

# A Facile and Scalable Fabrication Method of Thin Film Composite Reverse Osmosis Membranes: *Dual-Layer Slot Coating*

Sung-Joon Park,<sup>a,‡</sup> Won-Gi Ahn,<sup>a,‡</sup> Wansuk Choi,<sup>a</sup> Sang-Hee Park,<sup>a</sup> Jong Suk Lee,<sup>b</sup> Hyun Wook Jung,<sup>a,\*</sup> and Jung-Hyun Lee<sup>a,\*</sup>

<sup>a</sup>Department of Chemical and Biological Engineering, Korea University, 5-1 Anam-dong, Seongbuk-gu, Seoul 136-713, Republic of Korea, \*E-mail: [leejhyy@korea.ac.kr](mailto:leejhyy@korea.ac.kr); [hwjung@grtrkr.korea.ac.kr](mailto:hwjung@grtrkr.korea.ac.kr)

<sup>b</sup>Department of Chemical and Biomolecular Engineering, Sogang University, Sinsu-dong, Mapo-gu, Seoul 121-742, Republic of Korea.

SUPPORTING INFORMATION

**Table S1.** Water contact angle ( $^{\circ}$ ) and surface roughness (*rms*, nm) of the IP membranes (prepared on the PAN and HPAN supports) and the DSC membrane (prepared on the HPAN support) as a function of MPD concentrations.

Membrane	Properties	MPD concentration (wt.%)			
		2.0	0.1	0.05	0.025
IP (on PAN)	Water contact angle	71.8 $\pm$ 1.9	70.8 $\pm$ 1.7	71.3 $\pm$ 1.4	70.4 $\pm$ 1.4
	surface roughness	26.8 $\pm$ 6.7	21.2 $\pm$ 7.0	18.1 $\pm$ 5.5	14.8 $\pm$ 5.2
IP (on HPAN)	Water contact angle	70.3 $\pm$ 1.3	70.5 $\pm$ 1.8	69.9 $\pm$ 1.6	70.1 $\pm$ 1.2
	surface roughness	26.9 $\pm$ 9.5	25.1 $\pm$ 7.2	22.5 $\pm$ 6.6	21.8 $\pm$ 6.9
DSC (on HPAN)	Water contact angle	65.8 $\pm$ 1.2	66.1 $\pm$ 1.5	65.7 $\pm$ 1.7	65.0 $\pm$ 1.5
	surface roughness	9.3 $\pm$ 1.1	5.2 $\pm$ 0.7	3.5 $\pm$ 0.6	1.4 $\pm$ 0.2