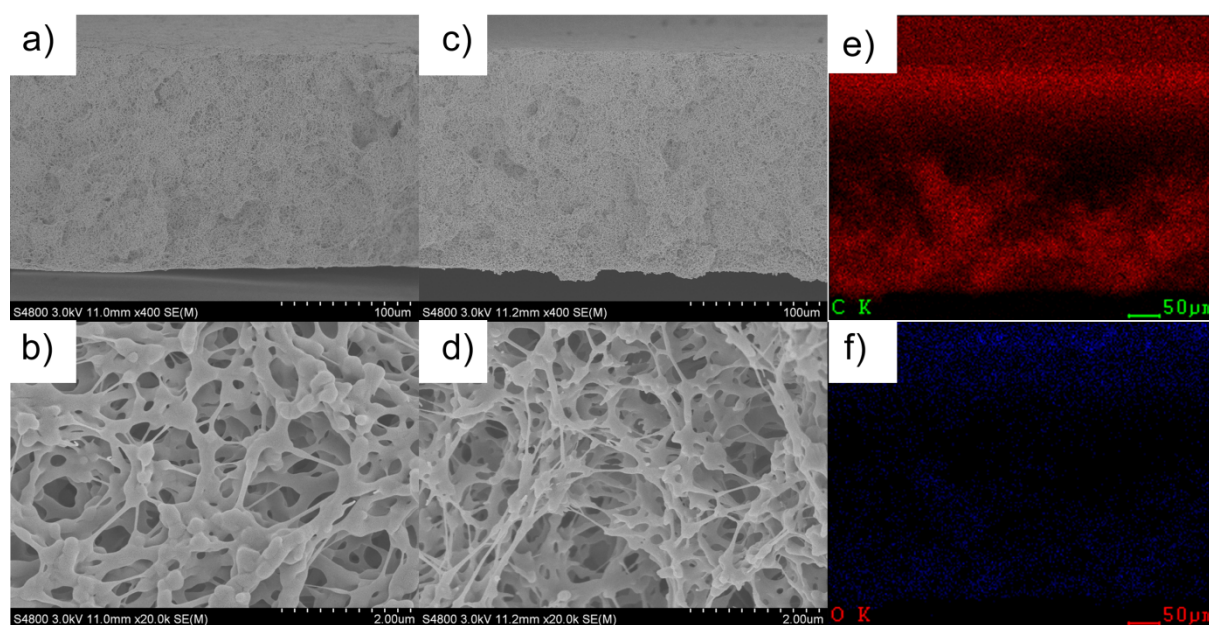


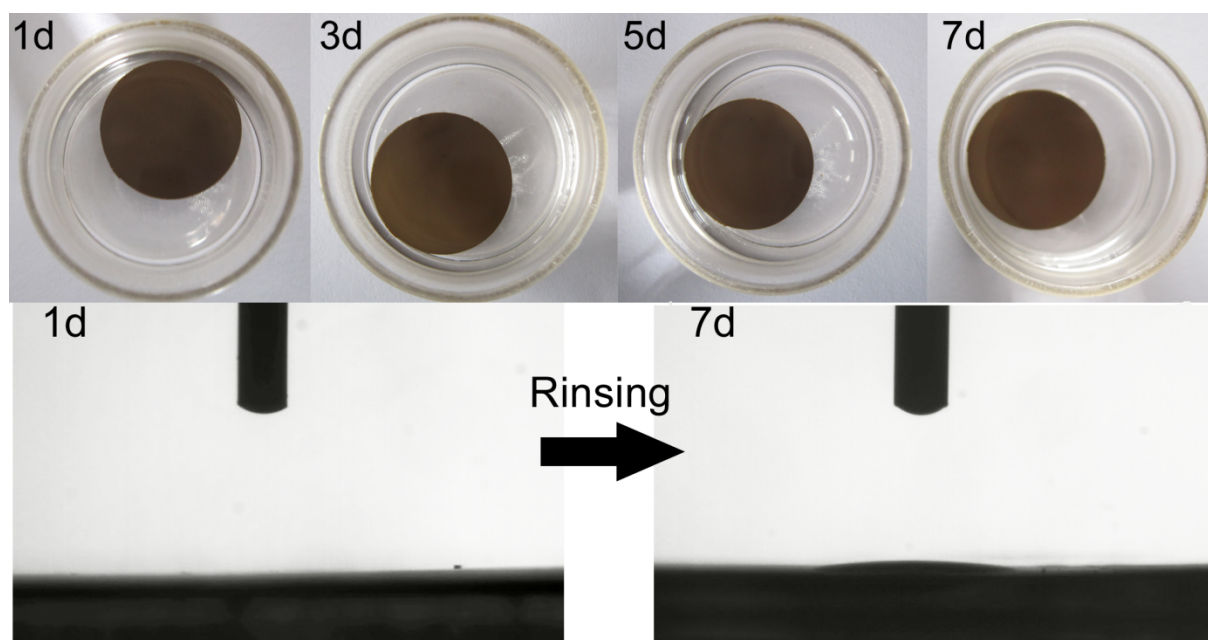
Supporting information

**Mussel-inspired Modification of Polymer Membrane for Ultrahigh Water  
Permeability and Oil-in-Water Emulsion Separation**

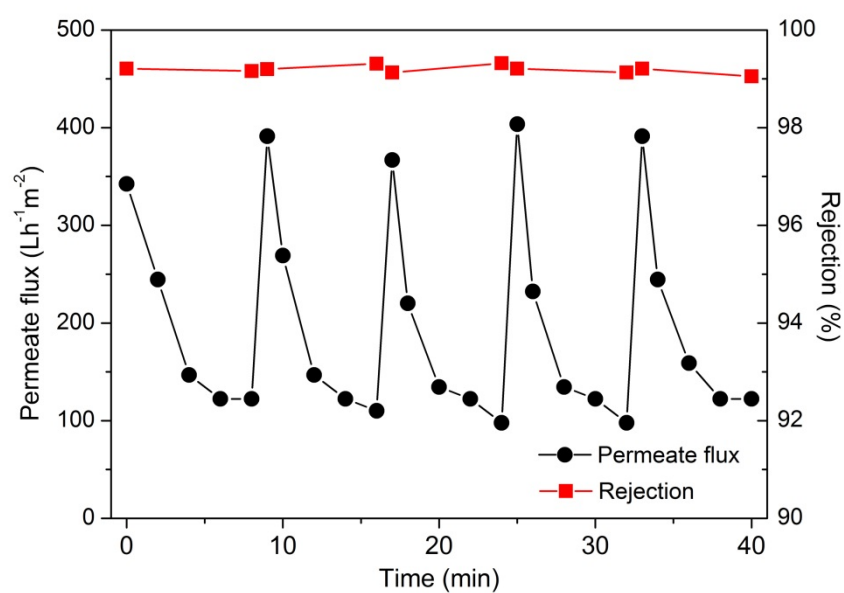
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**Fig. S1** Cross-section morphologies of the pristine (a and b) and PDA/PEI-decorated (c and d) membranes observed by SEM. (e) and (f) are the distribution of C and O in the cross-section of the PDA/PEI-decorated membrane, which are detected by the EDX detector.



**Fig. S2** Digital photos of the PDA/PEI-decorated membranes with different rinsing times (1, 3, 5 and 7 d) in deionized water. The water contact angles are shown below.



**Figure S3.** Permeate flux and rejection of the PDA/PEI-decorated membranes during the filtration of n-hexane/water/Tween 80 emulsion with n-hexane:water=1:100(v/v) under 0.02 MPa. The membrane was washed by water each 8 min.