

## Supplementary Information for

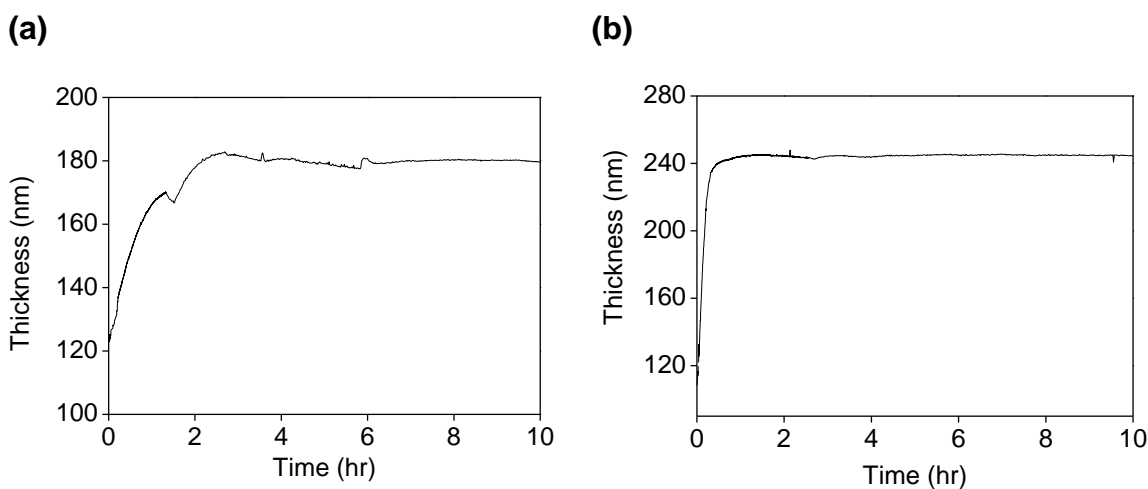
# Microdomain Control in Block Copolymer-Based Supramolecular Thin Films through Varying Grafting Density of Additives

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

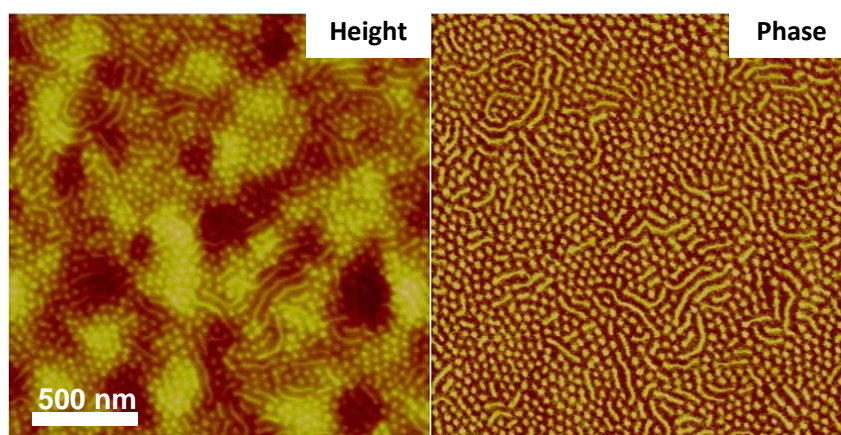
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**Figure S1.** Film thicknesses as a function of time during solvent annealing: (a) A PS(20000)-*b*-P4VP(17000)(PDP)<sub>1.0</sub> film originally with thickness of 117 nm increasing to 180 nm under low vapor pressure of chloroform. The swelling ratio is about 1.5. (b) A PS(20000)-*b*-P4VP(17000)(DBSA)<sub>1.0</sub> originally with thickness of 100 nm increasing to 240 nm under high vapor pressure of chloroform. The swelling ratio 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)<sub>0.8</sub> supramolecular Thin Films

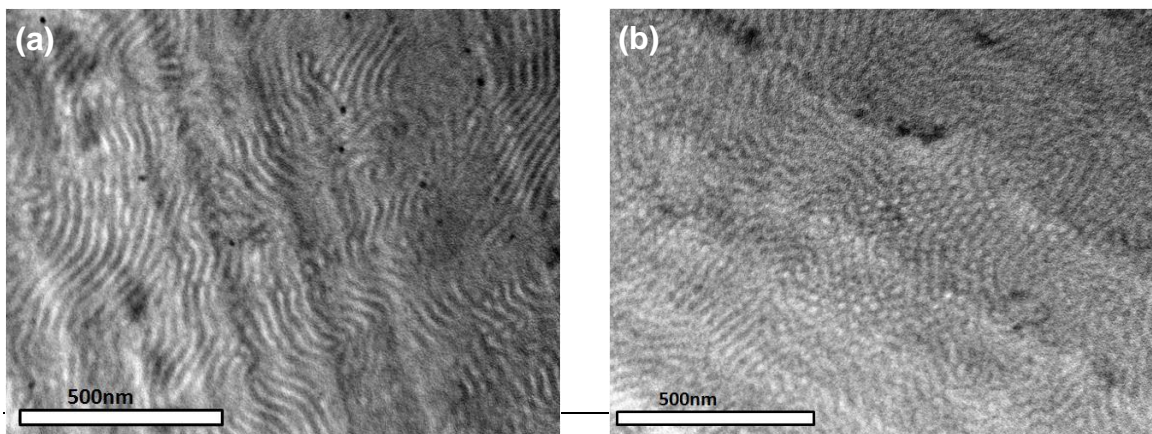
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**Figure S2.** AFM images of a PS(20000)-*b*-P4VP(17000)(PDP)<sub>0.8</sub> thin film, ~ 132 nm in thickness, showing a mixture of perpendicular and parallel PS cylinders. The *z* scale is 40 nm for height and 40° for phase.

## 3. TEM Images of PS-*b*-P4VP(DBSA)<sub>x</sub> supramolecules

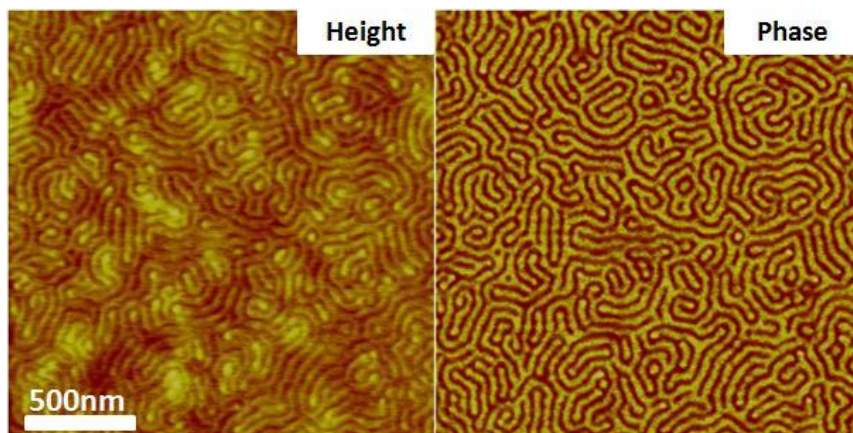
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**Figure S3.** TEM images of PS-*b*-P4VP(DBSA)<sub>*x*</sub> bulk samples: (a)  $x = 0.5$  and (b)  $x = 1.0$ , both showing PS cylindrical microdomains in P4VP(DBSA) matrices.

#### 4. AFM Images of PS-*b*-P4VP(PDP) Thin Film

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**Figure S4.** AFM images of a PS(40000)-*b*-P4VP(5600)(PDP)<sub>2.5</sub> thin film ~ 71 nm in thickness, showing perpendicular lamellae. The *z* scale is 10 nm for height and 60° for phase