Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.
This journal is © The Royal Society of Chemistry 2018

Supporting Information

Guanidinium-Functionalized Nanofiltration Membranes Integrating Anti-fouling and Antimicrobial Effect

Hong-Li Zhang, Yu-Bing Gao, Jing-Gang Gai*

State Key Laboratory of Polymer Materials Engineering, Polymer Research Institute of Sichuan University, Chengdu, Sichuan 610065, China

In this section, NFM-S1 and NFM-S2 represent the introduction of TAGH with 0.2 g and 0.7 g, respectively.

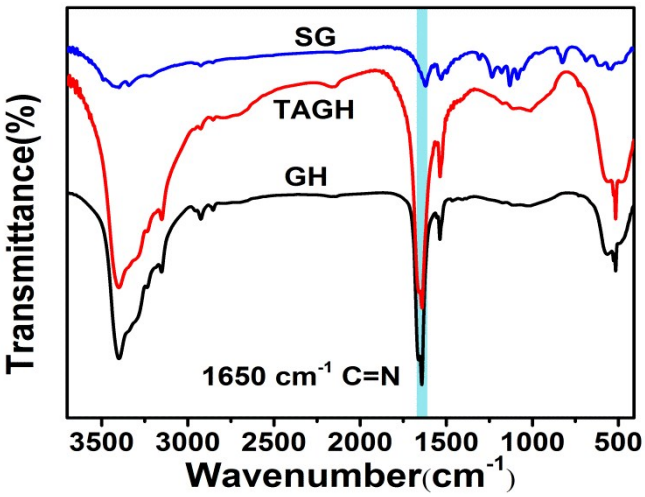

Fig. S1 FTIR spectra of GH, TAGH and SG.

Tab. S1 Chemical compositions of NFM2 surface with different content TAGH.

Sample name	C (%)	O (%)	N (%)
NFM-S1	69.11	17.47	13.42
NFM2	68.75	17.57	13.68
NFM-S2	68.69	17.60	13.71

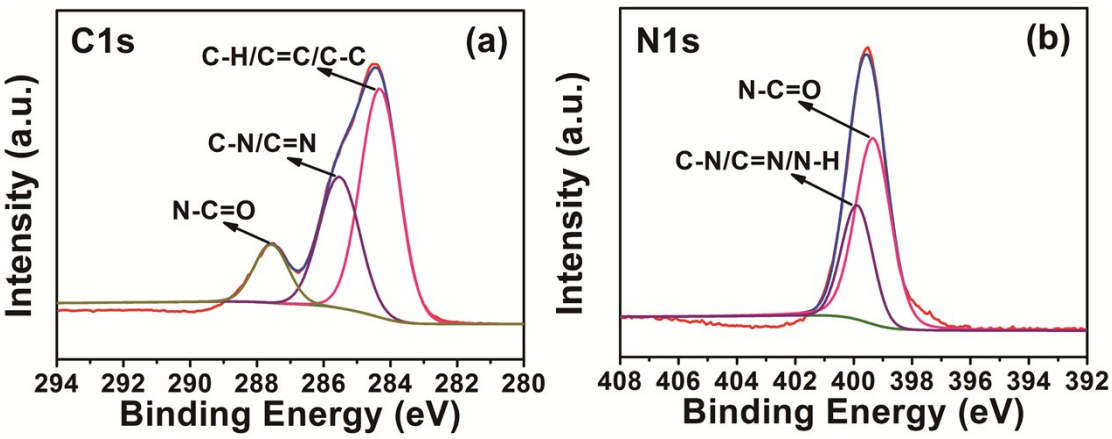

Fig. S2 XPS survey spectra (a) C 1s and (b) N 1s core-level for NFM2.

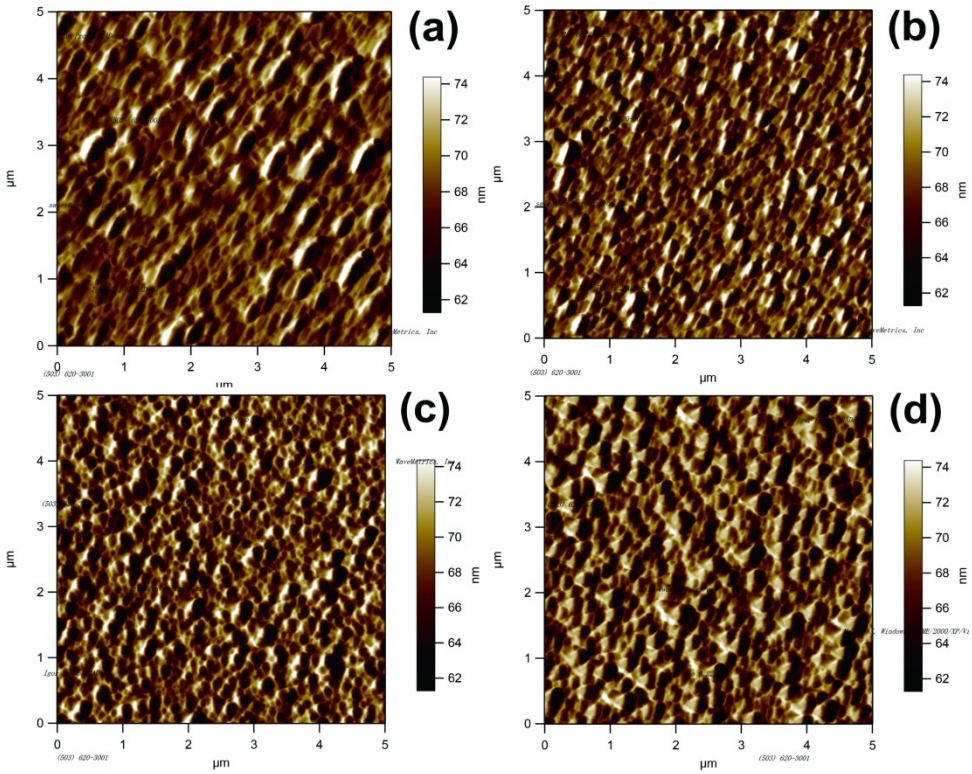

Fig. S3 AFM topological images of (a) NFM0, (b) NFM1, (c) NFM2 and (d) NFM3.

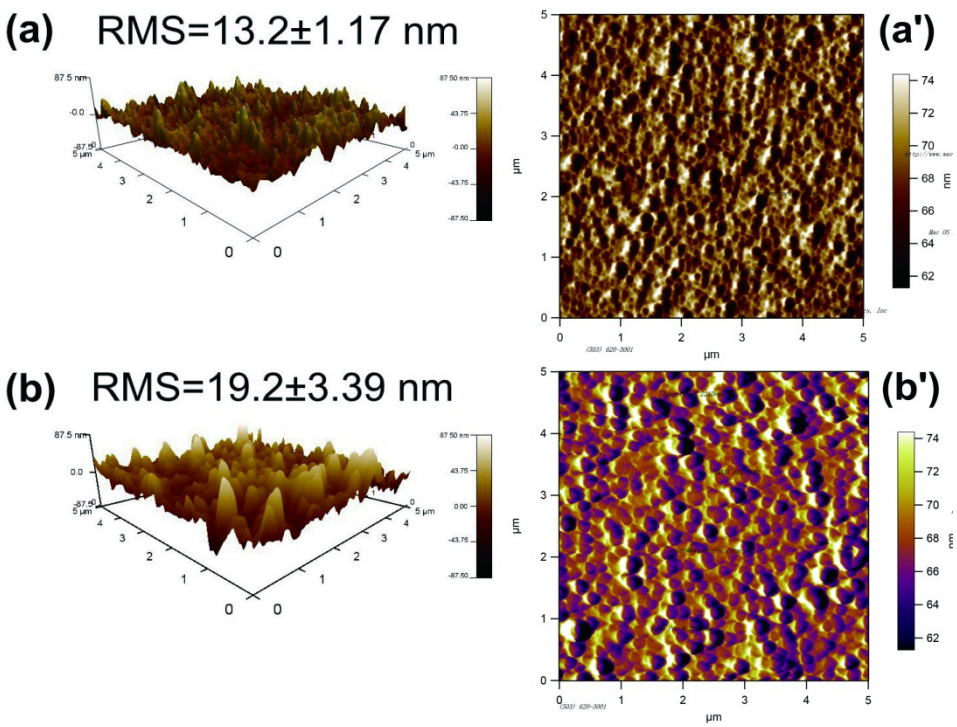

Fig. S4 AFM height (left) and topological (right) images of (a, a’) NFM-S1 and (b, b’) NFM-S2.

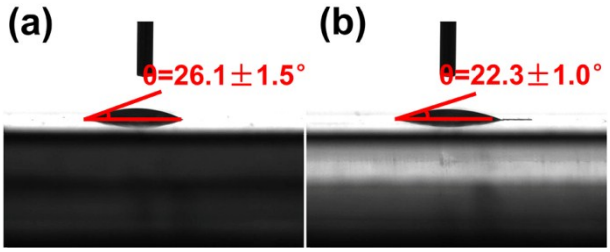

Fig. S5 Water contact angles of (a) NFM-S1 and (b) NFM-S2.

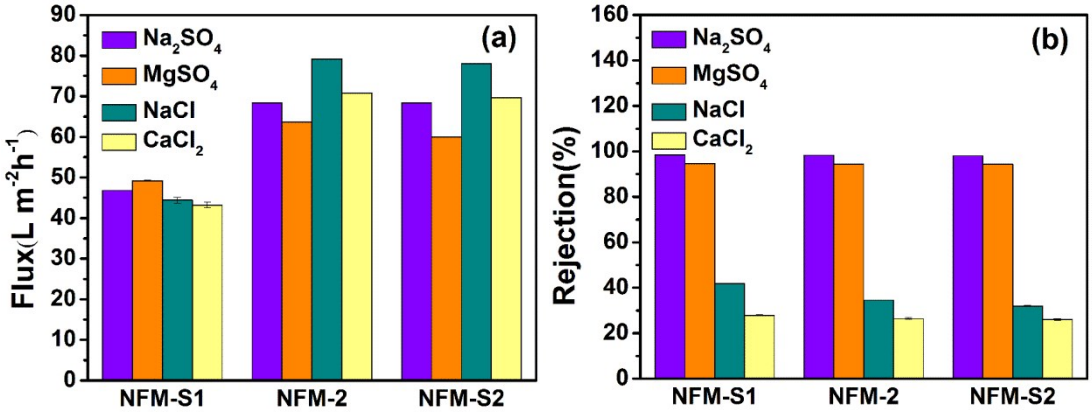

Fig. S6 Water flux and salts rejection of NFM2 tested with different inorganic salts aqueous solution (2 g L^{-1} Na_2SO_4, $MgSO_4$, NaCl, $CaCl_2$) at 25 °C and 0.6 MPa.

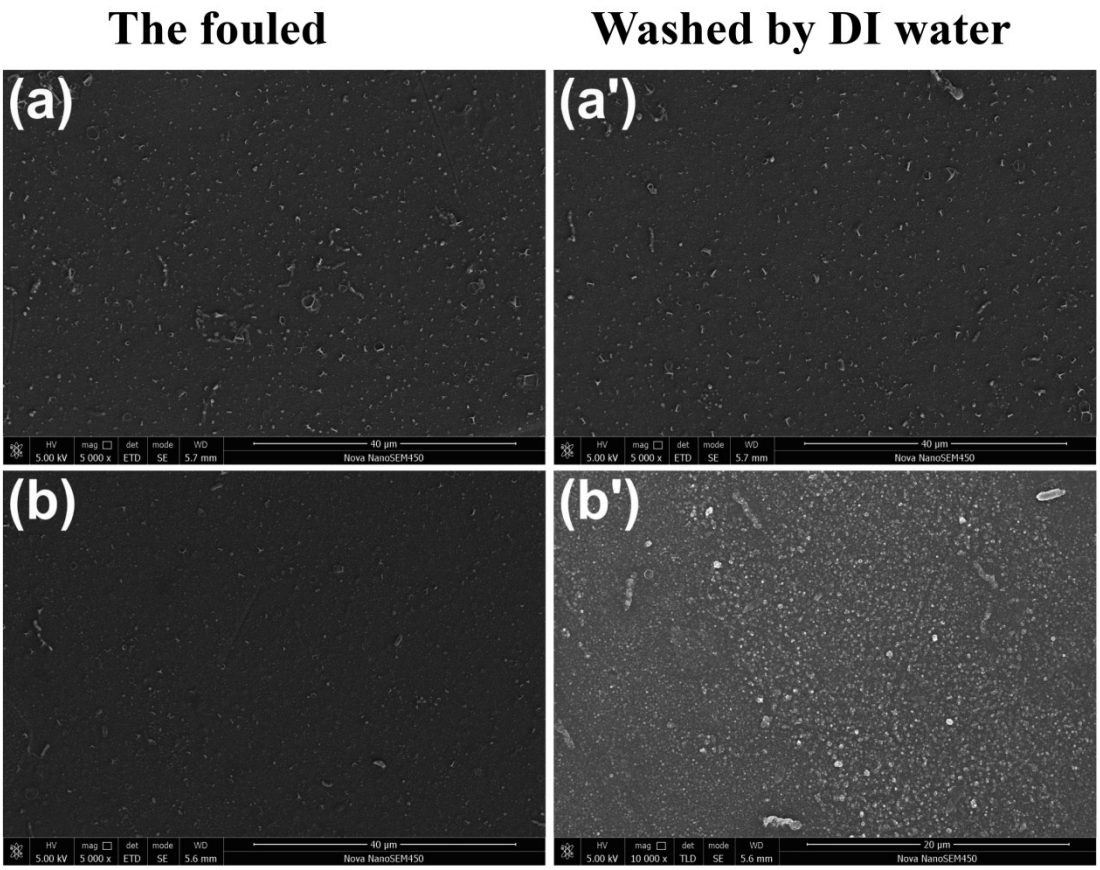

Fig. S7 SEM surface images of the membranes fouled and washed by DI water for (a, a') NFM-0 and (b, b') NFM-2.