

## Supplementary materials for

# **Scaling-up CO<sub>2</sub>-selective Graphene Oxide Membranes via Sequential Coating with Gelated Graphene Oxide and Polyethyleneimine for CO<sub>2</sub> Separation**

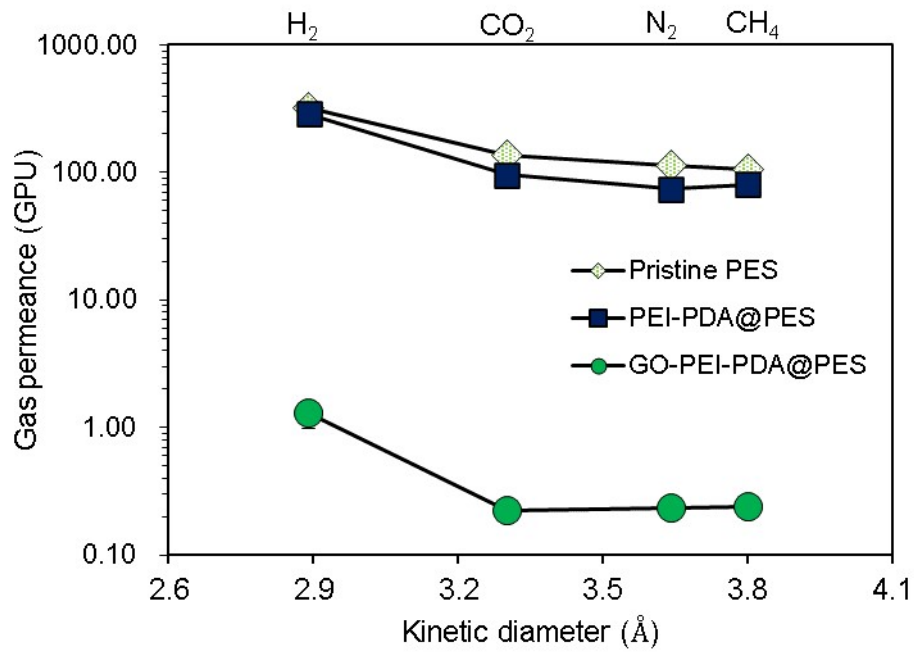
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This file includes:

Fig. S1

Table S1



**Fig. S1.** Gas permeance of Pristine PES and modified membranes.

**Table S1.** The raw data of permeability and selectivity of membranes.

Membrane	Conditions		P <sub>H2</sub>	P <sub>CO2</sub>	P <sub>N2</sub>	P <sub>CH4</sub>	S <sub>CO2/H2</sub>	S <sub>CO2/CH4</sub>	S <sub>CO2/N2</sub>
PES	Dry	Average	319.72	135.40	112.43	104.62			
		Standard deviation	11.19	13.70	10.54	19.48			
PEI-PDA@PES	Dry	Average	289.12	95.40	74.48	80.54			
		Standard deviation	18.89	14.60	13.03	9.01			
	Wet	Average	7.40	6.08	3.68	3.78	0.79	1.59	1.63
		Standard deviation	0.27	0.40	0.28	0.29	0.03	0.04	0.04
GO-PEI-PDA@PES	Dry	Average	1.29	0.22	0.23	0.24			
		Standard deviation	0.30	0.02	0.04	0.01			
	Wet	Average	1.36	3.80	0.13	0.22	2.94	22.26	41.06
		Standard deviation	0.30	0.02	0.04	0.01	0.18	2.79	4.94
PEI-GO-PEI-PDA@PES	Dry	Average	62.56	10.86	14.28	14.15			
		Standard deviation	2.01	0.41	0.66	1.90			
	Wet	Average	0.59	2.30	0.04	0.08	3.91	29.58	54.25
		Standard deviation	0.08	0.25	0.01	0.00	0.70	4.82	10.81