Electronic Supplementary Material (ESI) for RSC Advances.

Supplemental Information

Graphene Oxide Layer as Acid-Resisting Barrier Deposited on Zeolite LTA Membrane for Dehydration of Acetic Acid

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Fig. S1.

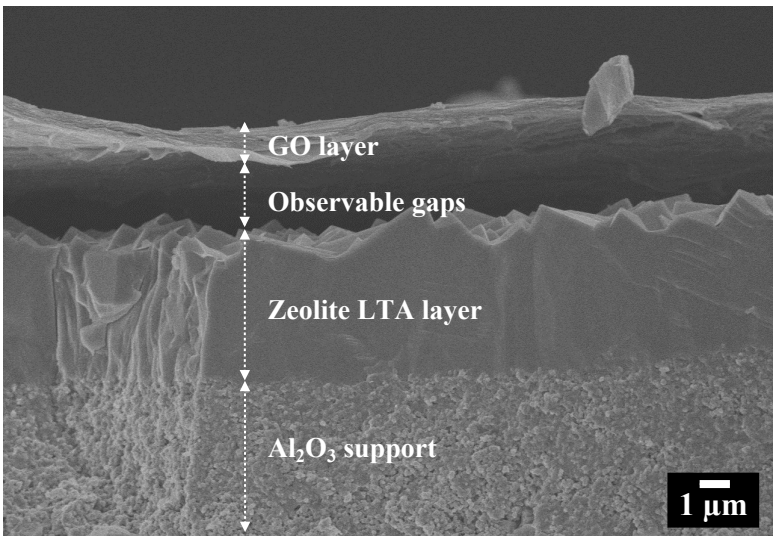

Fig. S1. Cross-section FESEM image of the LTA@GO membrane when GO layer was prepared on PDA-free zeolite LTA bottom layer.

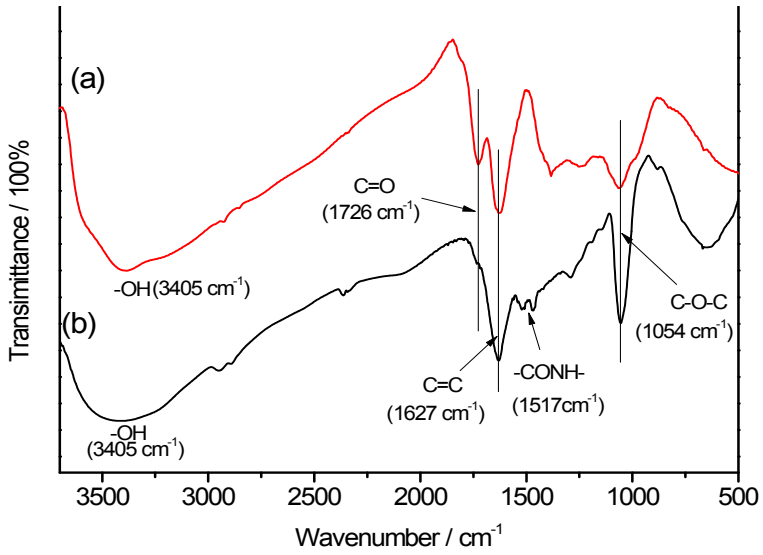

Fig. S2. FT-IR spectra of the GO (a) and (b) PDA-modified GO powders.

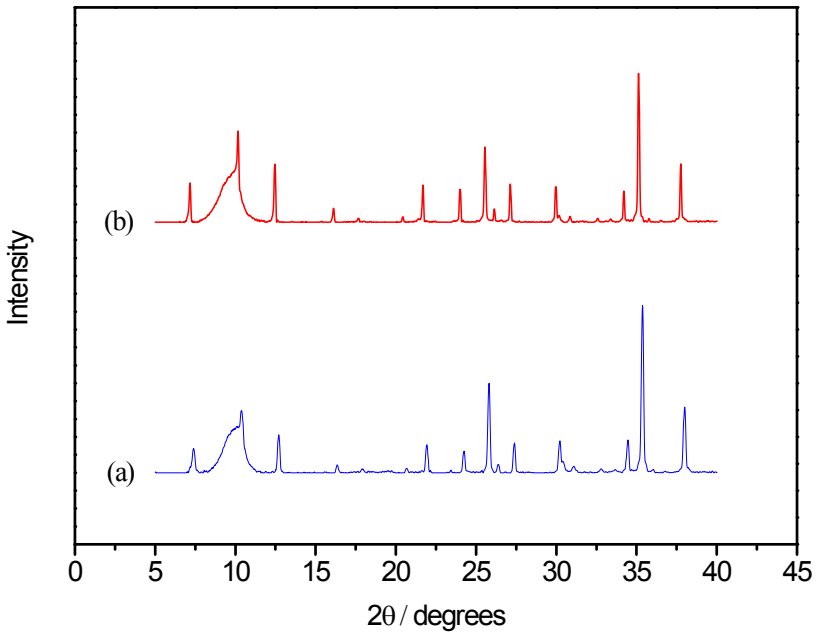

Fig. S3. XRD patterns of the LTA@GO composite membrane before (a) and after (b) the separation of 95 wt% acetic acid/water mixture by pervaporation for 168 h at 333 K.

Table S1. Comparisons of the pervaporation properties of the developed LTA@GO membrane in this study with literature data for Acetic acid/water separation

Membrane	HAc/H_2O (wt%)	Temperature (K)	Separation factor	Flux ($kg \cdot m^{-2} \cdot h^{-1}$)	Reference
MOR	90/10	80	50	<0.05	[1]
	50/50	80	299	0.614	
Ge-ZSM-5	5/95	90	14	0.43	[2]
ZSM-5	90/10	75	165	0.25	[3]
MOR/ZSM-5 hybrid membranes	40/50	80	150	5.6	[4]
	70/30	80	290	3.2	
	90/10	80	230	0.8	
MOR	90/10	75	2300	0.44	[5]
MOR	50/50	60	640	0.89	[6]
MOR	90/10	75	400	0.067	[7]
ZSM-5	90/10	75	720	0.42	
MOR	90/10	100	158	0.133	[8]
ZSM-5	75~96.5	80	∞	1.1~2.67	[9]
T	50/50	75	182	1.46	[10]
LTA@GO	95/5	60	~400	~1.5	This work

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