

Electronic Supplementary Information

A Facile Method for Preparation of Uniform Polymeric Vesicles with Tunable Size

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Keywords: block copolymer, self-assembly, polymeric vesicles, size uniformity, Monte Carlo simulation.

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SUPPORTING FIGURES:

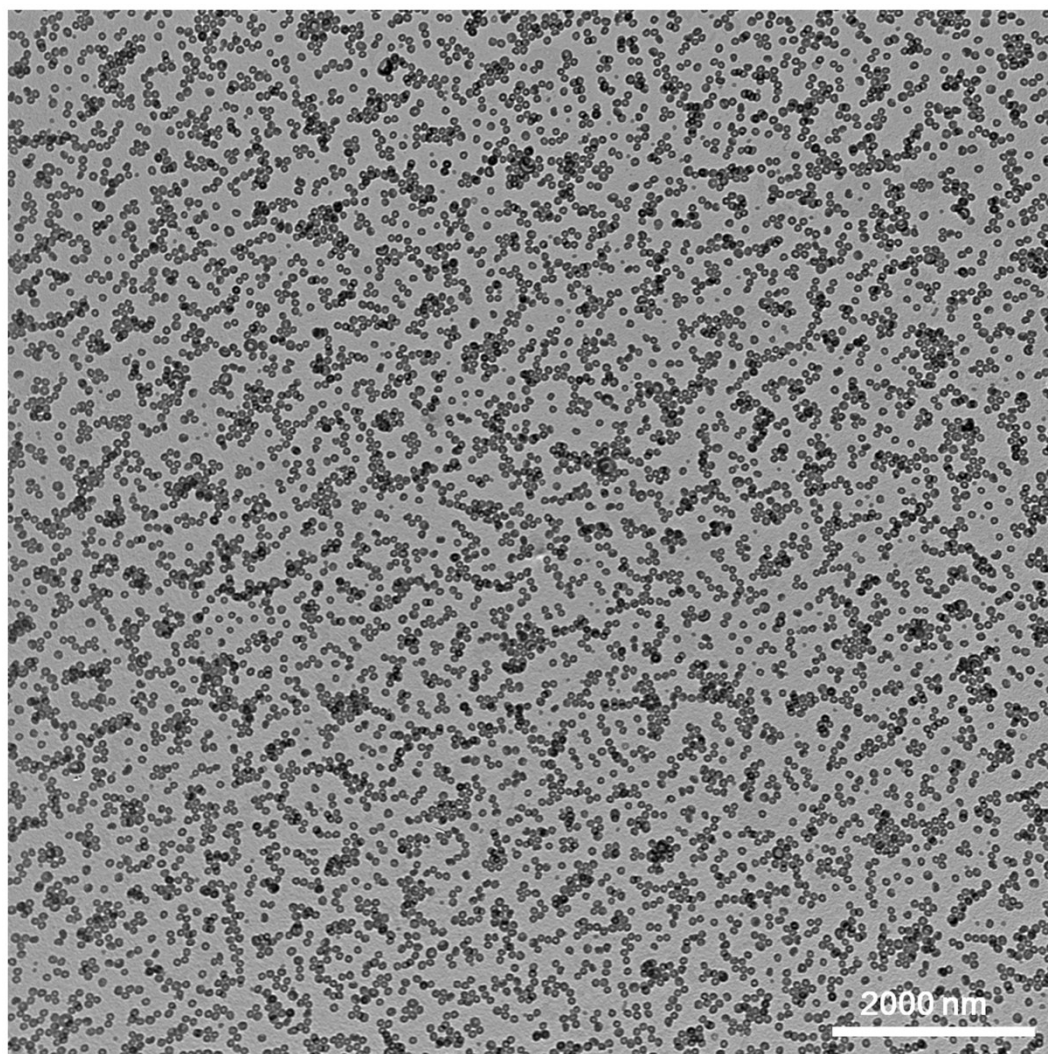


Fig. S1 Low magnified TEM image of the uniform polymeric vesicles formed from the P4VP₇₇-*b*-PS₃₁₈ at the selective solvent content of 34 %.

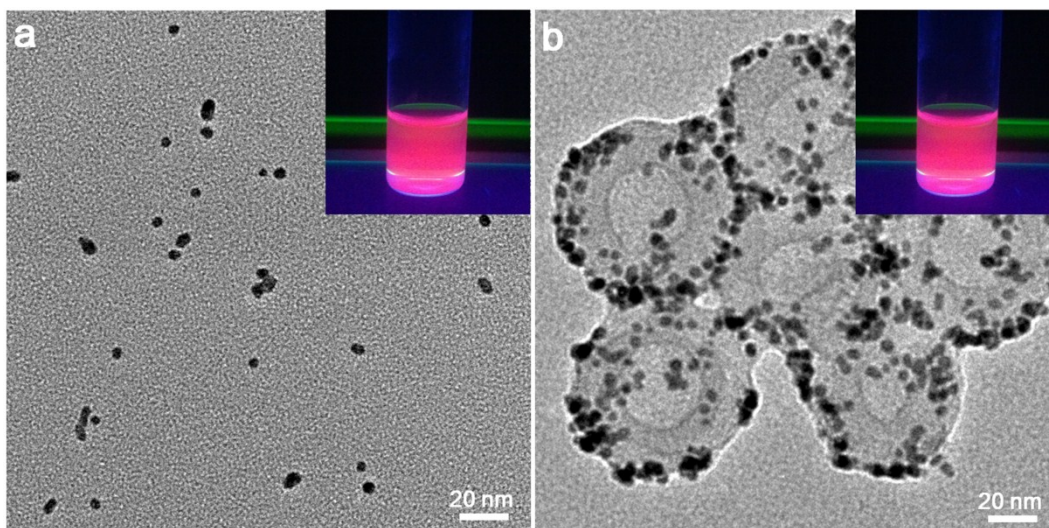


Fig. S2 High resolution TEM images of (a) the free CdSe QDs and (b) the bound QDs in the outer surface of the polymeric vesicles. The insets are the corresponding digital photographs for the QDs solutions under ultraviolet light (365 nm).

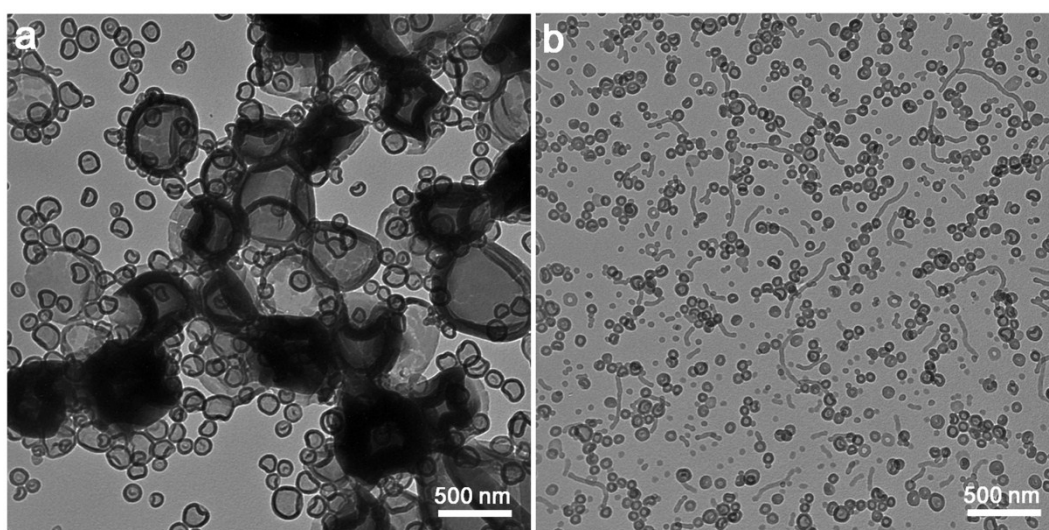


Fig. S3 TEM images of the aggregate morphologies formed from the P4VP₇₇-*b*-PS₃₁₈ at different selective solvent contents: (a) 30 %, (b) 37 %.

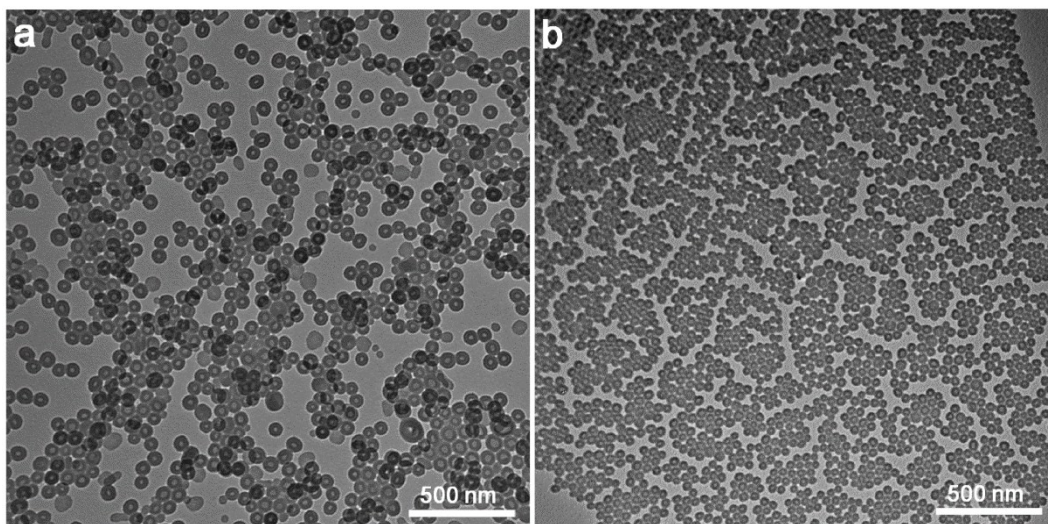


Fig. S4 TEM images of the uniform polymeric vesicles formed from (a) the P4VP₄₃-*b*-PS₃₆₆-*b*-P4VP₄₃ at the selective solvent content of 34 % and (b) the PS₁₄₄-*b*-PAA₂₂ at the selective solvent content of 24 %.

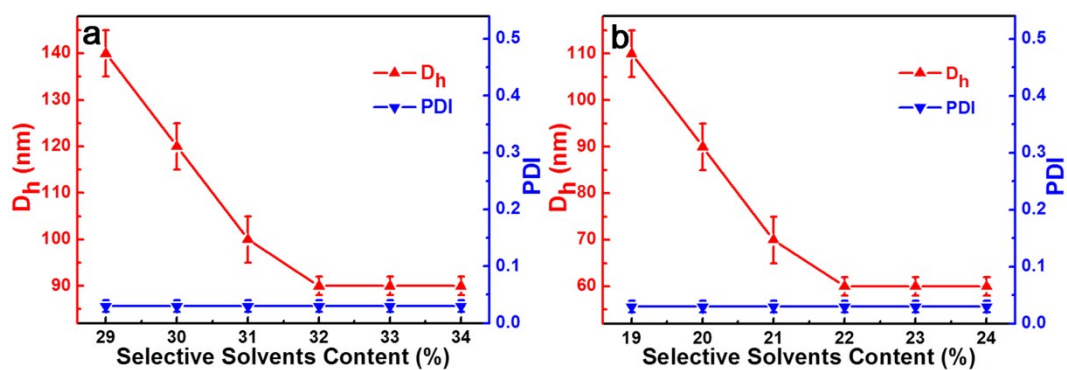


Fig. S5 DLS results of the uniform polymeric vesicles formed from (a) the P4VP₄₃-*b*-PS₃₆₆-*b*-P4VP₄₃ and (b) the PS₁₄₄-*b*-PAA₂₂ at different selective solvent contents.

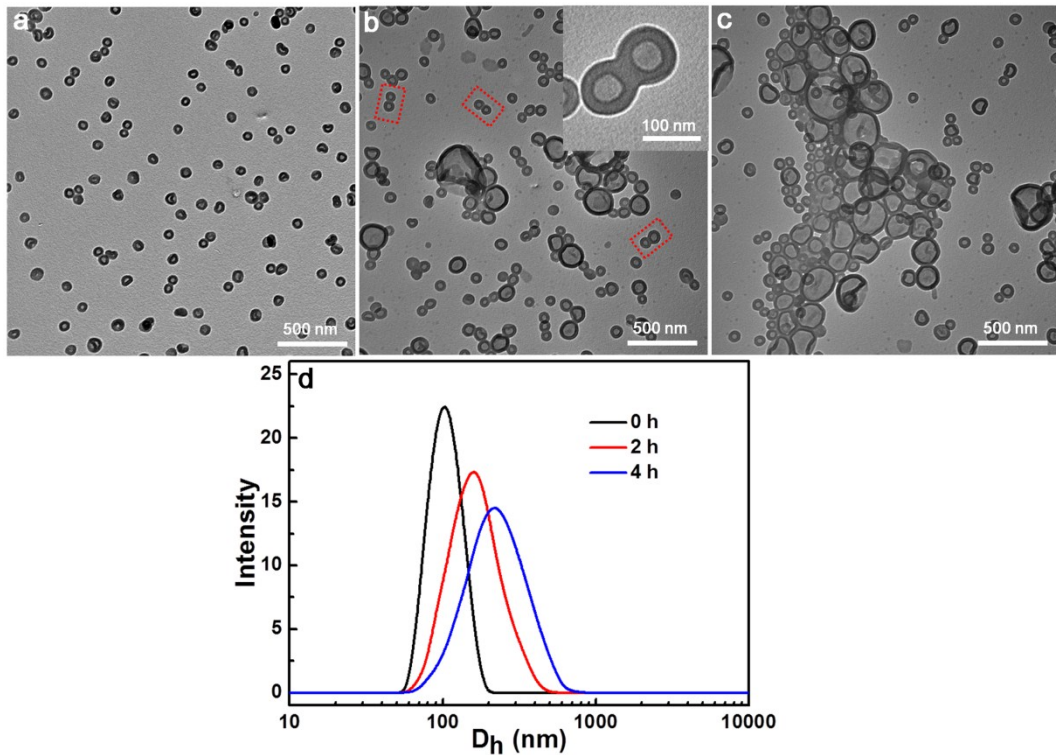


Fig. S6 TEM images of the uniform polymeric vesicles formed from the P4VP₇₇-*b*-PS₃₁₈ at the selective solvent content of 34 % with different stirring time: (a) 0 h, (b) 2 h, (c) 4 h. (d) The corresponding DLS results.

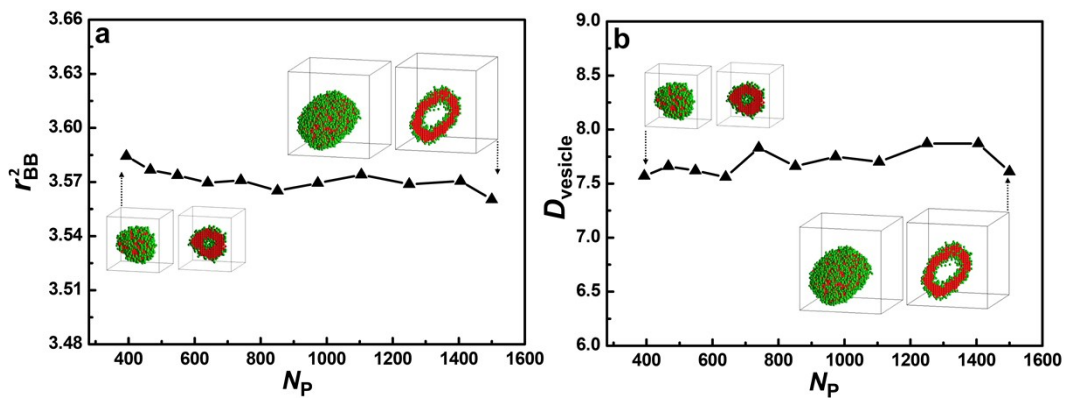


Fig. S7 Simulation results of the variations of (a) the mean square end-to-end distance of the hydrophobic blocks B (r_{BB}^2) in each vesicle and (b) the vesicle wall thickness (D_{vesicle}) with vesicle sizes (N_p). The micelle morphologies and their cross sections for corresponding N_p are also given for the purpose of clarity. The interaction between blocks B and solvents is $\epsilon_{BS} = 0.16$.