Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Electronic Supplementary Information

Hierarchical Self-Assembly of PS-*b*-P4VP/PS-*b*-PNIPAM Mixture into Multicompartment Micelles and Its Response to Two-Dimensional Confinements

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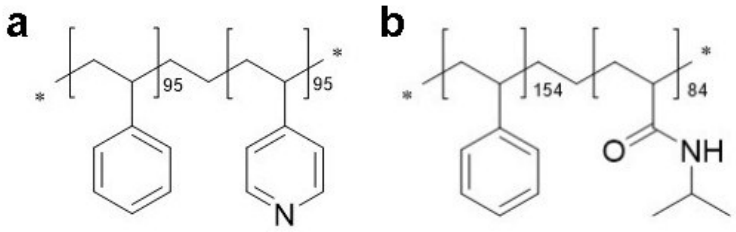

Figure S1. Molecular schematic drawings of PS-*b*-P4VP (a) and PS-*b*-PNIPAM (b). The subscripts refer to the number of corresponding repeated units.

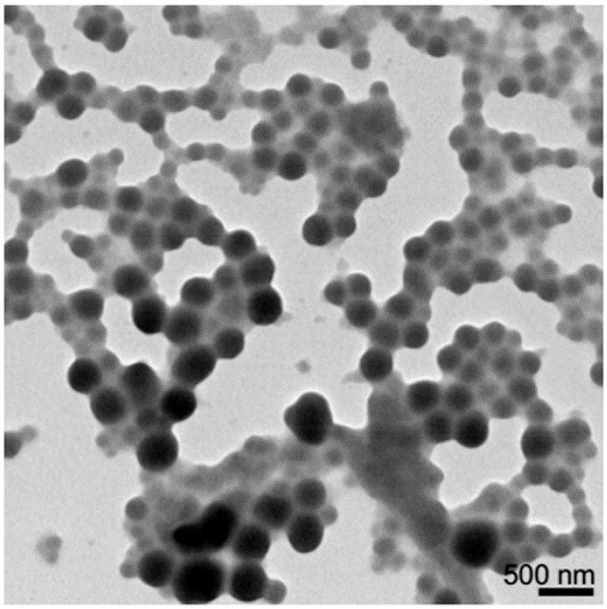

Figure S2. TEM image of the micelles self-assembled from PS-*b*-PNIPAM in THF/Water (84/16, v/v).

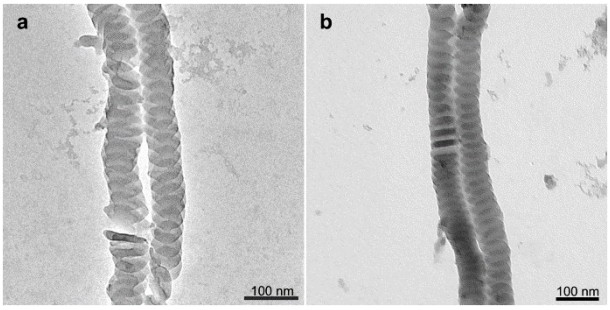

Figure S3. TEM image for samples obtained from the confined self-assembly of $PS_{9.8k}$-*b*-$P4VP_{10k}$/PS_{16k}-*b*-$PNIPAM_{9.5k}$ mixture (3/7) after of stirring for one day (a) and three days (b).

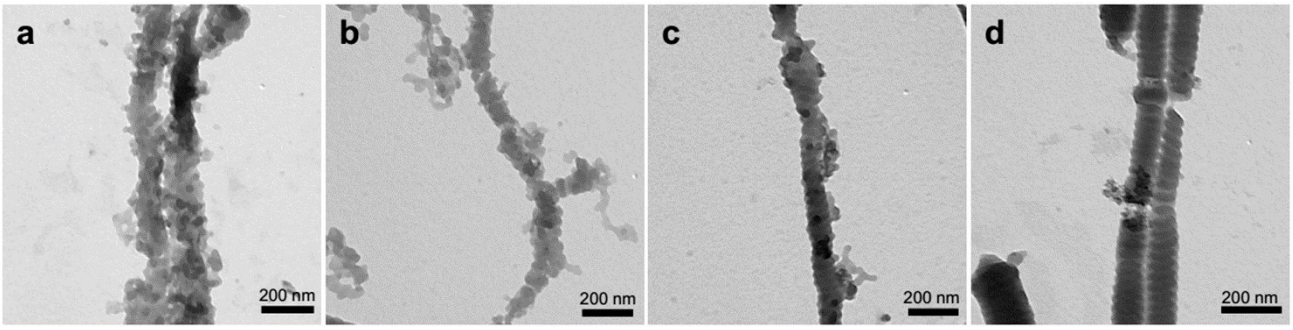

Figure S4. TEM images of the dynamics of the micelles confined in nanopores of AAO template (a) 0min, (b) 2min, (c) 5min, (d) 20min.

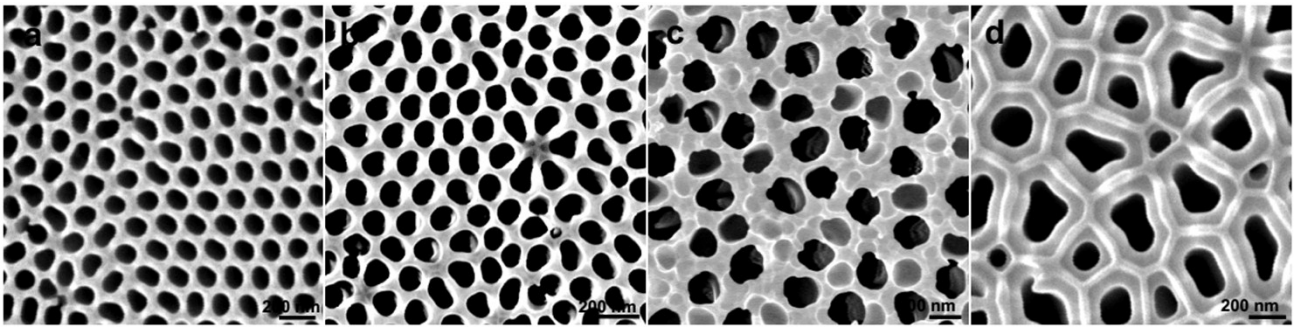

Figure S5. SEM images of AAO membrane with different pore size: (a) 93.7 ± 5.9 nm, (b) 111.2 ± 5.9 nm, (c) 187.5 ± 18.6 nm and (d) 253.7 ± 34.9nm, respectively.

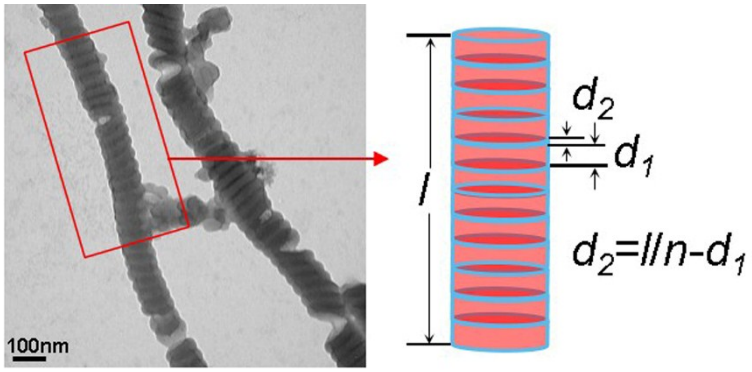

Figure S6. Schematic description of the measurement method for the PS and P4VP/PNIPAM layer thickness. The l is the local length of the LMCMs, n is the number of the disks, d_1 is the thickness of PS layer and d_2 is the thickness of P4VP/PNIPAM layer.

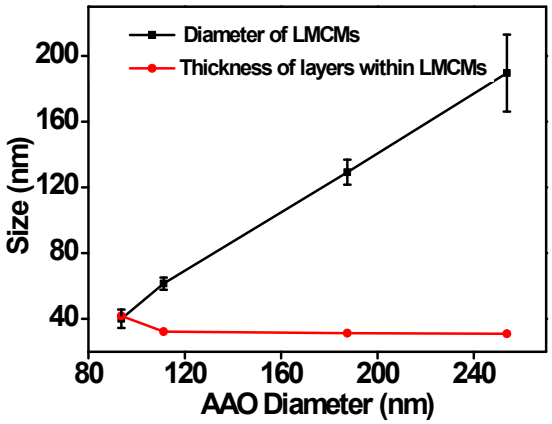

Figure S7. Diameters of LMCMs and the average thickness of layers along with the nanopores of AAO template.

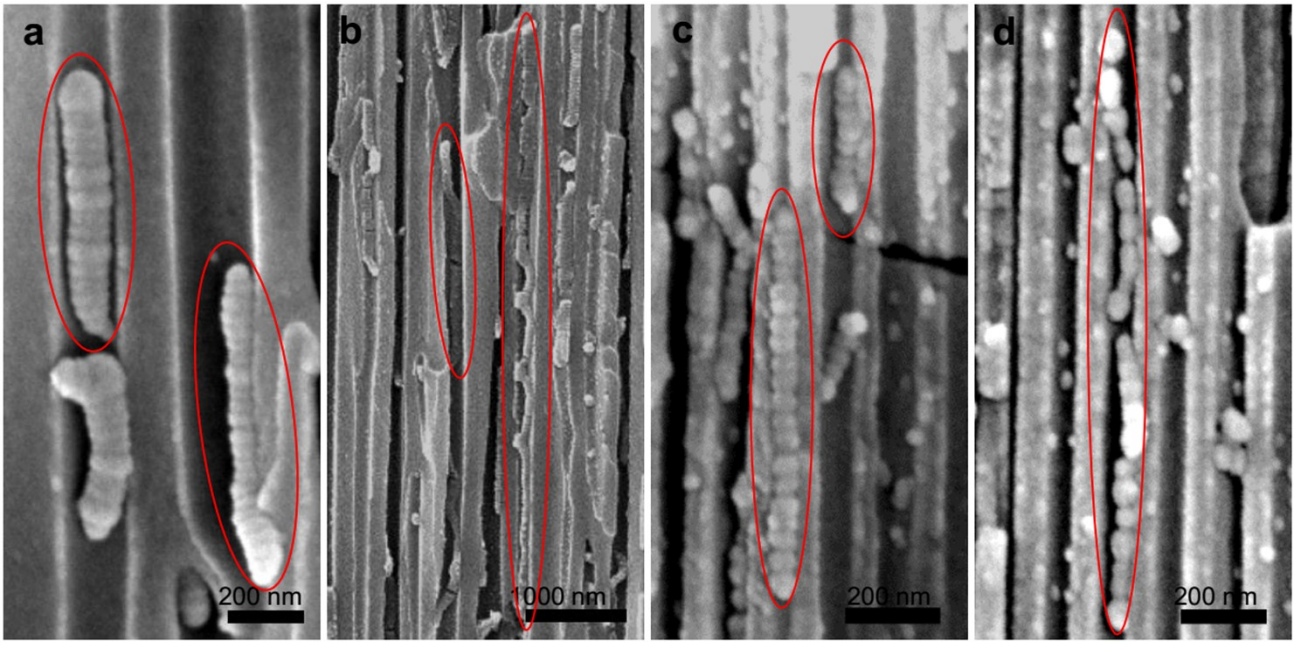

Figure S8. SEM images of micelles with different AAO membrane nanopores diameter (a) 253.7 ± 34.9 nm, (b) 187.5 ± 18.6 nm, (c) 111.2 ± 5.9 nm, (d) 93.7 ± 5.9 nm.