Supporting Information

One-pot synthesis of polydopamine-Zn complex antifouling coatings on membranes for ultrafiltration under harsh conditions

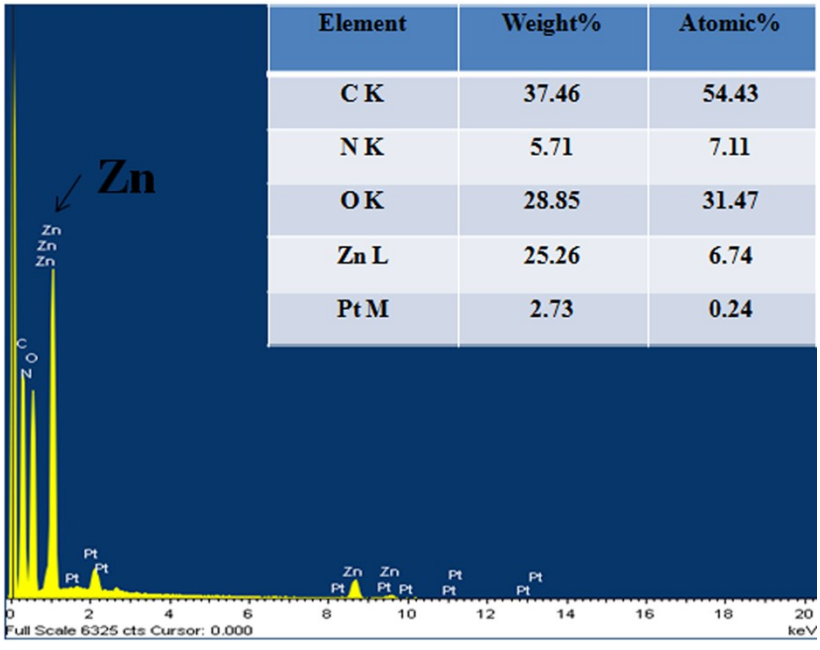
Huiqing Wu,[a,b] Jia Ming Ang,[a] Junhua Kong,[c] Chenyang Zhao,[a] Yonghua Du,[d] Xuehong Lu*[a]

[a]School of Materials Science and Engineering, Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798

[b]School of Materials Science and Engineering, Xiamen University of Technology, 600 Ligong Road, Xiamen, People's Republic of China

[c] Institute of Materials Research and Engineering, A*STAR (Agency for Science, Technology and Research), 2 Fusionopolis Way, Innovis, #08-03, Singapore 138634.

[d] Institute of Chemical and Engineering Sciences, A*STAR (Agency for Science, Technology and Research), 1 Pesek Road, Jurong Island, Singapore 627833



Element	Weight%	Atomic%
C K	37.46	54.43
N K	5.71	7.11
O K	28.85	31.47
Zn L	25.26	6.74
Pt M	2.73	0.24

Figure S1. Elemental analysis of Zn-PDA complex powder sample by EDX measurement

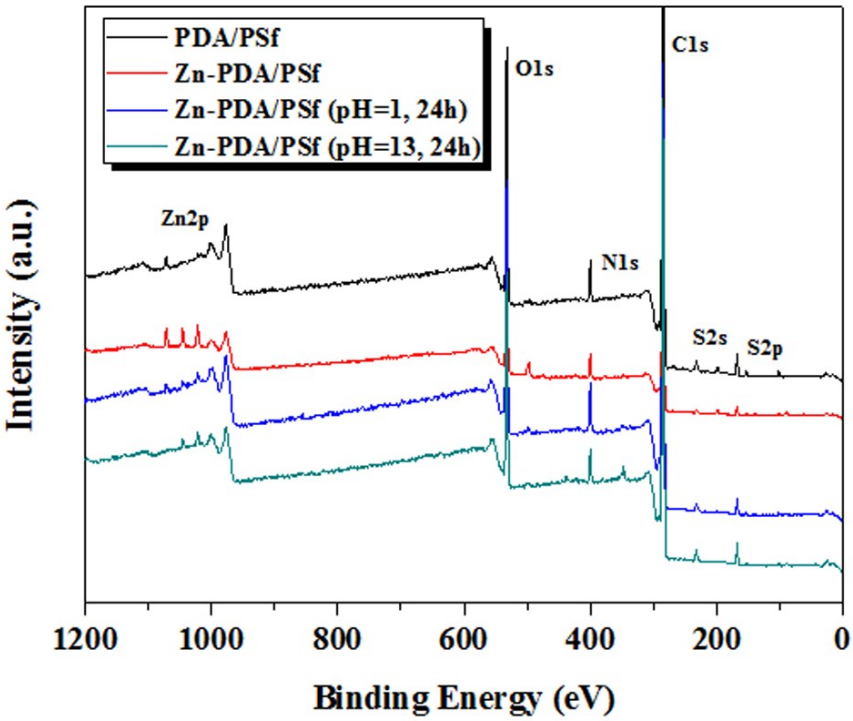


Fig. S2 XPS spectra of the original Zn-PDA/PSf membranes and the membranes after immersing in the acidic and alkaline solution for 24 h, respectively.

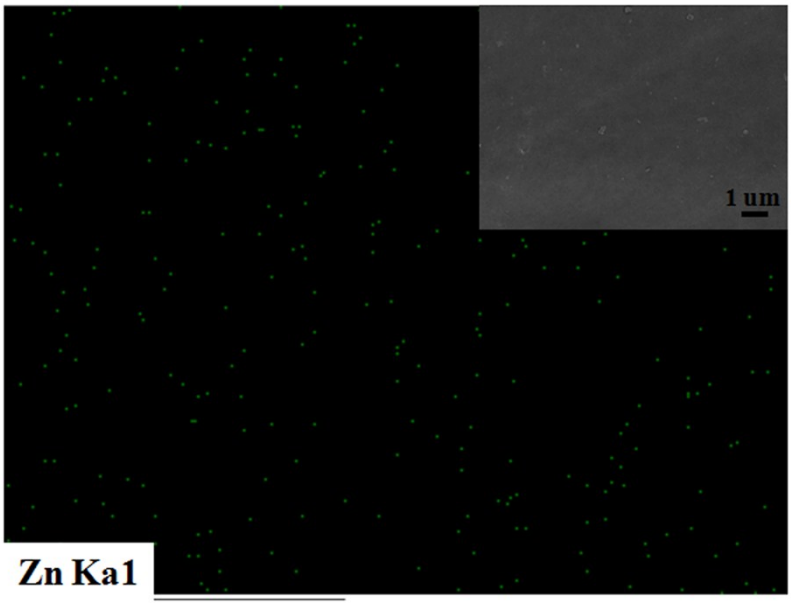


Figure S3. A SEM image showing the surface of a Zn-PDA/PSf membrane and the corresponding EDX mapping

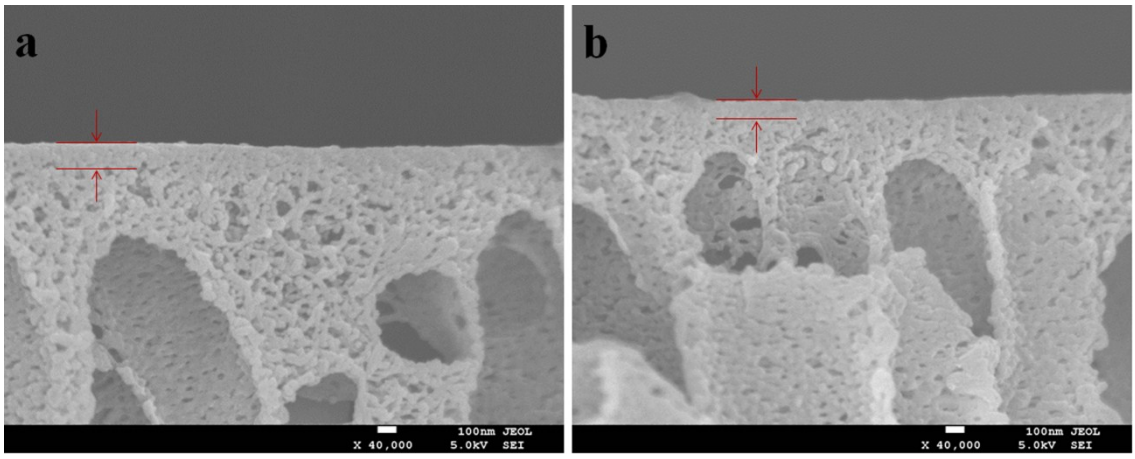


Figure S4. SEM images of the cross-sections of(a) PDA/PSf membrane,(b) Zn-PDA/PSf membrane.

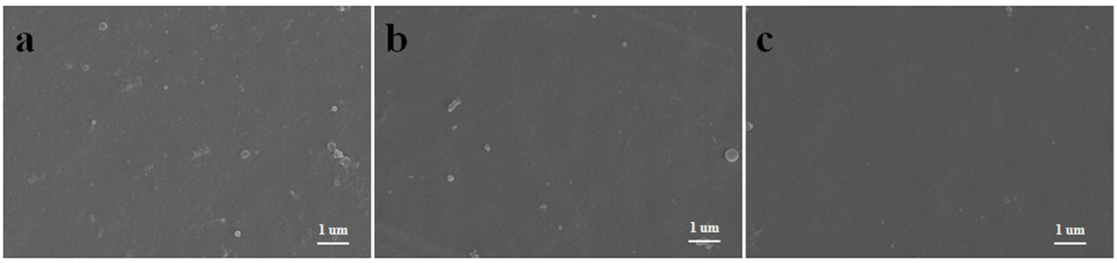


Fig. S5 SEM images of the surfaces of Zn-PDA/PSf membrane prepared at different dopamine: Zn^{2+} feed molar ratio: (a) 2:1, (b) 1:1, (c) 1:2.