Electronic Supplementary Information (ESI) for the manuscript entitled:

Bio- and Oil-Fouling Resistance of Ultrafiltration Membranes Controlled by Star-Shaped Block and Random Copolymer Coatings

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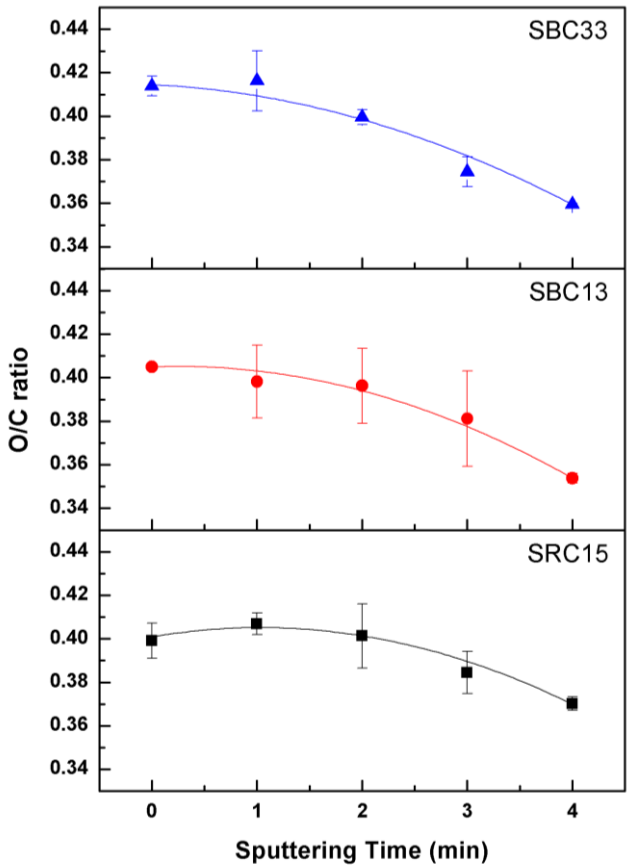


Fig. S1 XPS depth profiles (O/C ratios) of SRC15, SBC13, and SBC33 films on PSf-coated silicon wafer obtained by sputtering of argon cluster ion beams.

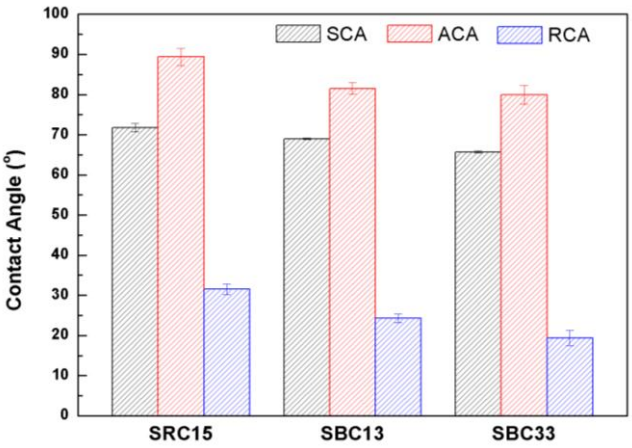


Fig. S2 Comparison of static contact angle (SCA), advancing contact angle (ACA) and receding contact angle (RCA) of SRC15, SBC13, and SBC33 films on PSf-coated silicon wafer.

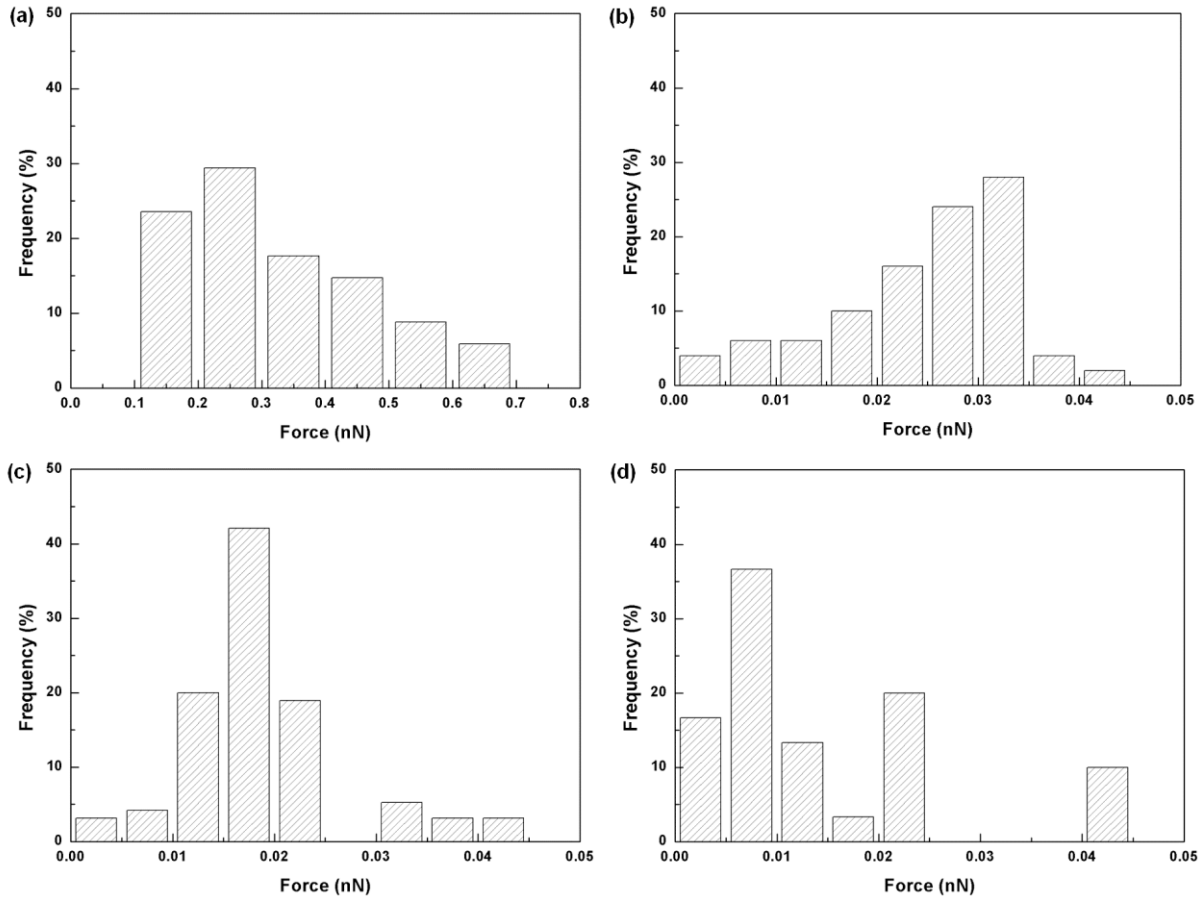


Fig. S3 Interaction force histograms which were used to determine the mean interaction forces between BSA-tethered AFM tip and polymer films. (a) PSf, (b) SRC15, (c) SBC13, and (d) SBC33 films on PSf-coated silicon wafer.

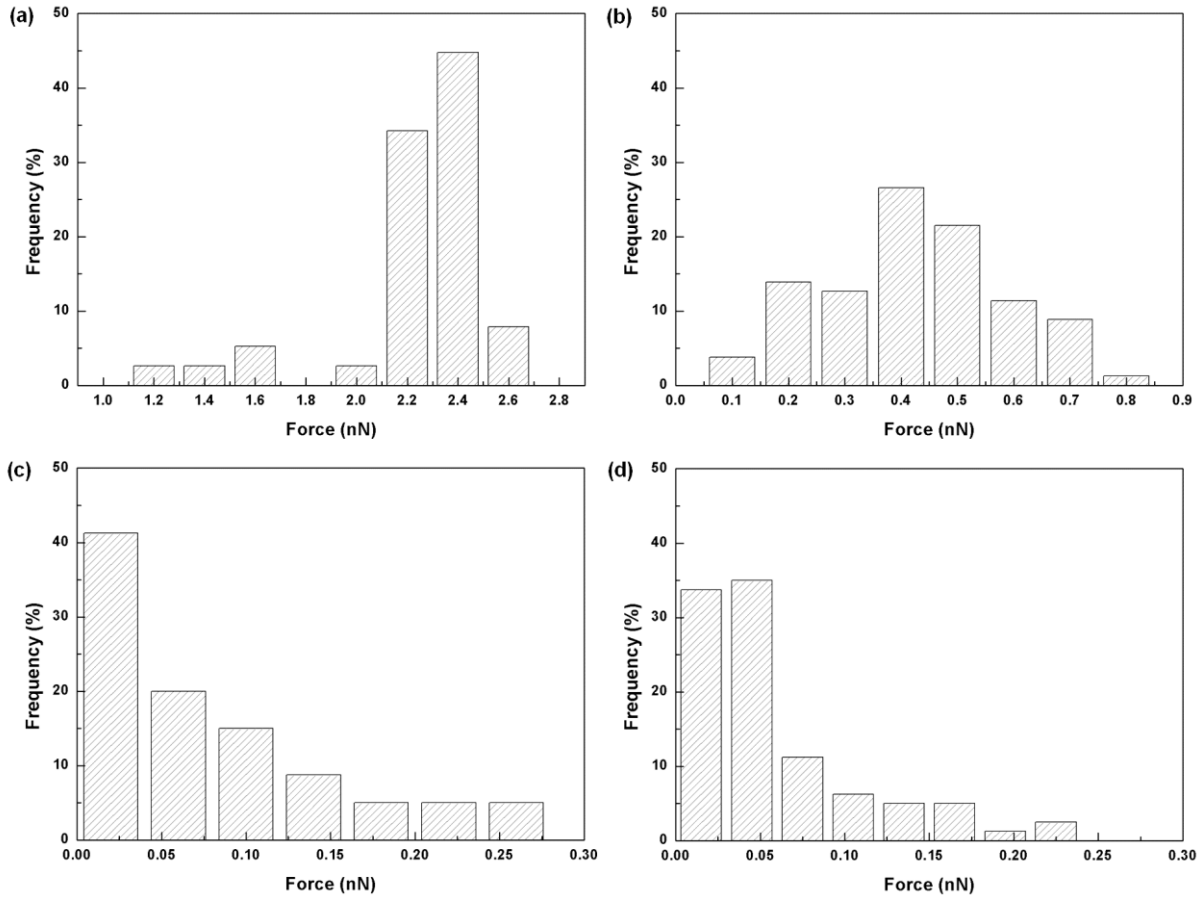


Fig. S4 Interaction force histograms which were used to determine the mean interaction forces between dodecyl-tethered AFM tip and polymer films. (a) PSf, (b) SRC15, (c) SBC13, and (d) SBC33 films on PSf-coated silicon wafer.

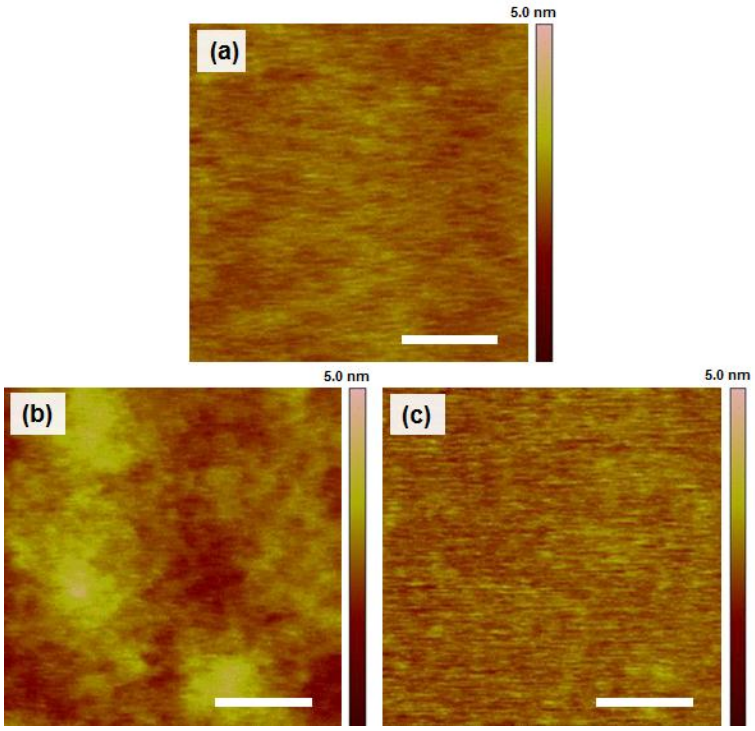
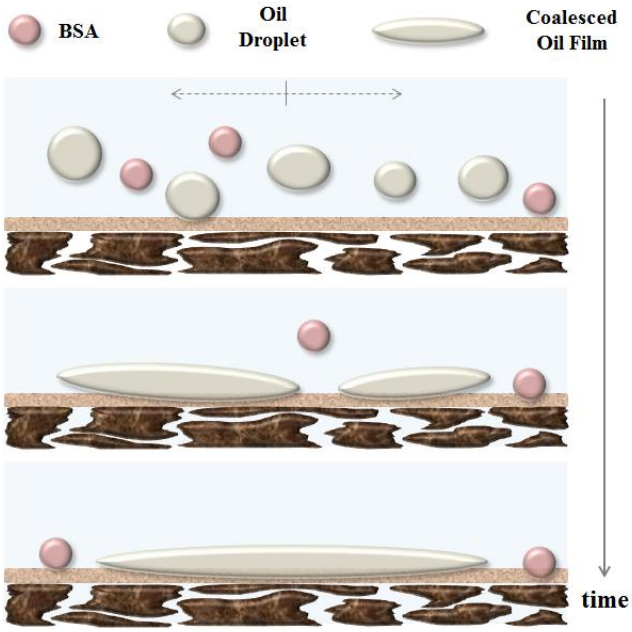


Fig. S5 AFM height images of (a) SRC15, (b) SBC13, and (c) SBC33 thin films on PSf-coated silicon wafer (Scale bar: 100 nm).



Scheme S1 Fouling behaviors of BSA and oil against the membrane surface.