Electronic Supplementary Material (ESI) for Soft Matter.

pH-Dependent Complexation and Polyelectrolyte Chain Conformation of Polyzwitterion-Polycation Coacervates in Salted Water

Kehua Lin, Benxin Jing and Yingxi Zhu

Department of Chemical Engineering and Materials Science

Wayne State University, Detroit, MI 48202 USA

Supporting Information

Figure S1. Normalized autocorrelation functions, $G(\tau)$ by $G(0)$ of f-P2VP in dilute aqueous solution of pH=2.05 (red circles) after dialysis for 2 weeks to remove excess c-Alexa488 dye in the solution in comparison to that of polymer-free dye solution (black squares). Solid line shows the fitting by using Eq. 3 assuming one simple three-dimensional Brownian diffusion. The data for f-P2VP solution is well-fitted by Eq. 3 to confirm the absence of excess free dye in f-P2VP solution within experimental uncertainty.

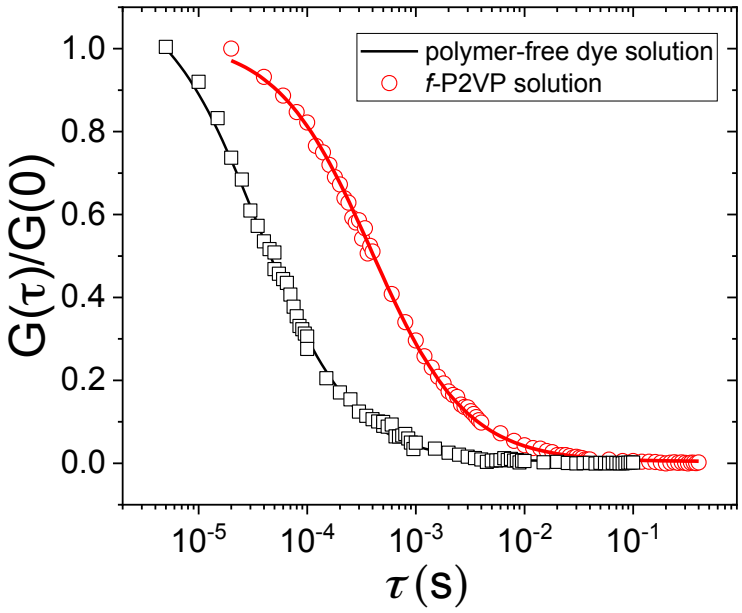

Figure S2. (a) UV-vis spectra of plain P2VP in dilute aqueous solution of varied P2VP concentration of 2×10^{-5} M (black line), 4×10^{-5} M (red line), 10^{-4} M (blue line), and 2×10^{-4} M (green line). (b) Calibrated linear relationship of UV-vis absorbance intensity at its characteristic peak wavelength of 260 nm against P2VP concentration in aqueous solution.

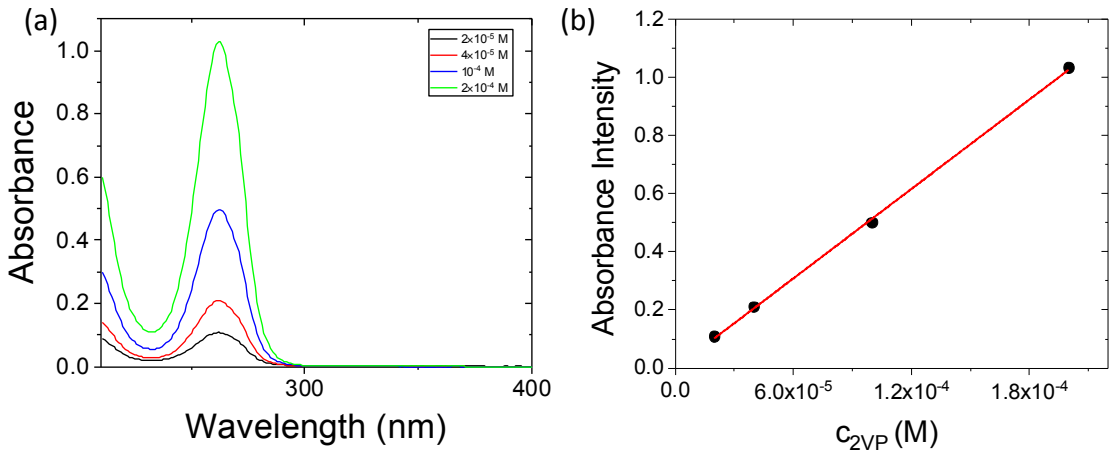

Figure S3. Fluorescence micrographs of two-aqueous-phase separated PDMAPS-P2VP coacervates formed at fixed c_T = 0.2 M, c_{2VP}/c_T =0.25, c_{KCl} = 0.1 M and varied pH =(a) 2.05, (b) 3.04, and (c) 4.37, where n-Alexa488 is added to P2VP aqueous solution before mixing. The size of each micrograph is 100 μm by 100 μm.