

Fabrication of thin film composite membranes on nano-zeolite modified support layer for tailored nanofiltration performance.

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SUPPLEMENTARY DATA

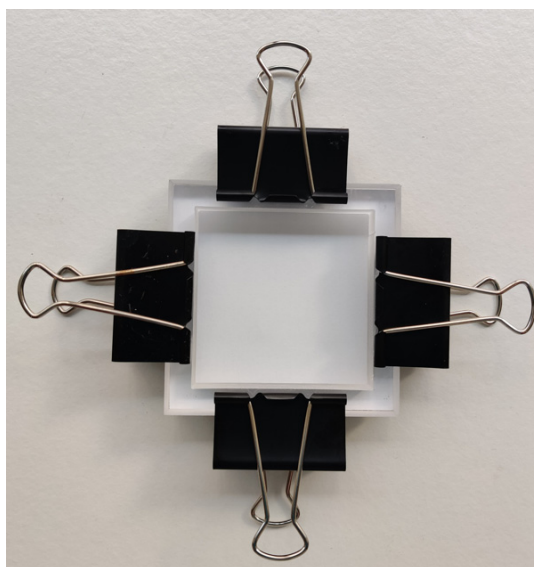


Figure S1: Custom-made plate and frame set-up for membrane fabrication through interfacial polymerization.

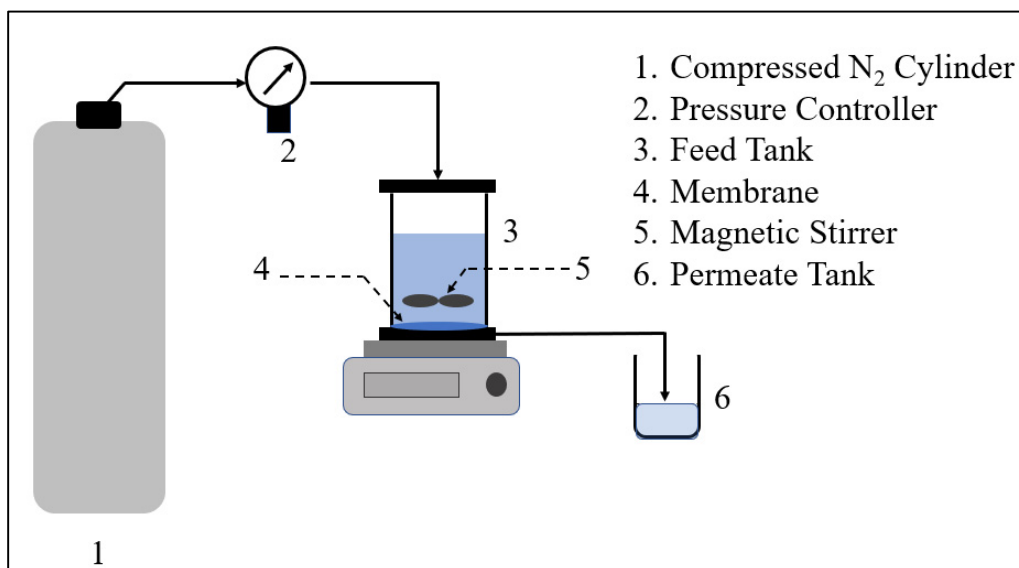


Figure S2: Schematic illustration of dead-end filtration system used for characterizing permeance of membrane supports and nanofiltration performance of PA membranes.

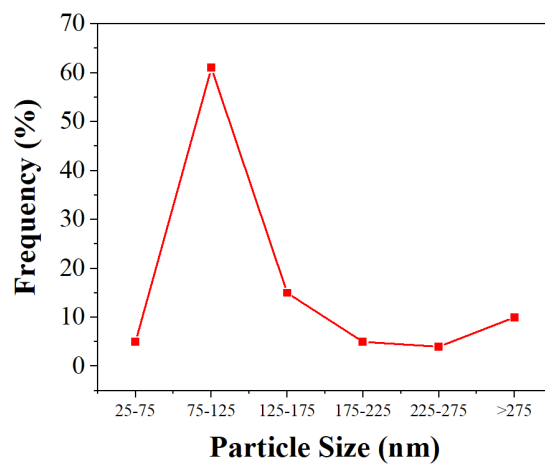


Figure S3: Particle size distribution of nanozeolites obtained after ball milling.

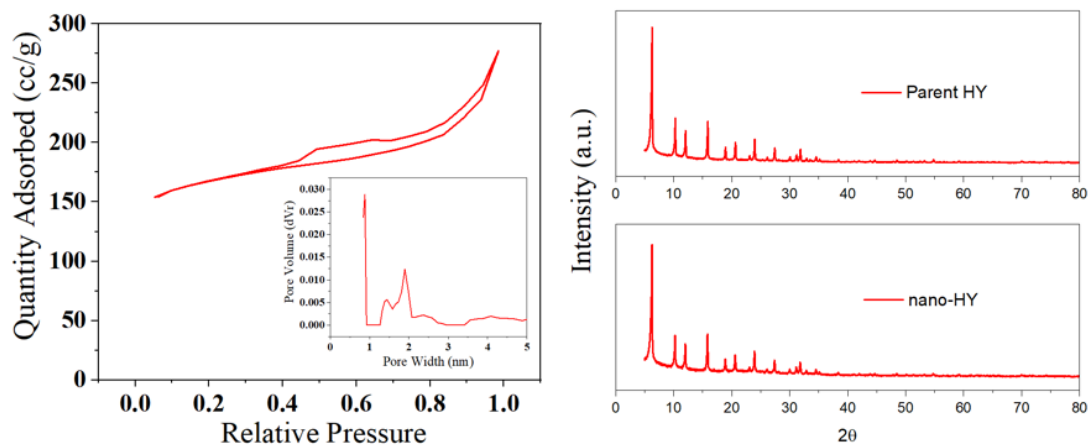


Figure S4: Left: Nitrogen adsorption isotherm and pores size distribution of nanozeolites. Right: Comparison of XRD patterns of nanozeolite and parent zeolite.

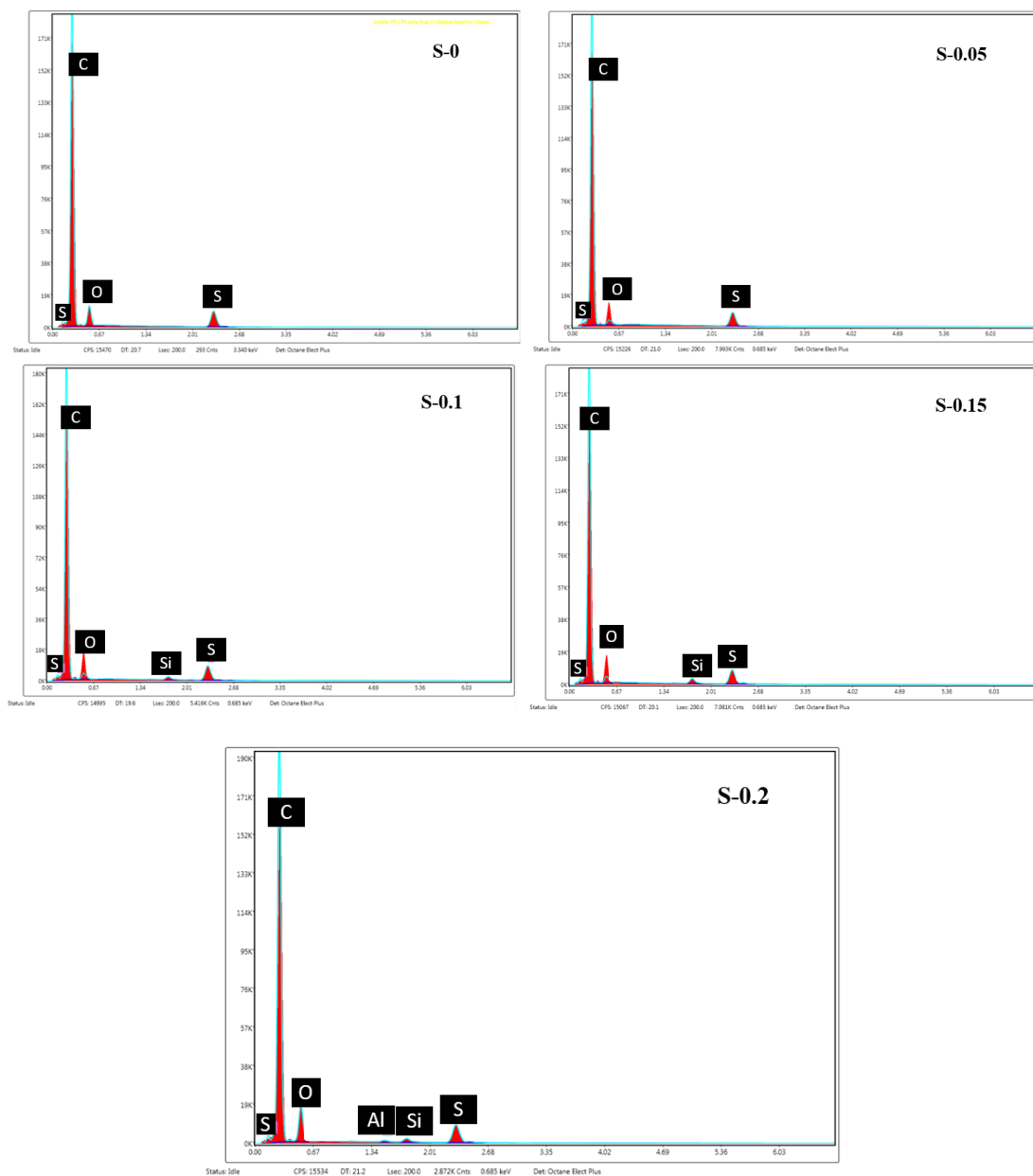


Figure S5: EDS spectrum of all the supports fabricated with varying nanozeolite concentrations.

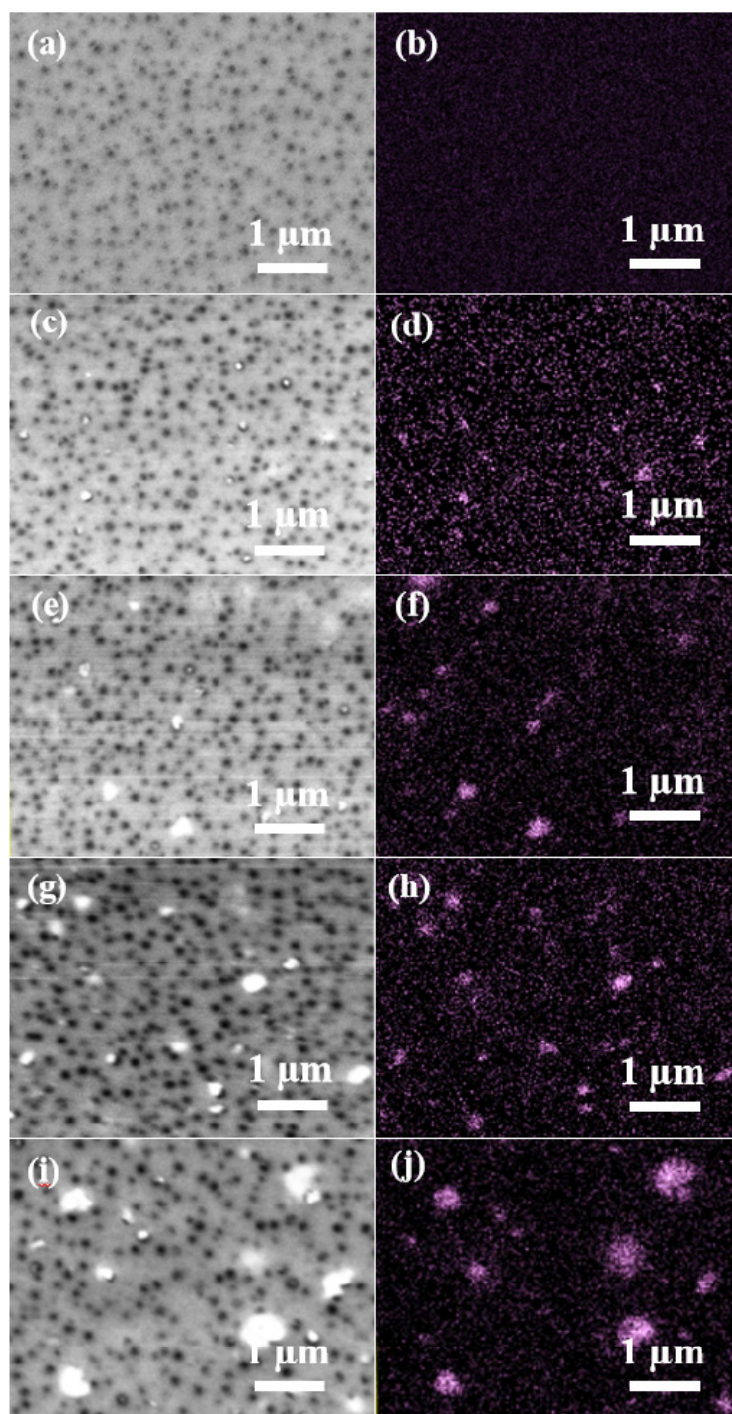


Figure S6: Elemental mapping of Si atom distribution on the surface of membrane supports prepared with varying nanozeolite concentration (a,b) S-0, (c,d) S-0.05, (e,f) S-0.1, (g,h) S-0.15 and (i,j) S-0.2

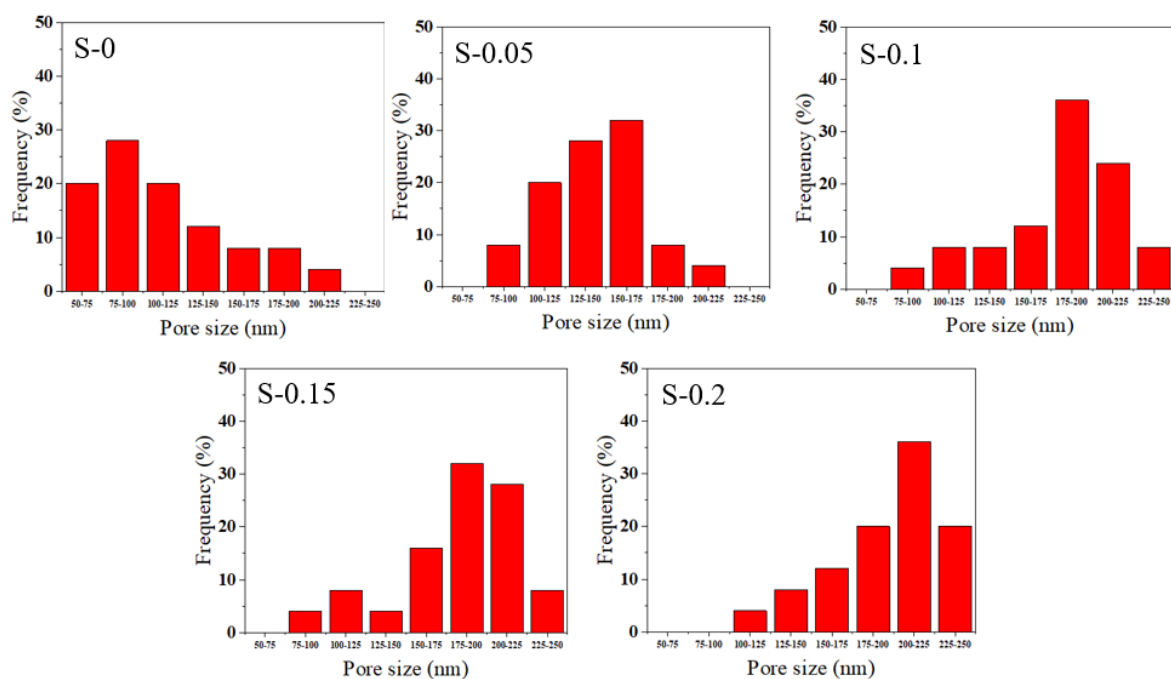


Figure S7: Pores size distribution of membrane supports as observed from SEM images.

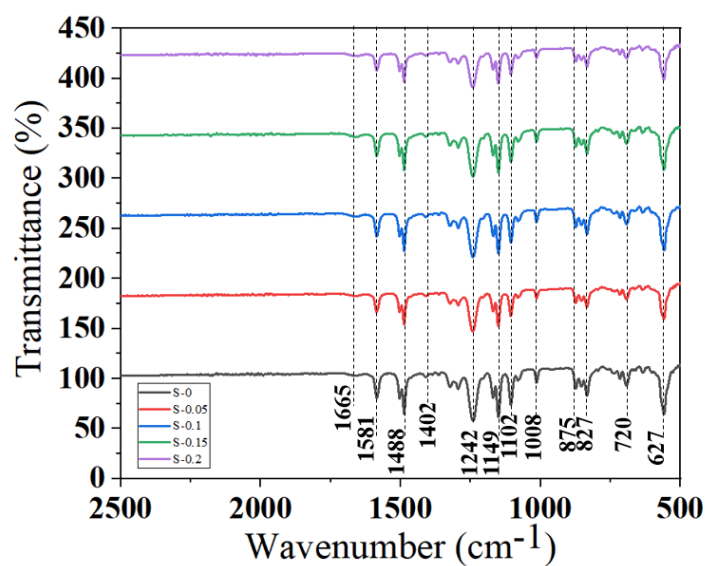


Figure S8: FTIR spectra of all membrane supports.

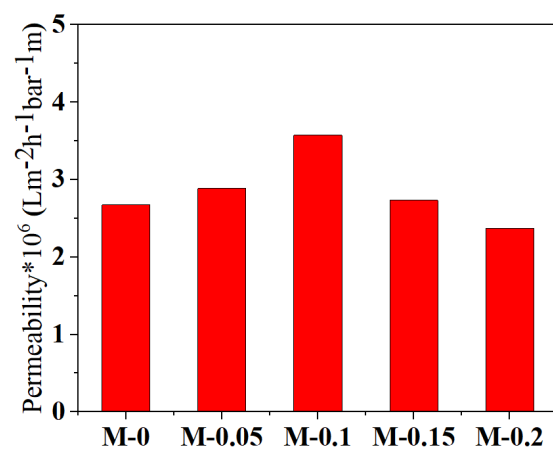


Figure S9: Permeabilities of different PA membranes.

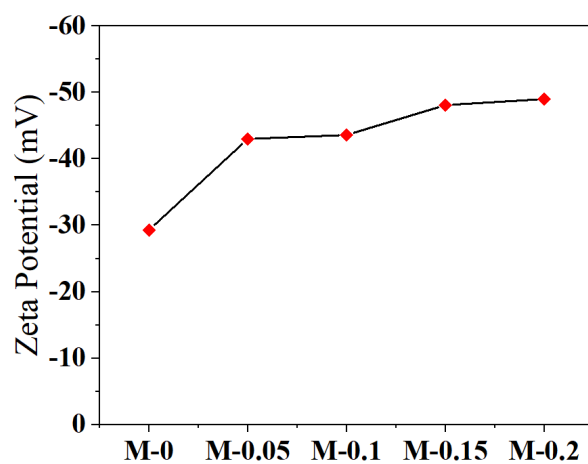


Figure S10: Zeta potential of PA membranes at neutral pH.