

Electronic supplementary information

Selective Layer-by-Layer Self-Assembly on Patterned Porous Films Modulated by Cassie-Wenzel Transition

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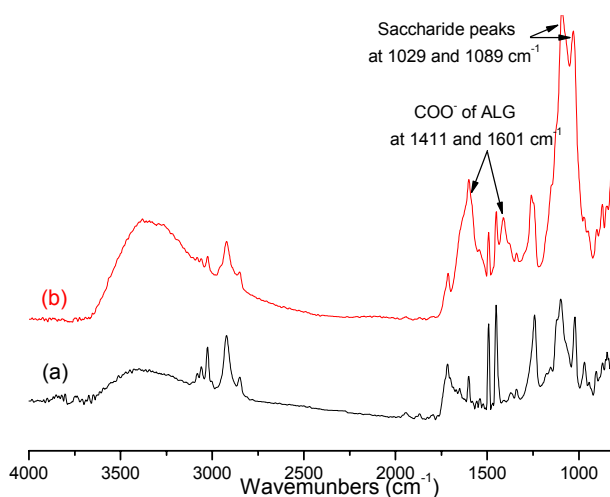


Figure S1 FTIR/ATR spectra of (a) quantennized PS-*b*-PDMAEMA film, (b) (ALG/CHI)₆ modified PS-*b*-PDMAEMA film.

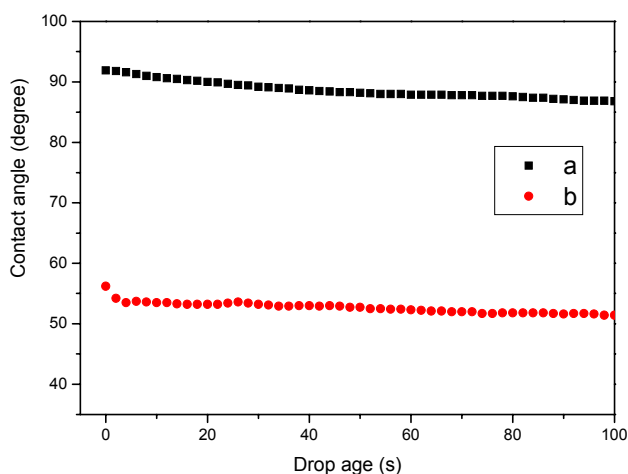


Figure S2 Time dependence of water contact angles: (a) (ALG/CHI)₂ modified PS-*b*-PDMAEMA film, (b) (ALG/CHI)₆ modified PS-*b*-PDMAEMA film.

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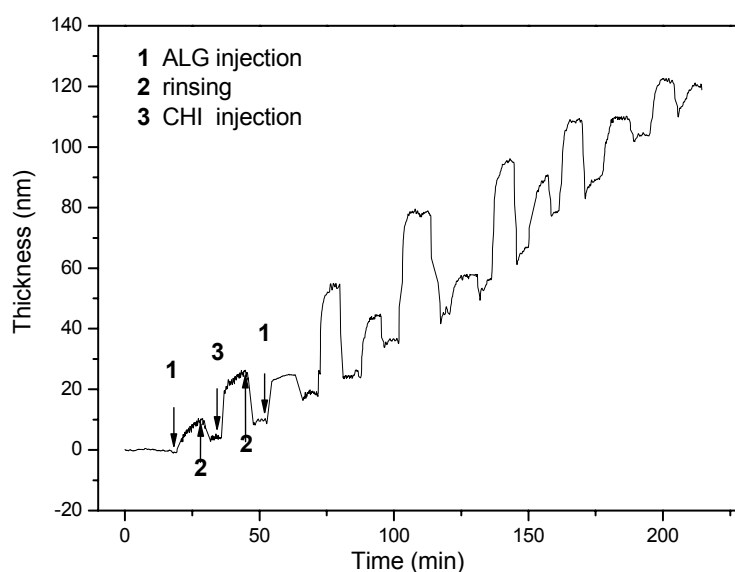


Figure S3 Thickness changes of PS-*b*-PDMAEMA film during the self-assembly of (ALG/CHI)₆ multilayers measured by QCM. The arrows indicate 1) ALG injection, 2) rinsing with 0.15 M NaCl solution, 3) CHI injection.

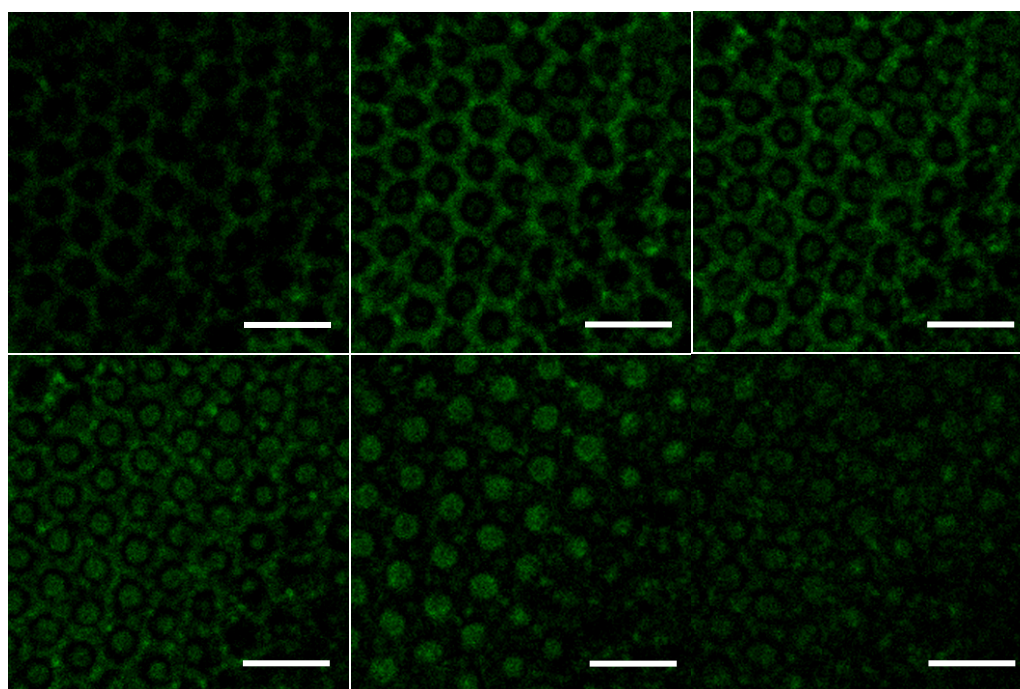


Figure S4 Confocal microscope images of (ALG/CHI)₆ modified PS-*b*-PDMAEMA film after staining with FITC. The sections in the z-axis are 400 nm starting from the surface of the film (upper left) until a penetration into the film of 2 μ m (low right). The scale bars are 5 μ m. The penetration analysis indicates that both of the top surface and the pore surface are covered by ALG/CHI multilayer.

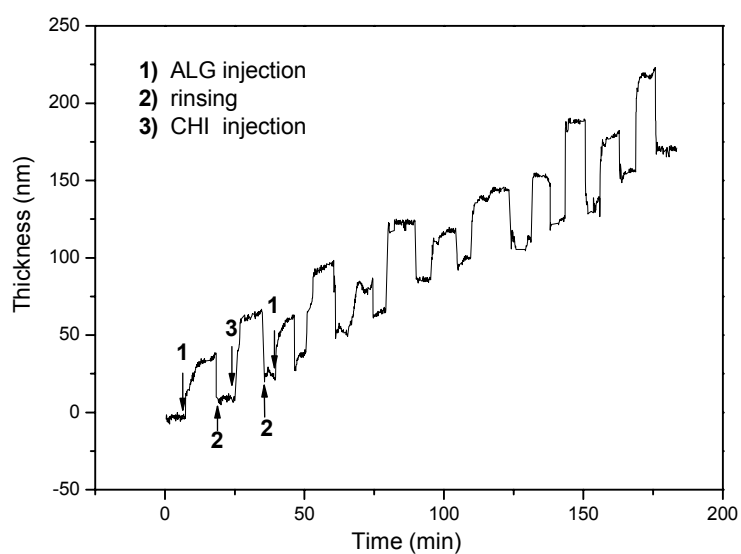


Figure S5 Thickness changes of PS/PDMAEMA film during the self-assembly of (ALG/CHI)₆ multilayers measured by QCM. The arrows indicate 1) ALG injection, 2) rinsing with 0.15 M NaCl solution, 3) CHI injection.

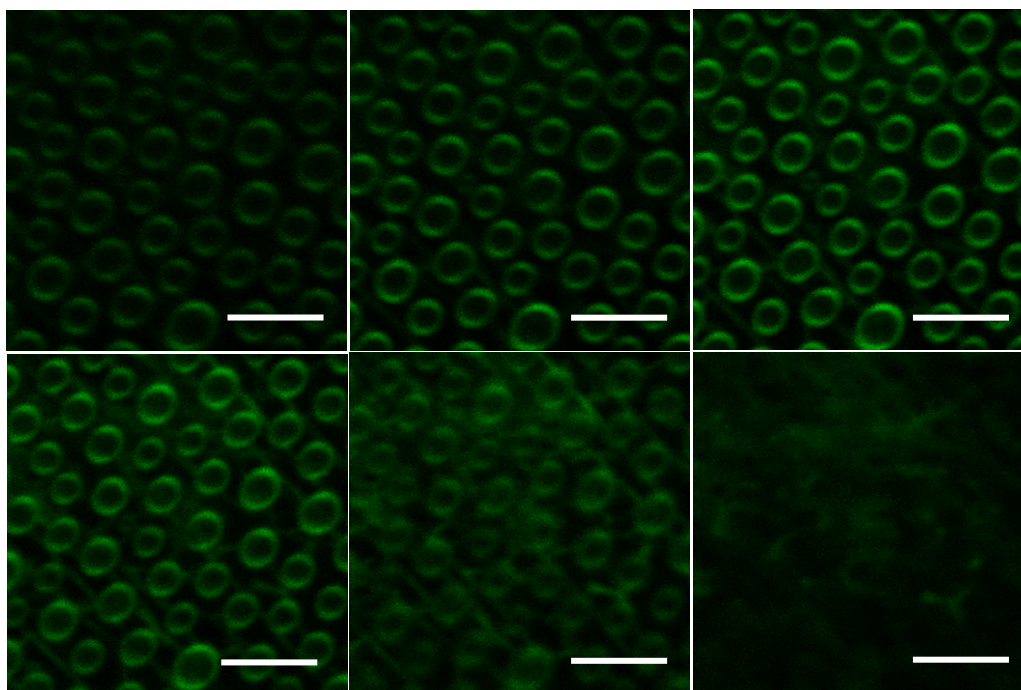


Figure S6 Confocal microscope images of (ALG/CHI)₆ modified PS/PDMAEMA film after staining with FITC. The sections in the z-axis are 400 nm starting from the surface of the film (upper left) until a penetration into the film of 2 μ m (low right). The scale bars are 10 μ m. The penetration analysis indicates that only the pore surfaces are covered by ALG/CHI multilayer.