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Supporting Information Available

Hexagonally Perforated Layer Morphology in PS-*b*- P4VP(PDP) Supramolecules

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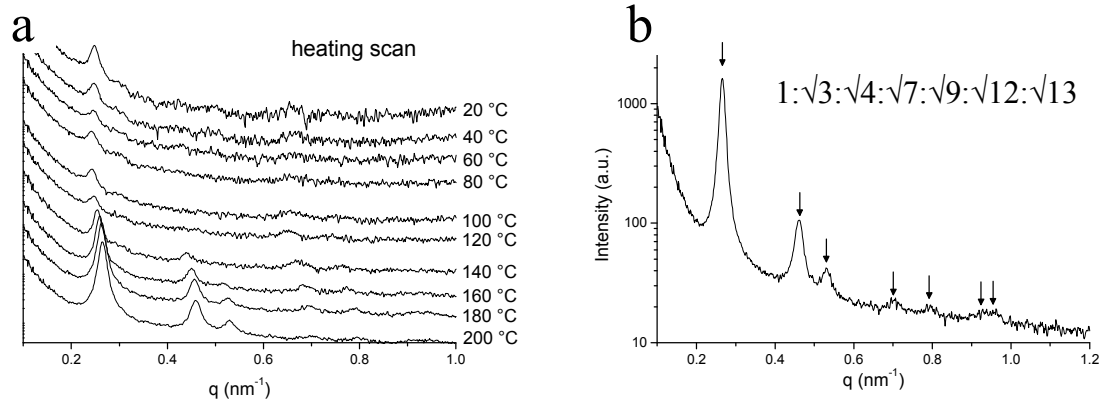


Figure 1. SAXS intensity patterns for PS-*b*-P4VP(PDP)_{0.3}, $f_{\text{P4VP(PDP)}} = 0.31$, $M_{\text{total}} = 39\,300\text{ g mol}^{-1}$ based on S4VP-33.7k: (a) as a function of temperature, the sample is heated from 20 °C to 200 °C with a heating rate of 10 °C/min; (b) at 200 °C. There is an order-order transition around 140 °C and at higher temperatures the sample has CYL morphology as evidenced by reflections positioned in the relative ratio $1:\sqrt{3}:\sqrt{4}:\sqrt{7}:\sqrt{9}:\sqrt{12}:\sqrt{13}$. To determine the low temperature morphology of the sample, TEM is employed as a supplementary technique.

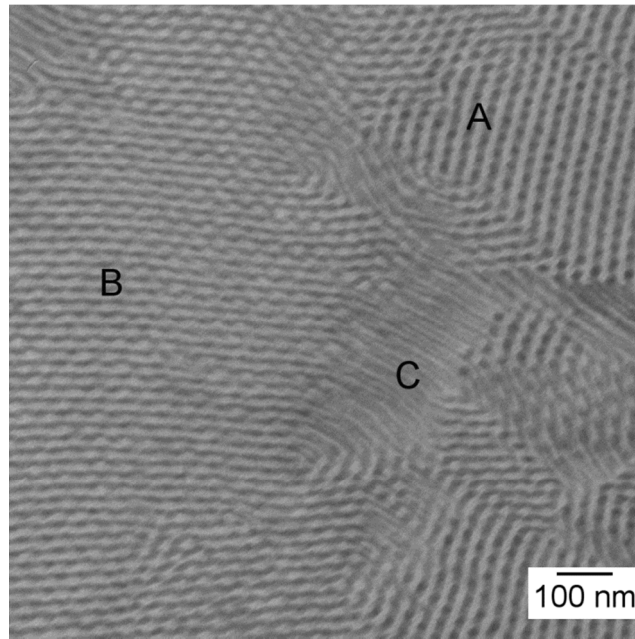


Figure 2. TEM micrograph of PS-*b*-P4VP(PDP)_{0.3}, $f_{\text{P4VP(PDP)}} = 0.31$, $M_{\text{total}} = 39\,300\text{ g mol}^{-1}$ based on S4VP-33.7k. The sample acquires the HPL structure at low temperatures and the letters A, B, C denote different projections through the HPL unit cell.

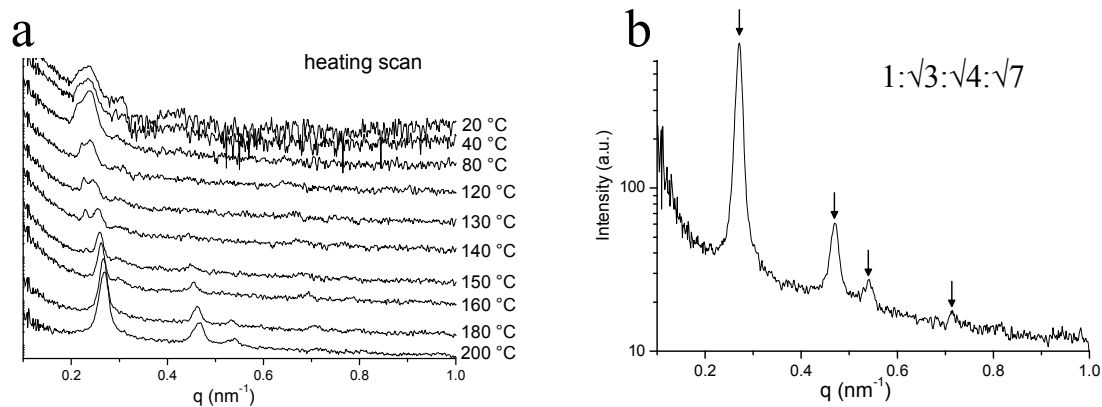


Figure 3. SAXS intensity patterns for $\text{PS-}b\text{-P4VP(PDP)}_{0.4}$, $f_{\text{P4VP(PDP)}} = 0.34$, $M_{\text{total}} = 41\,200 \text{ g mol}^{-1}$ based on S4VP–33.7k: (a) as a function of temperature, the sample is heated from 20 °C to 200 °C with a heating rate of 10 °C/min; (b) at 200 °C. There is an order-order transition around 140 °C and at higher temperatures the sample has CYL morphology as evidenced by reflections positioned in the relative ratio $1:\sqrt{3}:\sqrt{4}:\sqrt{7}$. To determine the low temperature morphology of the sample, TEM is employed as a supplementary technique.

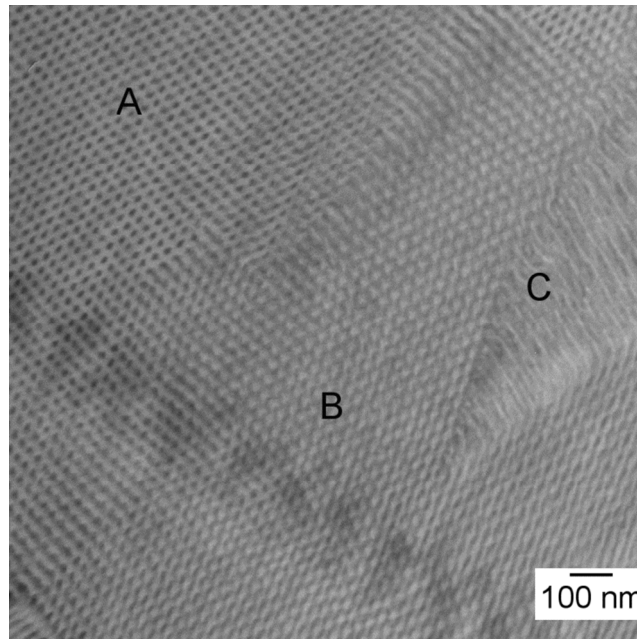


Figure 4. TEM micrograph of PS-*b*-P4VP(PDP)_{0.4}, $f_{\text{P4VP(PDP)}} = 0.34$, $M_{\text{total}} = 41\,200\text{ g mol}^{-1}$ based on S4VP-33.7k. The sample acquires the HPL structure at low temperatures and the letters A, B, C denote different projections through the HPL unit cell.

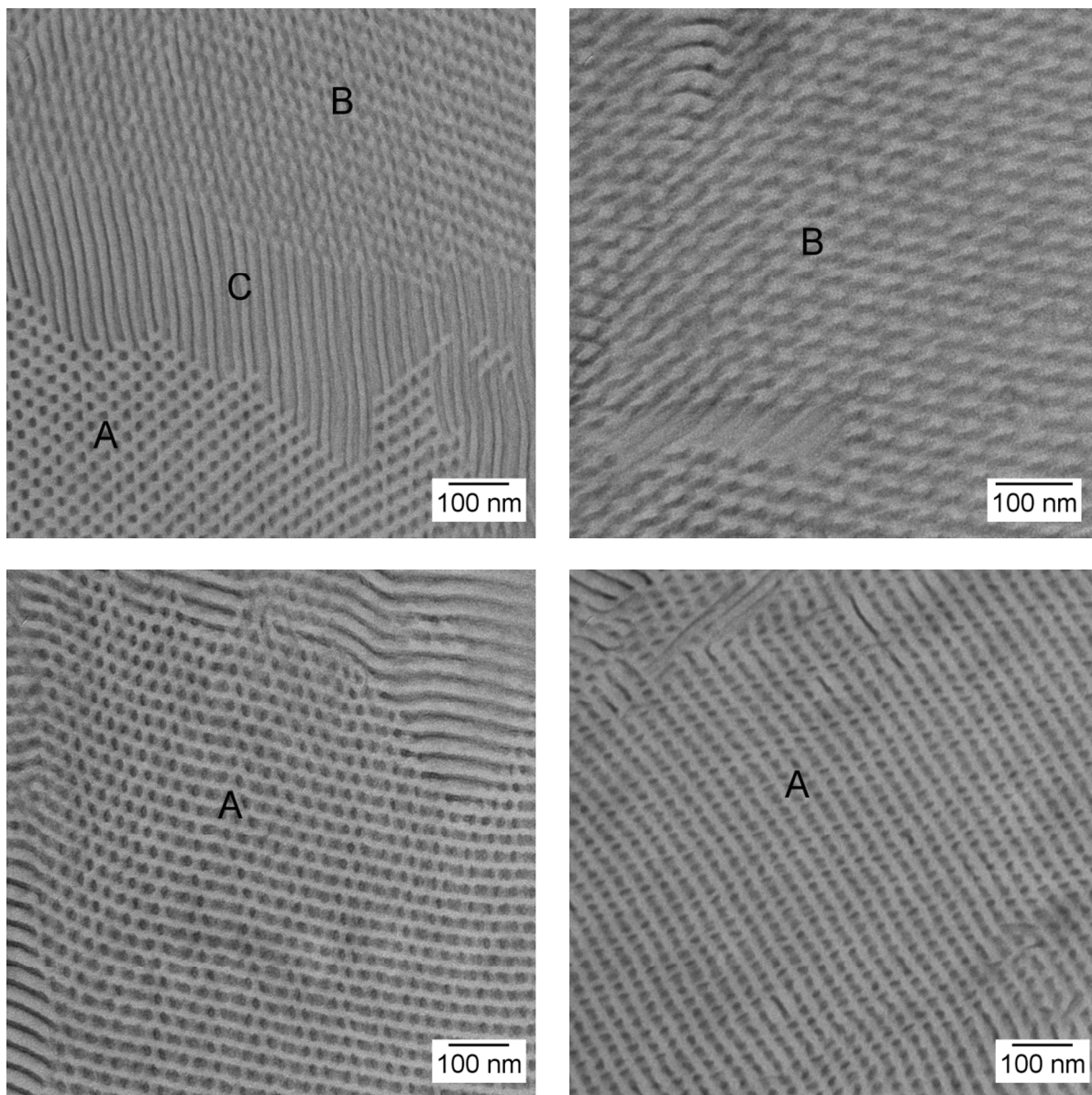


Figure 5. TEM micrographs of (a, b, c) PS-*b*-P4VP(PDP)_{0.5}, $f_{\text{P4VP(PDP)}} = 0.37$, $M_{\text{total}} = 43\,100\text{ g mol}^{-1}$ based on S4VP-33.7k, (d) PS-*b*-P4VP(PDP)_{0.5}, $f_{\text{P4VP(PDP)}} = 0.37$, $M_{\text{total}} = 52\,600\text{ g mol}^{-1}$ based on S4VP-41.0k. Letters A, B, C denote different projections through the HPL unit cell.

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