one obtained from an assembly on a polyelectrolyte silicon wafer resembling a positive surface charge (left) and the other one on a negatively charged, bare silicon wafer surface (right). As visible from the FFT images, the degree of order is much higher for the monolayer prepared on a polyelectrolyte-coated silicon wafer. In this case, electrostatic interactions between the particle and the surface dominate. No specific ordering can be found for the monolayer on a bare silicon wafer and hence the FFT does not show any pronounced features, such as Bragg rings.



SI-Fig. 2 Results from Ellipsometry, Ψ (black lines) and Δ (grey lines). The solid lines are results from films after heat treatment compared to results from before (dotted lines). Left: Au-PNIPAM-1. Right: Au-PNIPAM-2.