Abstract Submitted
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Ion Diffusion in polyelectrolyte solution[1] PENGXIANG JIA, JIANG ZHAO, Institute of Chemistry, Chinese Academy of Sciences — We use fluorescence correlation spectroscopy to study diffusion of sparse charged fluorescent molecules as probes of ions in the solution of polystyrene sulfonate (PSS-Na+). The diffusion of the probe was found to depend strongly on its charged state. More importantly, the diffusion of positively charged probes depends strongly the concentration and molecular weight of PSS- Na+. The results show that the fraction of free "counterions" in the solution decreases sharply with the increase of the polymer concentration and the molecular weight, showing the role of entropy and electrostatic interaction in the distribution of counterions around the polyelectrolyte chains.

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