

Supporting information

Rod-like micelles of octadecyltrimethylammobium bromide and their freezing upon solubilised styrene polymerisation

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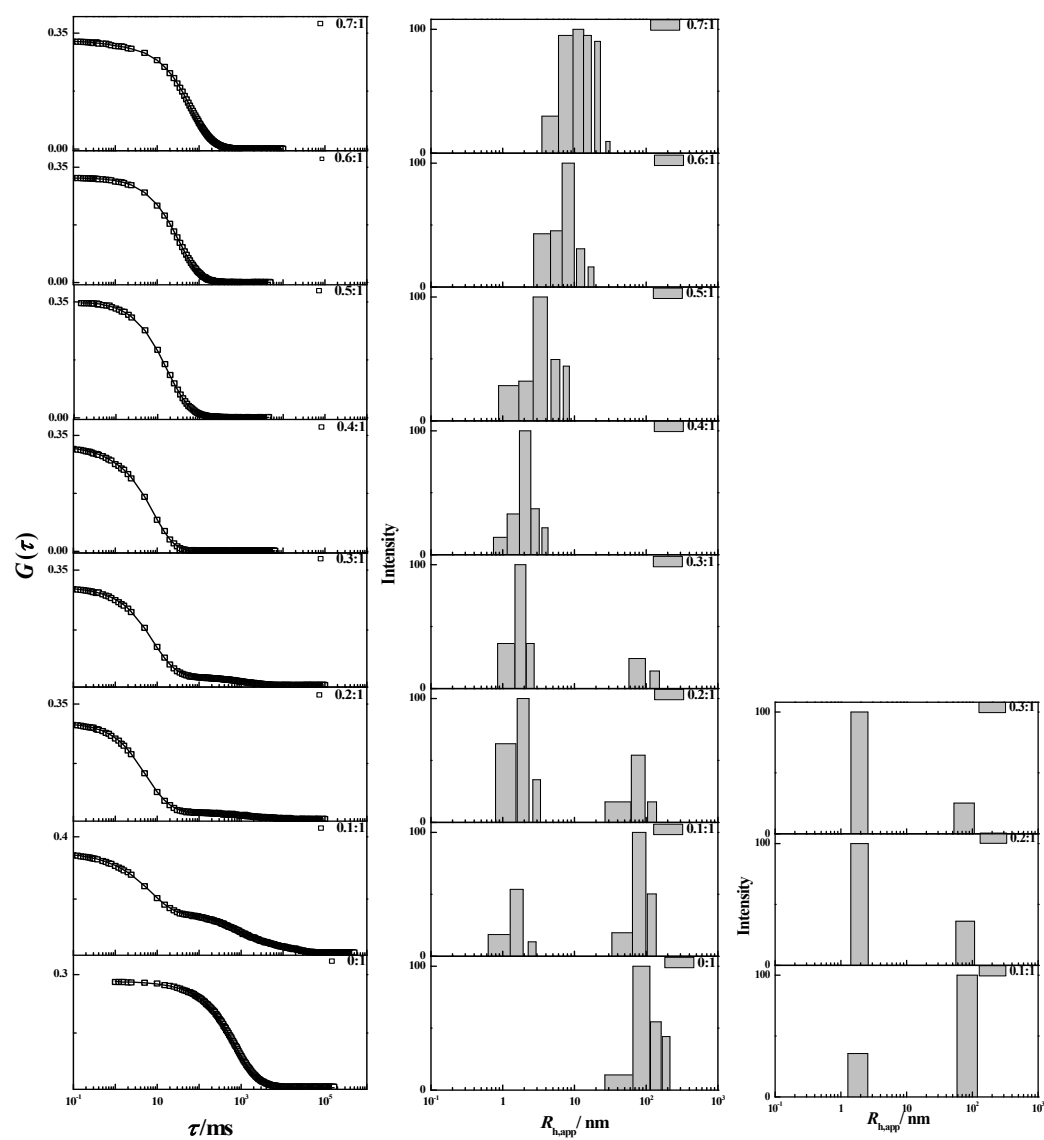


Fig. S1 Time correlation functions (left) and intensity fraction distribution (CONTIN, middle;

Dblexp, right) measured at a 90° angle and 30 °C for C₁₈TABr (15 mmol·L⁻¹) in ethanol/water (10/90 wt%) with different mole ratios of SNphs to C₁₈TABr.

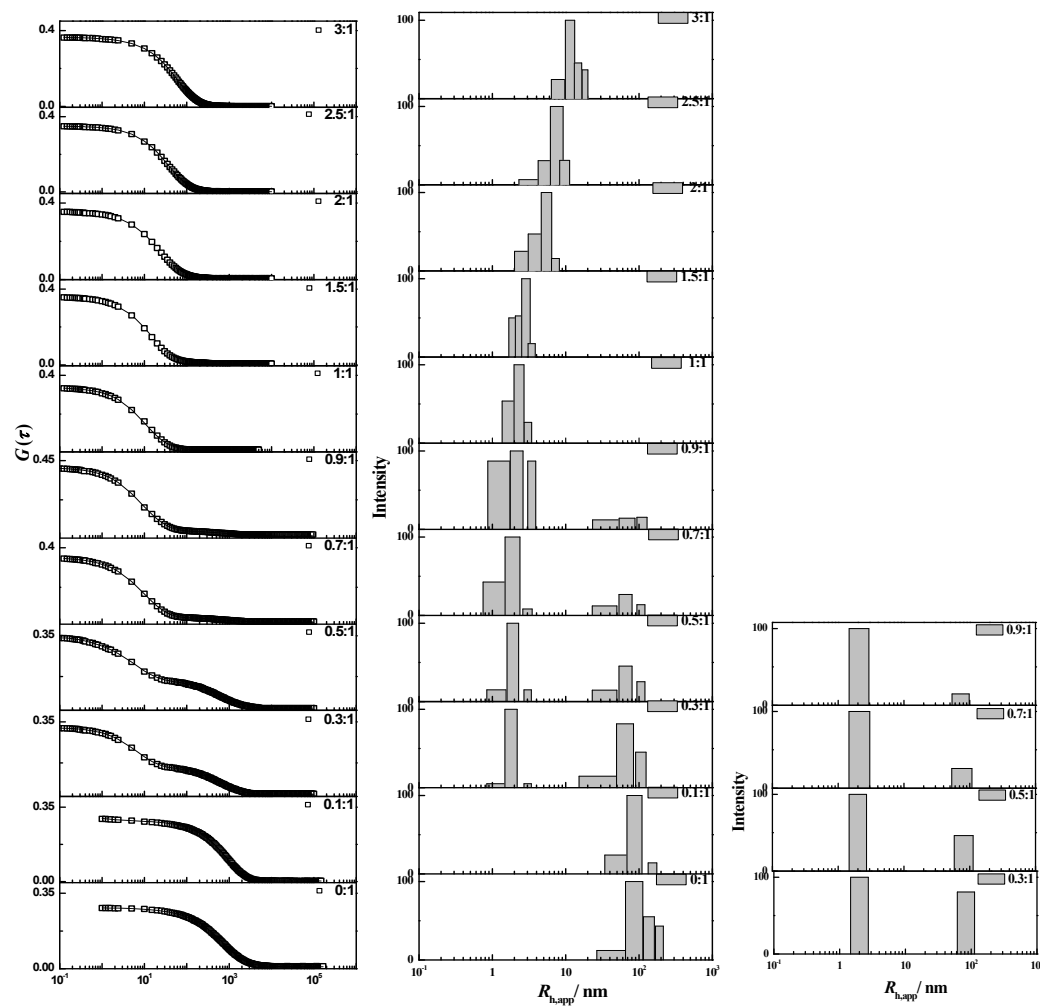


Fig. S2 Similar to Fig.S1 but in the presence of SBzs.

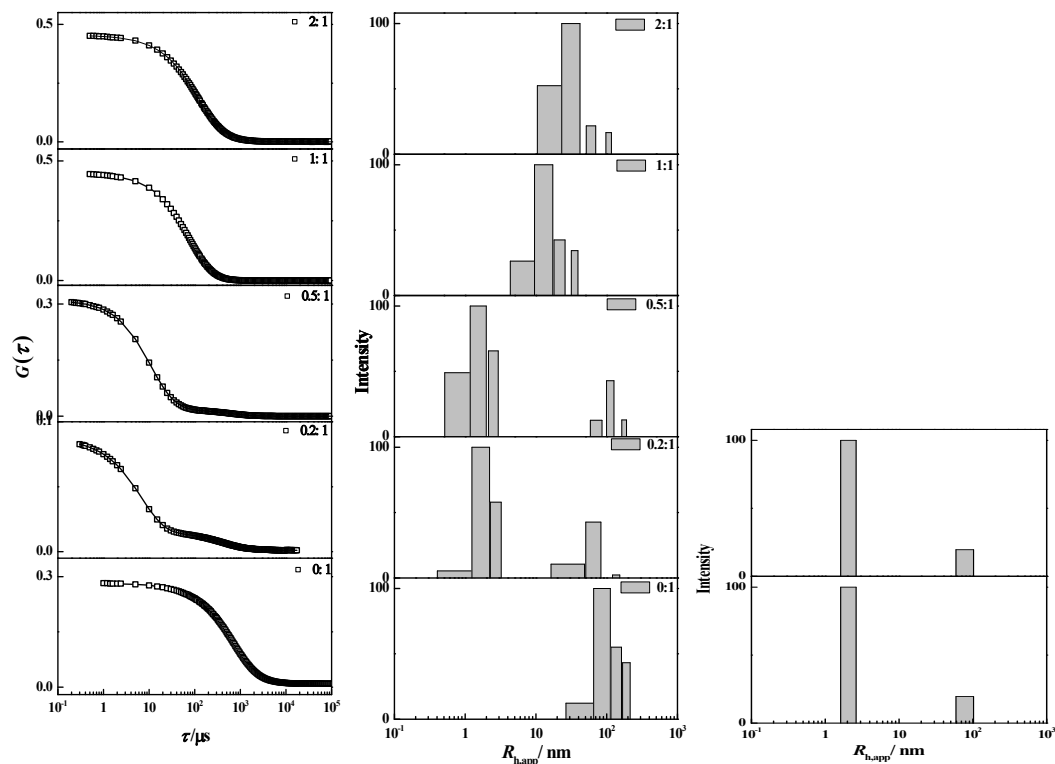


Fig. S3 Similar to Fig.S1 but in the presence of NaSaL.

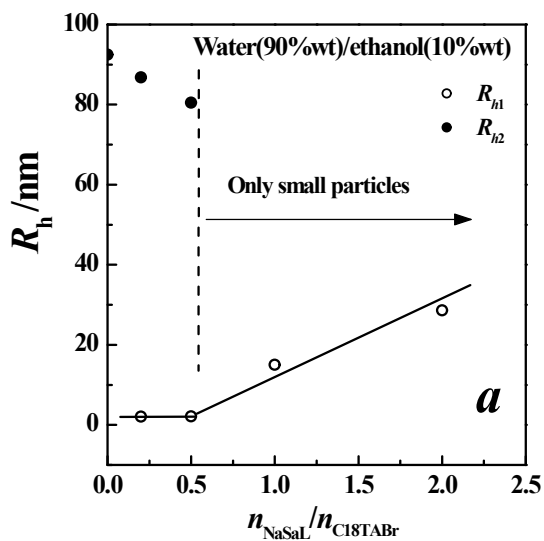


Fig. S4 R_h as a function of the mole ratio of NaSaL to surfactant for $C_{18}TABr$ ($15\text{mmol}\cdot\text{L}^{-1}$) in ethanol/water (10/90 wt%), where R_{h1} and R_{h2} represent apparent hydrodynamic radius of large and small aggregates, respectively, derived according to **Dblexp** software.

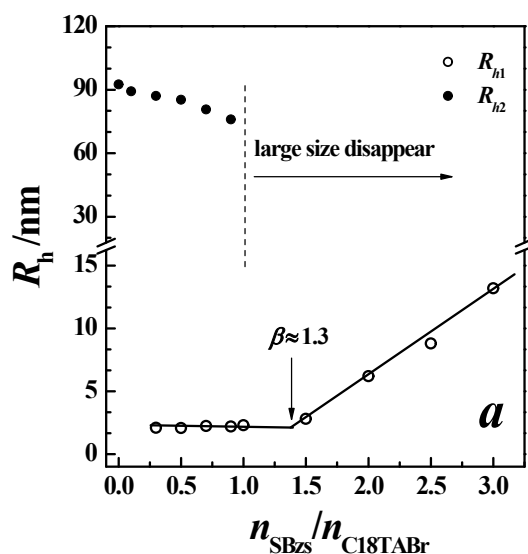


Fig. S5 R_h as a function of the ratio of SBzs to surfactant for $C_{18}TABr$ ($15\text{mmol}\cdot\text{L}^{-1}$) in ethanol/water (10/90 wt%), where R_{h1} and R_{h2} represent apparent hydrodynamic radius of large and small aggregates, respectively, derived according to **Dblexp** software.

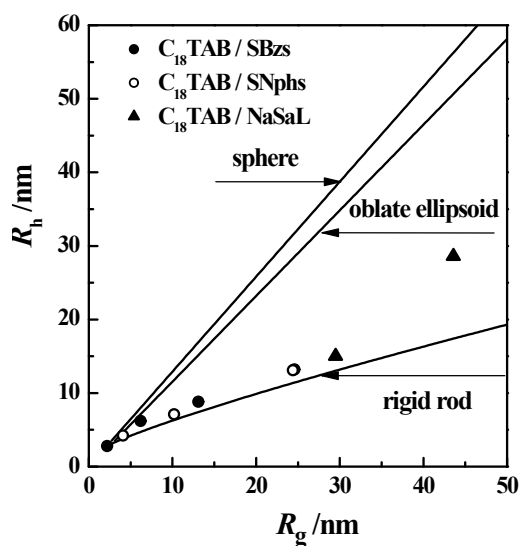


Fig. S6 Theoretical R_h vs R_g curves and the experimental points for $C_{18}TABr$ ($15\text{mmol}\cdot\text{L}^{-1}$) micelles in ethanol/water (10/90 wt%), in the presence of SBzs (●), 1.5, 2.0, 2.5, 3.0; SNphs (○), 0.5, 0.6, 0.7; NaSaL (▲), 1, 2. The data is the value of $n_{\text{SNphs}}/n_{\text{C18TABr}}$, corresponding to the points of each salt, from left to right.

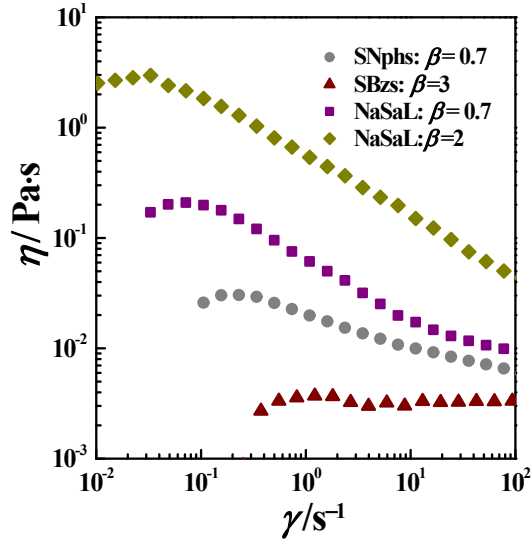


Fig. S7 Steady-state viscosity η against shear rate γ for $C_{18}TABr$ ($15\text{mmol}\cdot\text{L}^{-1}$) in ethanol/water (10/90 wt%) in the presence of organic salts with different β at $30\text{ }^\circ\text{C}$.

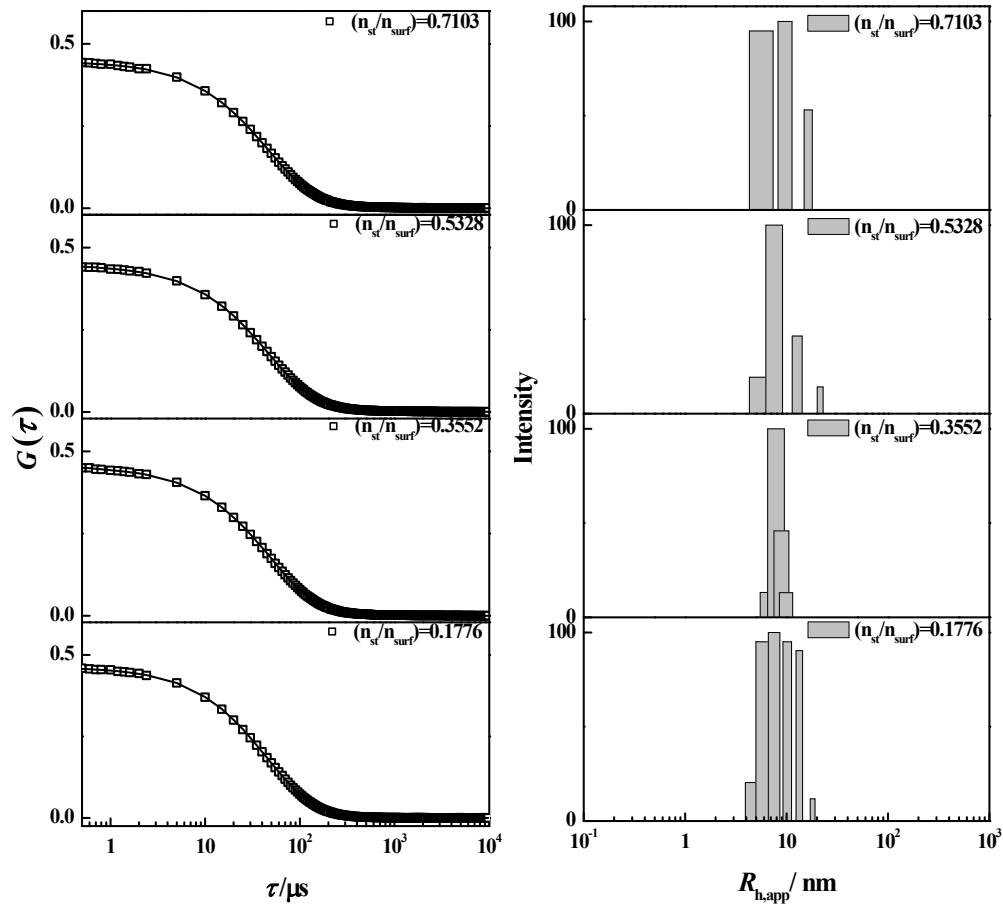


Fig. S8 Time correlation functions and intensity–fraction distribution measured at a 90° angle and analyzed by CONTIN model for $C_{18}TABr$ ($15\text{mmol}\cdot\text{L}^{-1}$)/SNphs ($n_{\text{SNphs}}/n_{C_{18}TABr} = 0.5$) at different mole ratios of styrene to surfactant ($n_{\text{st}}/n_{\text{surf}}$) at $30\text{ }^\circ\text{C}$

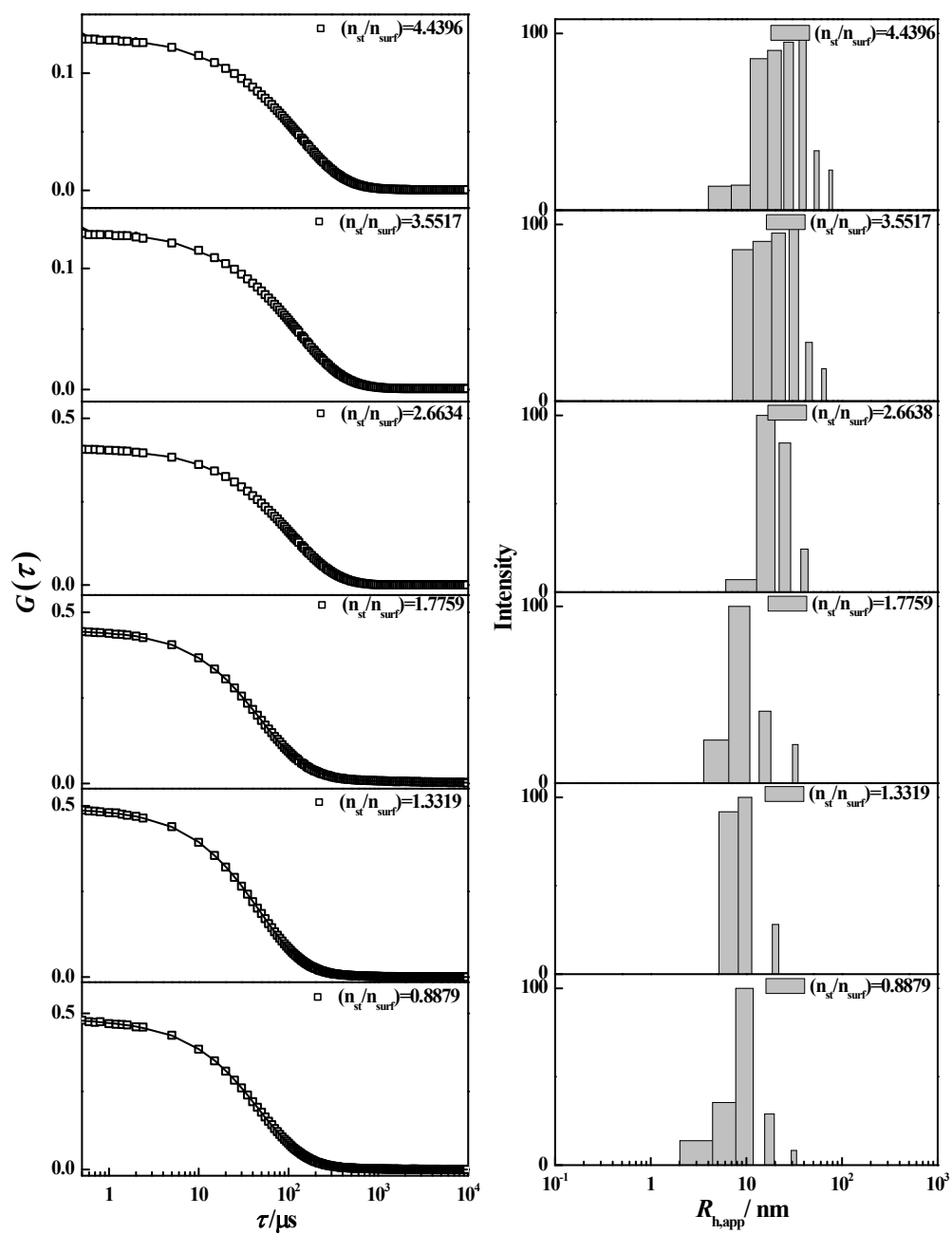


Fig. S9 Similar to Fig. S8, but after polymerizing for 8 h using $K_2S_2O_8$ under 70 °C.

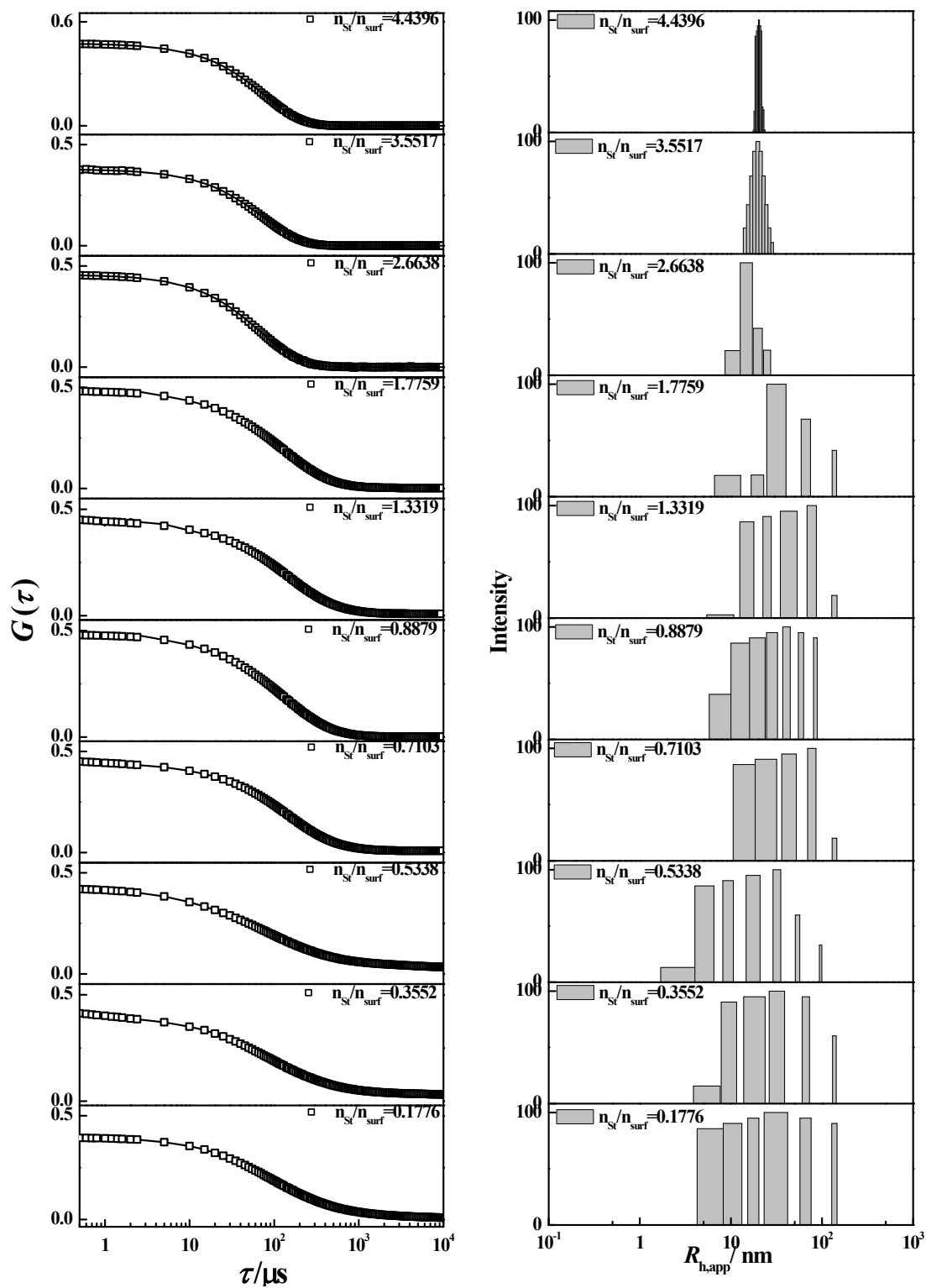


Fig. S10 Time correlation functions and intensity-fraction distribution measured at a 90° angle and analyzed by CONTIN model for the polymerized samples after 100 % diluting.

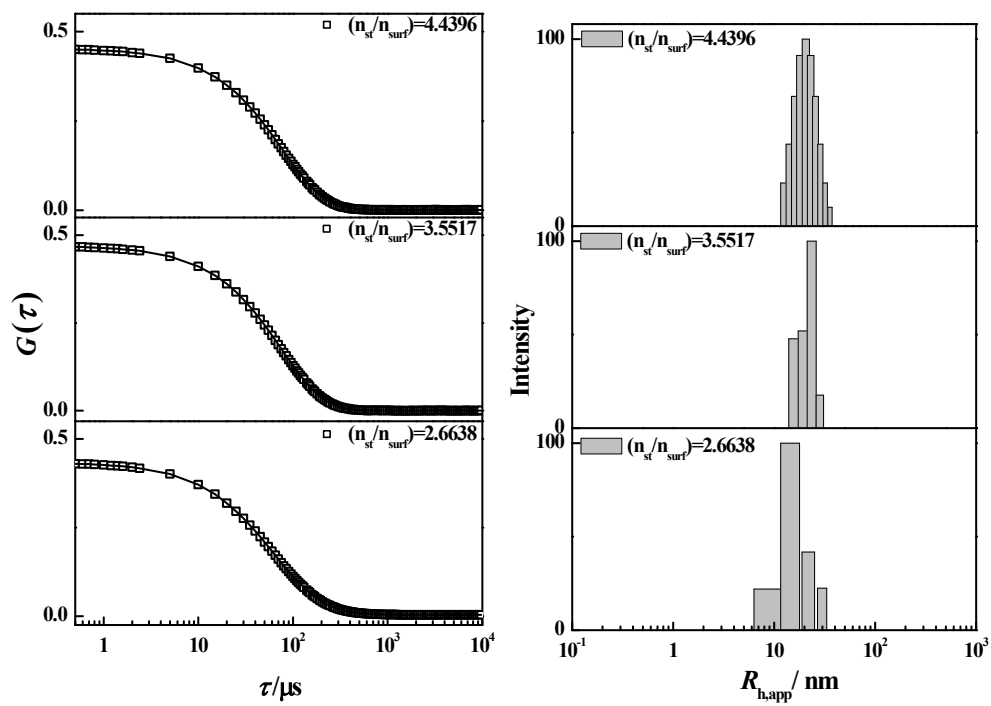


Fig. S11 Time correlation functions and intensity-fraction distribution measured at a 90° angle and analyzed by CONTIN model for the polymerized samples after 400 % diluting.