

Supporting Information

For

Microwave Synthesis of High-flux NaY Zeolite Membranes in Fluoride

Media

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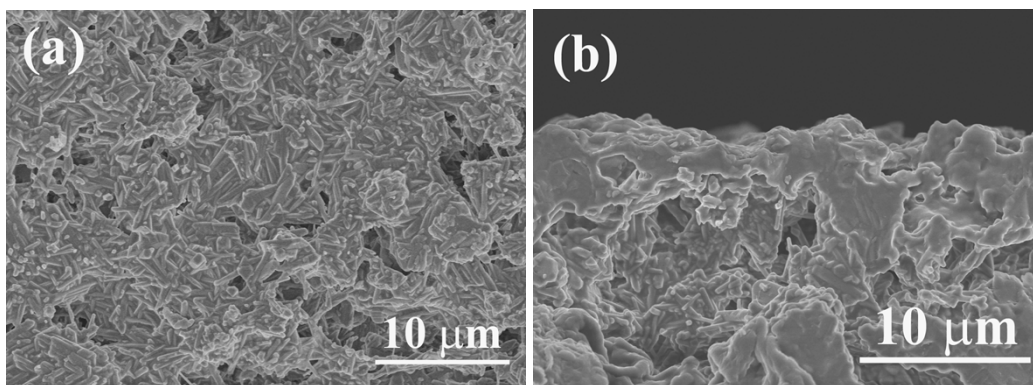


Fig. S1 SEM images of (a) surface and (b) cross section of the mullite support.

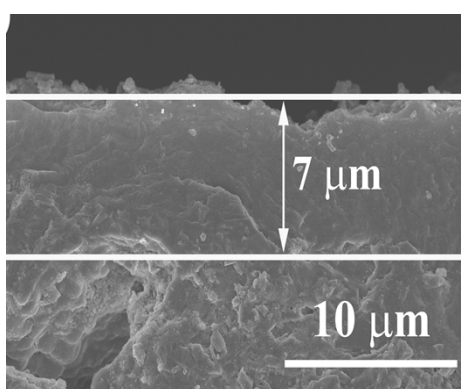


Fig. S2 Cross-sectional SEM images of NaY zeolite membrane prepared for 7 h.

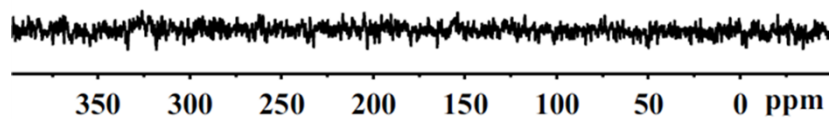


Fig. S3 ¹⁹F MAS NMR spectra of NaY crystals collected from MH membranes in fluoride media.

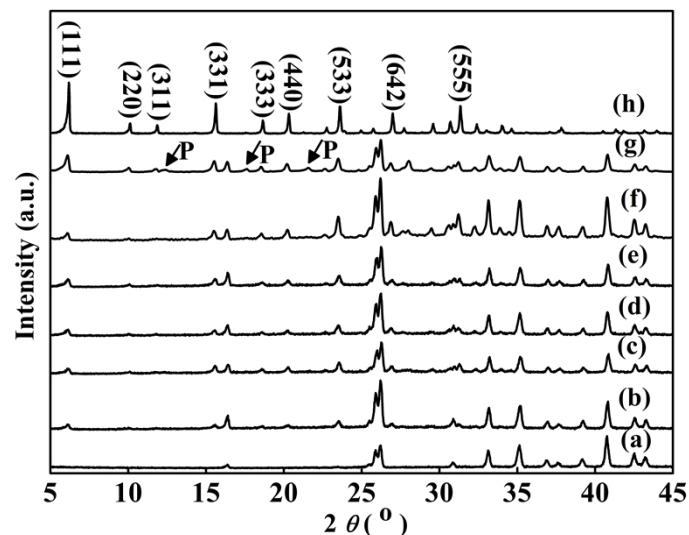


Fig. S4 XRD patterns of (a) mullite support and zeolite membranes prepared by microwave heating at 373 K for (b) 3.5 h, (c) 4.5 h, (d) 5.5 h, (e) 6.5 h, (f) 8 h and (g) 9 h and (h) NaY zeolite powder.

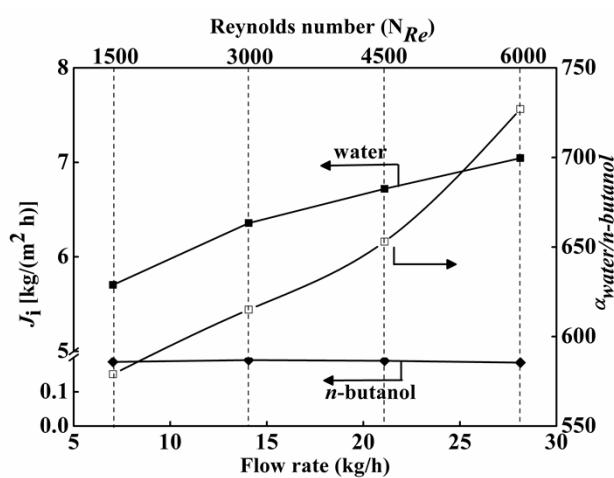


Fig. S5 VP performance of MH membrane (M4) as a function of the feed flow rate for 95 wt.% *n*-butanol aqueous solution at 383 K. Closed keys: the partial flux of water or alcohol; open keys: the water/alcohol separation factor.