Supplementary Information for

Microdomain Control in Block Copolymer-Based Supramolecular Thin Films through Varying Grafting Density of Additives

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1. In-situ Measurements of Film Thicknesses during Solvent Annealing

![Graph A](image1.png)

![Graph B](image2.png)

Figure S1. Film thicknesses as a function of time during solvent annealing: (a) A PS(20000)-b-P4VP(17000)(PDP)$_{1.0}$ film originally with thickness of 117 nm increasing to 180 nm under low vapor pressure of chloroform. The swelling ration is about 1.5. (b) A PS(20000)-b-P4VP(17000)(DBSA)$_{1.0}$ originally with thickness of 100 nm increasing to 240 nm under high vapor pressure of chloroform. The swelling ration is about 2.4. Note that the film was placed faceup on a stage in a sealed jar upon measurements.
2. AFM Image of PS-\(b\)-P4VP(PDP)_{0.8} supramolecular Thin Films

![AFM Image](image1.png)

**Figure S2.** AFM images of a PS(20000)-\(b\)-P4VP(17000)(PDP)_{0.8} thin film, \(\sim 132\) nm in thickness, showing a mixture of perpendicular and parallel PS cylinders. The \(z\) scale is 40 nm for height and 40° for phase.

3. TEM Images of PS-\(b\)-P4VP(DBSA) supramolecules

![TEM Images](image2.png)

**Figure S3.** TEM images of PS-\(b\)-P4VP(DBSA)_{\(x\)} bulk samples: (a) \(x = 0.5\) and (b) \(x = 1.0\), both showing PS cylindrical microdomains in P4VP(DBSA) matrices.
4. AFM Images of PS-\textit{b}-P4VP(PDP) Thin Film

\textbf{Figure S4.} AFM images of a PS(40000)-\textit{b}-P4VP(5600)(PDP)\textsubscript{2.5} thin film \textasciitilde{} 71 nm in thickness, showing perpendicular lamellae. The $z$ scale is 10 nm for height and 60° for phase.