

Abstract Submitted
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Salt Effects on the Structure and Stability of Ionizable Polydots - SANS Study¹ NARESH OSTI, SIDATH WIJESINGHE, MANJULA SENANAYAKE, ANURADHI WICKRAMASINGHE, THUSITHA ETAMPAWALA, DVORA PERAHIA, Clemson University, Clemson, SC 29634 — Confinement of rigid luminescent polymers into nano-dimension forms polydots, long lived nanoparticles, even though the polymer chains are far from their thermodynamically equilibrium conformations. These polydots bare the potential to be tunable by changing the conformation of the polymer, making them promising for new bio-imaging markers and drug delivery vehicles. Here, we investigate ionizable polydots formed by di-alkoxy poly para-polyphenyleneethynylene (PPEs). Incorporating an ionic group opens the way to tether bio-active molecules to these markers as well as tuning their conformation and hence their luminescence. Our small angle neutron scattering (SANS) have shown that these ultra-stable polydots respond to changes in their electrostatic environment where exposure to NaOH modifies both the structure and stability.

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