**Supporting Information**

# Scalable Synthesis of Nanoporous Atomically Thin Graphene Membranes for Dialysis and Molecular Separations via Facile Isopropanol-Assisted Hot Lamination

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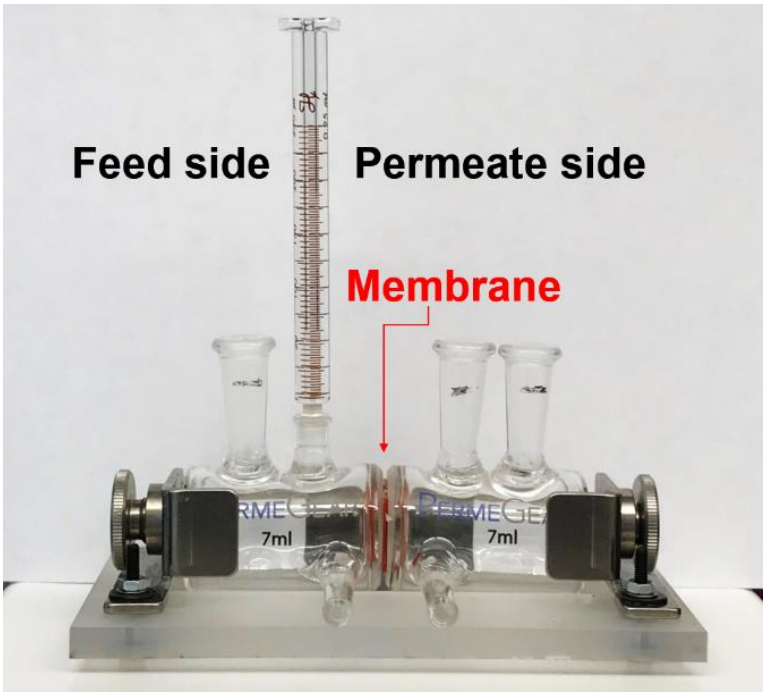


**Figure S1.** Experimental setup used to measure pressure-driven and diffusion-driven transport across the synthesized graphene NATMs.

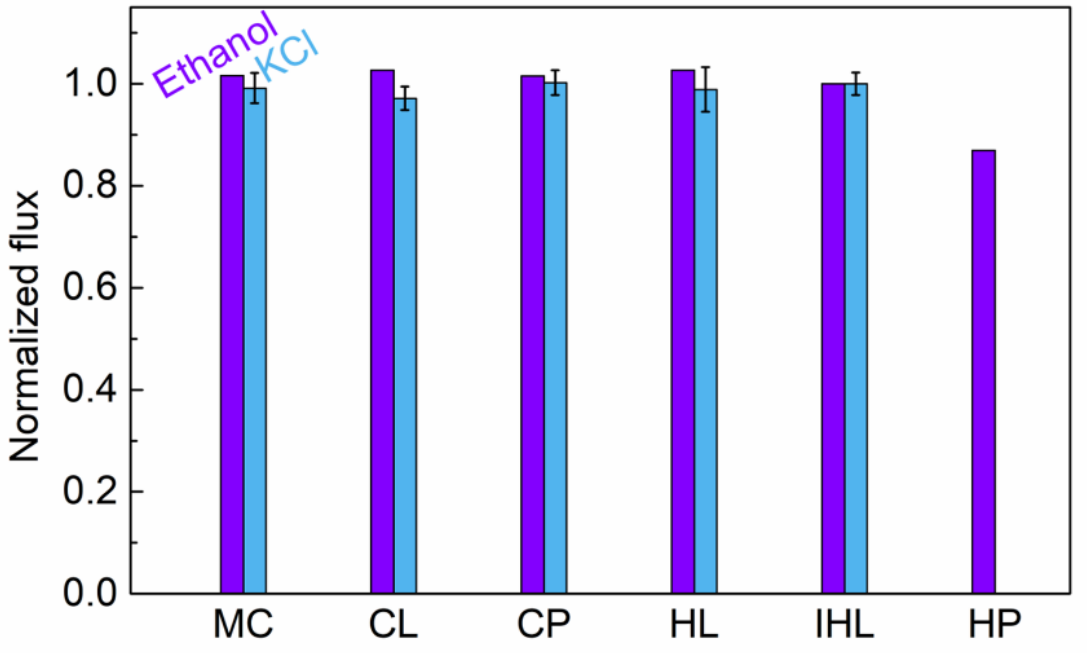


**Figure S2.** Pressure-driven flow using ethanol and diffusion-driven flow with KCl across PCTE supports after manual compression (MC), cold lamination (CL), cold press (CP), hot lamination (HL), IPA-assisted hot lamination (IHL) and hot press (HP) normalized with respect to bare untreated PCTE. Error bars indicate one standard deviation.

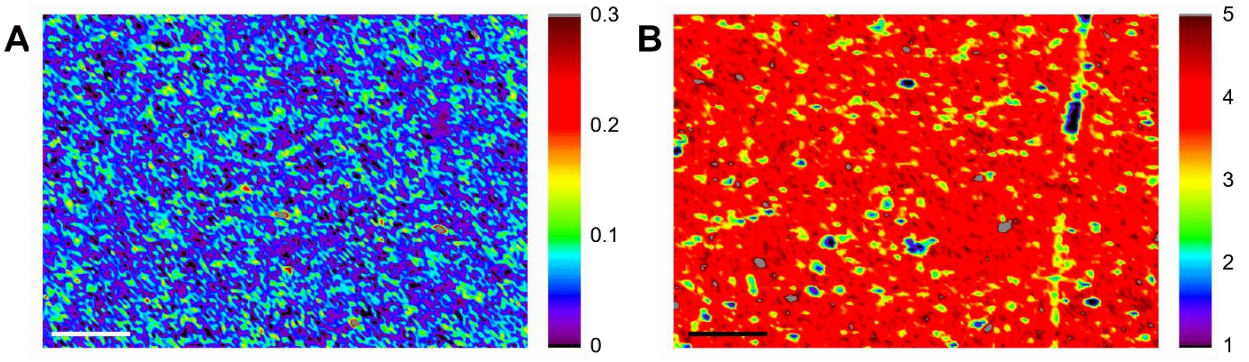


**Figure S3.** Raman maps A) $I_D/I_G$ and B) $I_{2D}/I_G$ ratios for graphene after water-assisted oxidation via immersion in water at 90 °C for 48 hours. Scale bare is 50 μm.

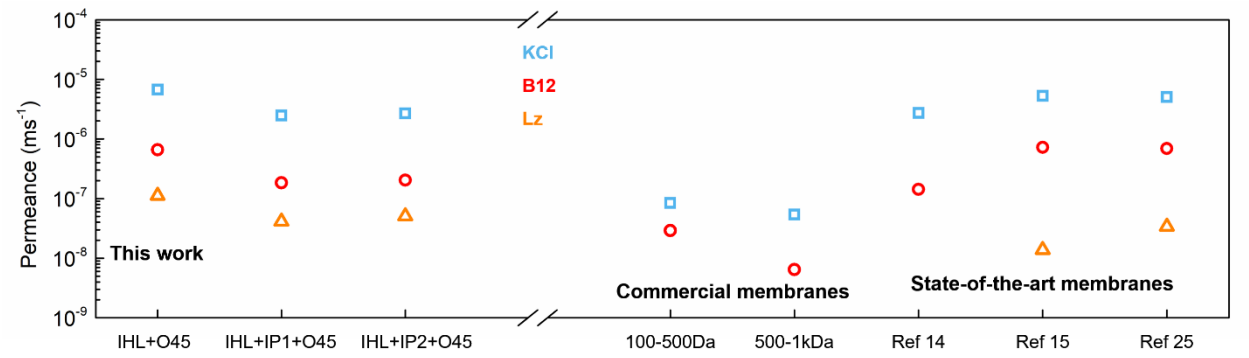


**Figure S4.** Diffusive permeance of the fabricated NATMs compared with commercially available dialysis membranes (100-500Da and 500-1000Da) and prior work on NATMs (taken from Ref. 14, Ref. 15, and Ref. 25) for KCl, B12 and Lz. Note all the solute permeance data are directly measured values and have not been adjusted for support porosity ~10%.