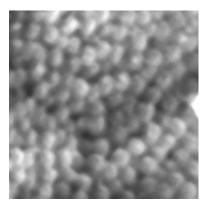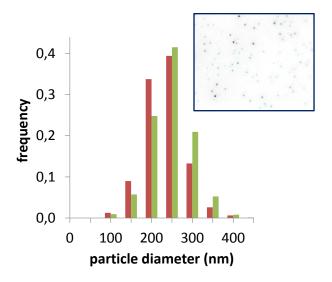# Preparation and Characterization of Low Dispersity Anionic Multi-Responsive Core-Shell Polymer Nanoparticles

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Supporting Information

Figure SI-1. SEM image showing dry P(MA-N) particles (JEOL 7001F analytical scanning electron microscope). Although some particles were destroyed, probably by the carbon deposition, the low size dispersity of the particles is still visible. Image is 1 μm wide.

Figure SI-2. Diameter distribution of p(MA-N) (red) and p(N-AA) (green) particles in water at pH = 5.5, 23°C and 3 mM ionic strength, obtained by Nanoparticle Tracking Analysis (Nanosight instrument, model LM10-HSBF). This technique follows the Brownian diffusion of each individual particle, to calculate its diffusion coefficient and hydrodynamic diameter. The insert shows an optical still image of the scattering by p(N-AA) particles. The results are consistent with DLS results (Figures 3, 8 and 9 of the manuscript). By assuming homogeneous composition of the samples, and comparing the number-average and weight-average diameters, we can estimate dispersity index values Mw/Mn of 1.17 and 1.15 for p(N-AA) and p(MA-N), which give a clear idea of the dispersity of the swollen particles.