Supporting Information for

Alginate Hydrogel Assisted Controllable Interfacial Polymerization for High-Performance Nanofiltration Membranes

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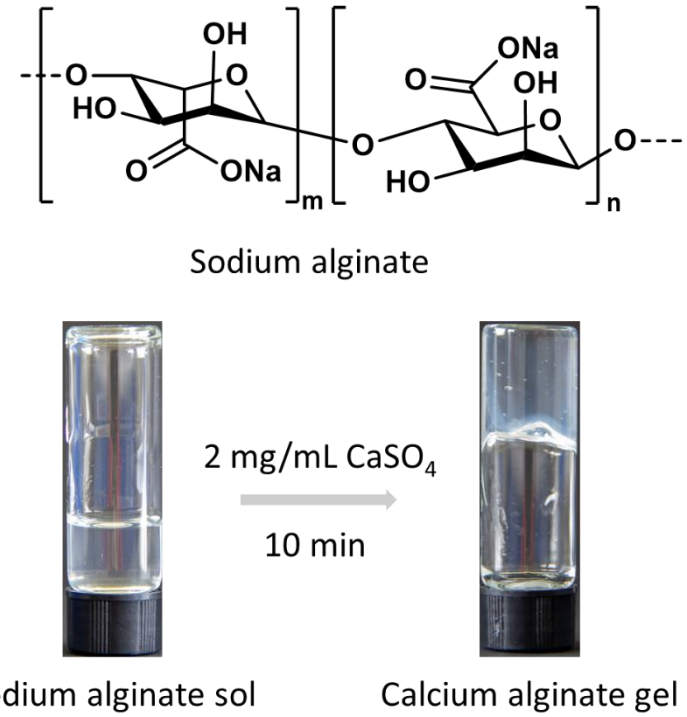

Figure S1. Molecular formula of SA and a schematic diagram of the fast sol-gel transformation of SA induced by $CaSO_4$.

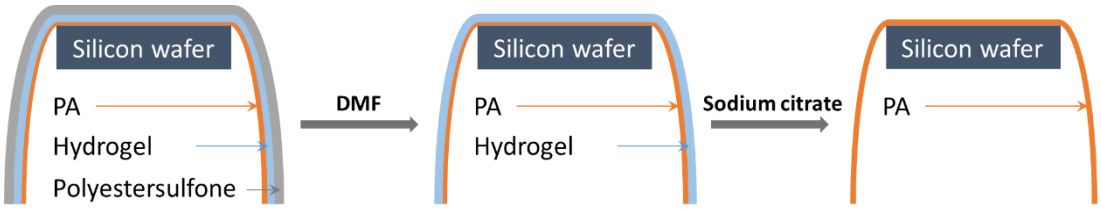

Figure S2. Schematic illustration of the isolation process of polyamide nanofilms from a SA-TFC membrane.

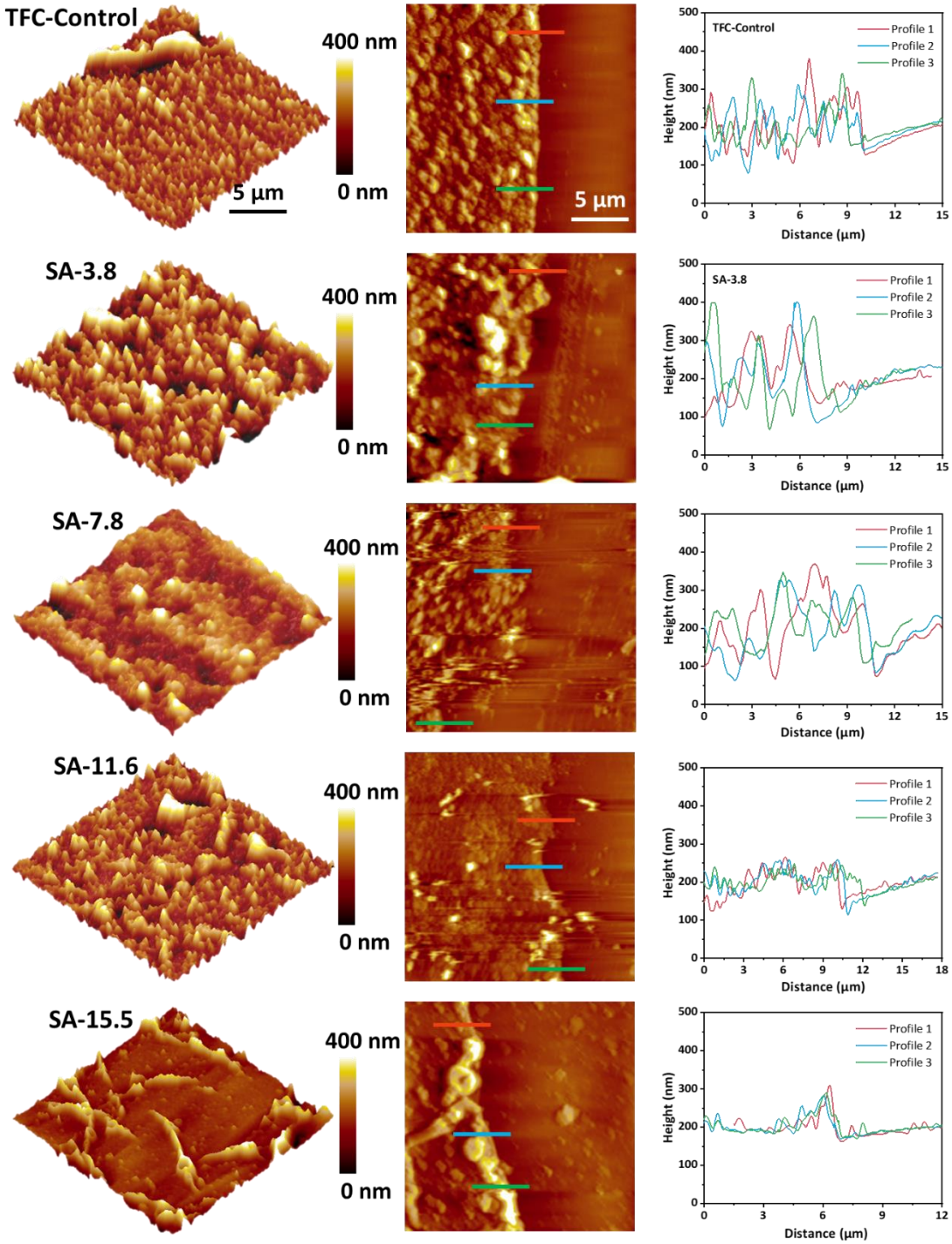

Figure S3. AFM images and related height profiles of the polyamide nanofilms isolated from TFC-Control and SA-TFC membranes.

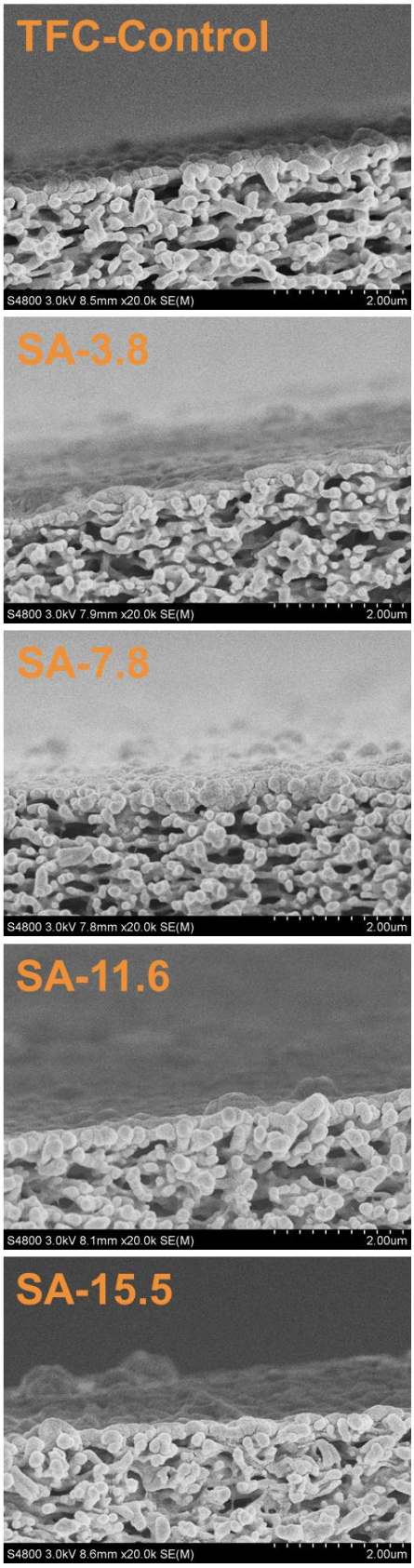

Figure. S4 SEM cross-section images of TFC-Control and SA-TFC membranes.

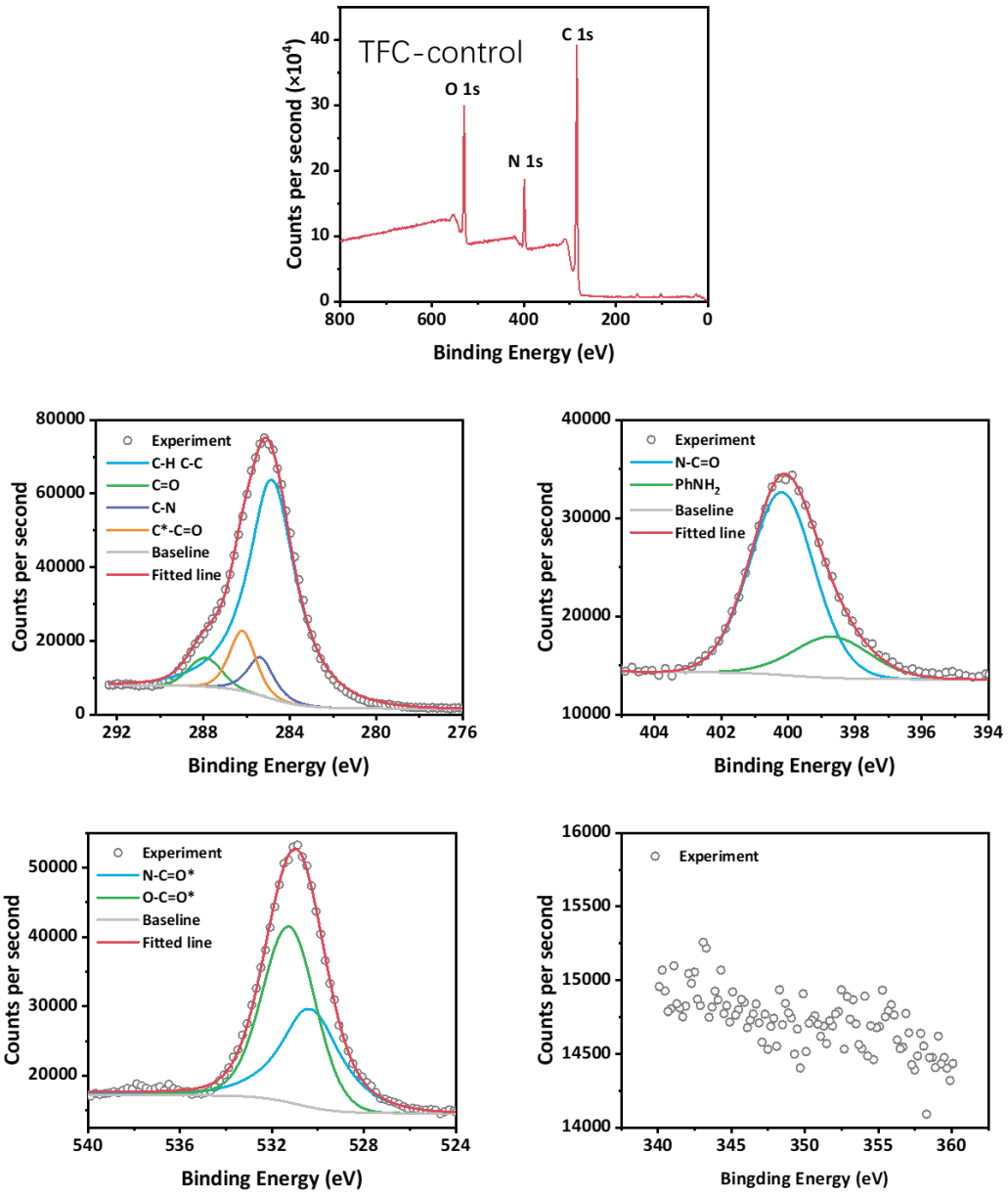

Figure S5. XPS full spectrum and the C, N, O, Ca peak fitting spectra of TFC-Control membrane.

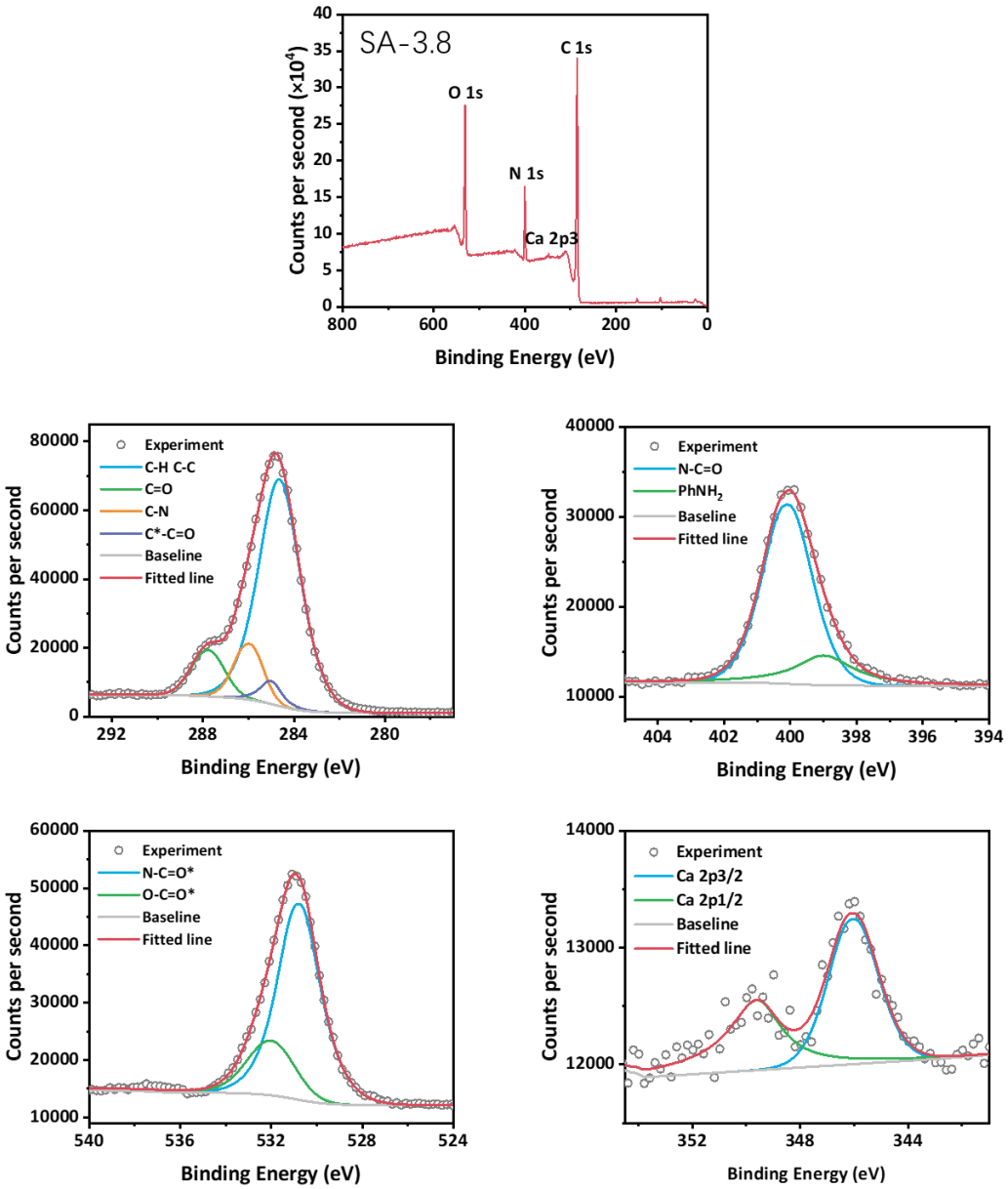

Figure S6. XPS full spectrum and the C, N, O, Ca peak fitting spectra of SA-3.8 membrane.

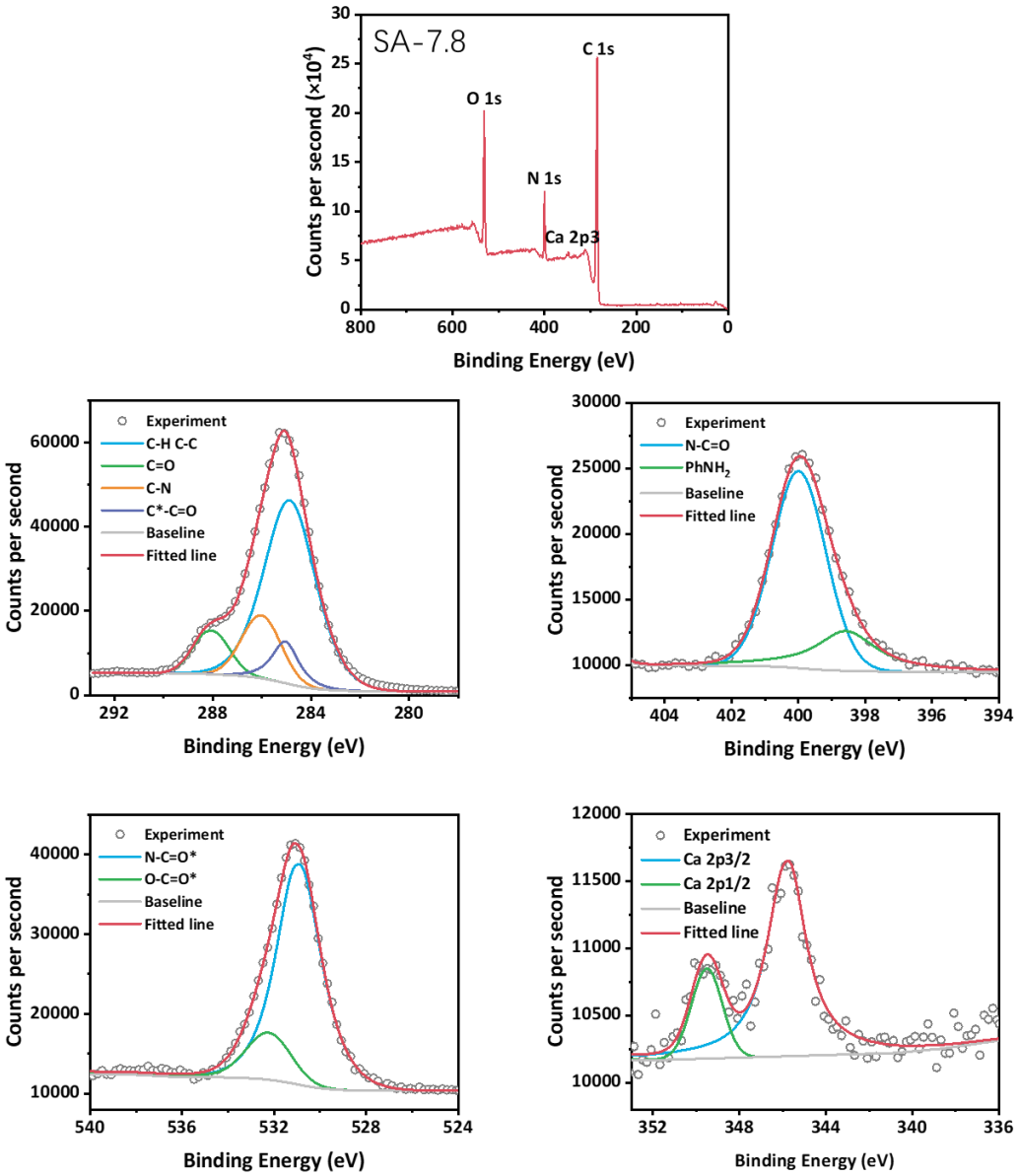

Figure S7. XPS full spectrum and the C, N, O, Ca peak fitting spectra of SA-7.8 membrane.

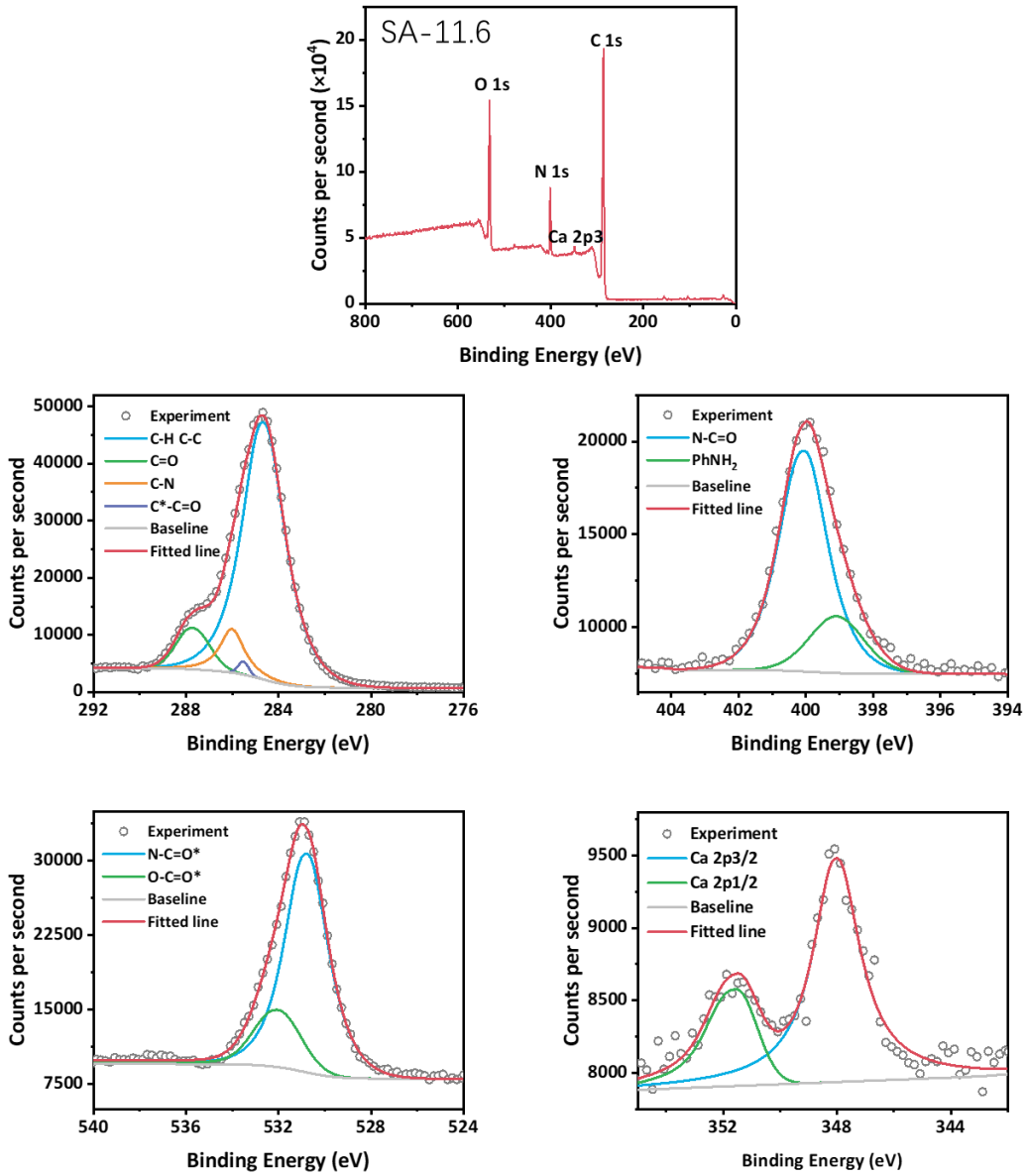

Figure S8. XPS full spectrum and the C, N, O, Ca peak fitting spectra of SA-11.6 membrane.

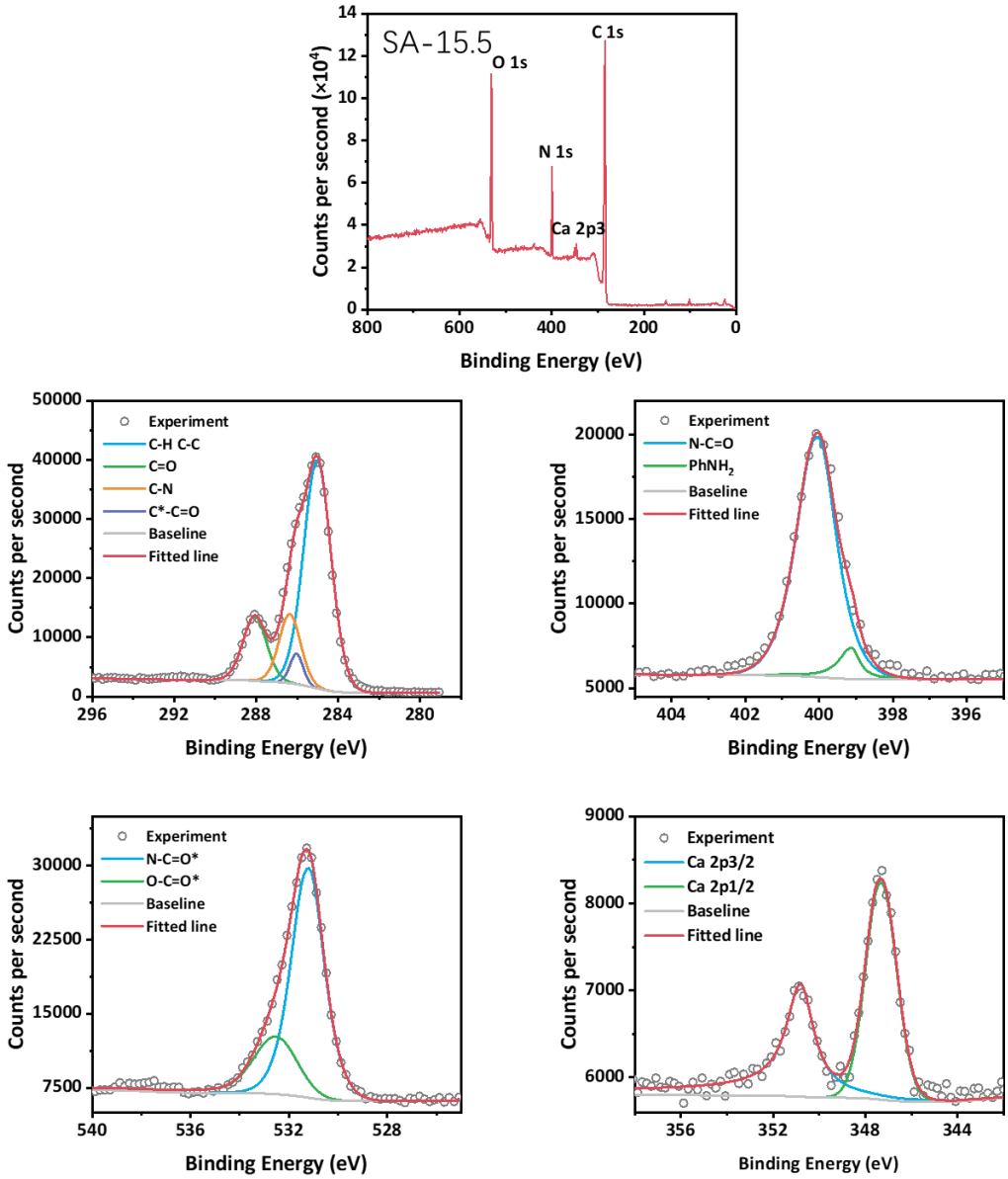

Figure S9. XPS full spectrum and the C, N, O, Ca peak fitting spectra of SA-15.5 membrane.

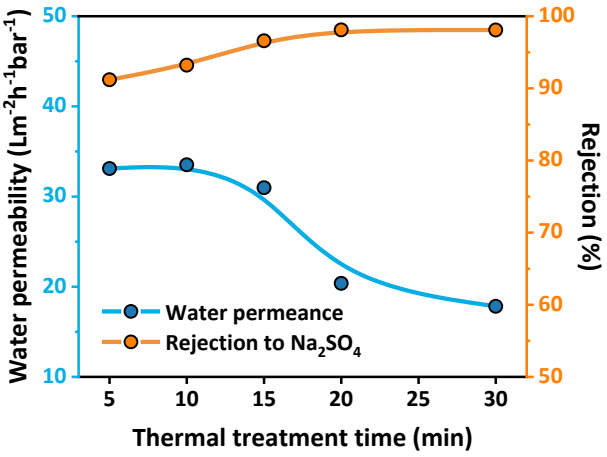

Figure S10. The influence of thermal treatment time on nanofiltration performance of SA-15.5