Supporting Information

Size Quenching during Laser Synthesis of Colloids Happens Already in the Vapor Phase of the Cavitation Bubble

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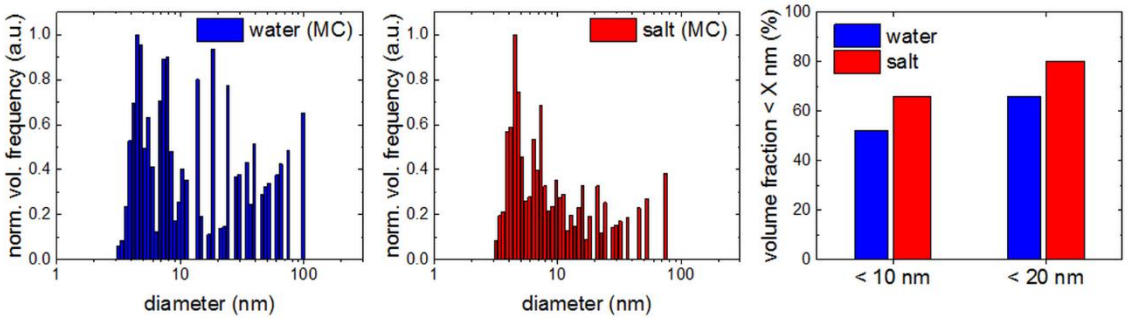

Figure S1. Volume-weighted size distributions obtained from Monte Carlo (MC) analysis of *in situ* SAXS data (shown in Fig. 3a). The size distributions of particles in water (left) and 0.5 mM NaCl solution (middle) differ significantly at sizes above 10 nm. This is clarified by a diagram plotting the volume fraction of particles smaller than 10 nm and 20 nm as function of the ablation medium (right). This fraction of small particles is higher in saline solution.

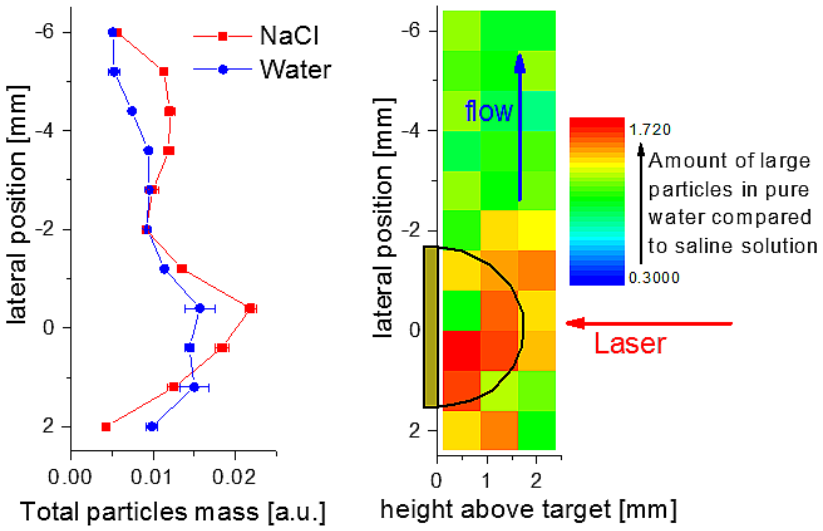

Figure S2. Left: Particle mass in dependence of the lateral position inside the ablation chamber volume. Negative lateral positions are representing distinct time delays after the laser impact. The zero position marks the target center. Right: Ratio of large to small particle fraction abundance in pure water compared to micromolar NaCl solution as a function of lateral position and height above target (black hemisphere represents maximum extension of the cavitation bubble). In red areas the amount of large particles in is higher compared to saline solutions.