Supplementary Information

In situ Confinement of Free Linkers within a Stable MOF Membrane for Highly Gas Separation Properties

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Fig. S1 TGA analysis of $[Ni_2(L-asp)_2(bpe)] \cdot (G)$ crystals scraped from the membrane after 5 hours activating treatment at 150 °C.



Fig. S2 (a, b) Large scale optic micrographs of the $[Ni_2(L-asp)_2(bpe)] \cdot (G)$ seed layer on nickel mesh. (c, d) Large scale top-view SEM images of the $[Ni_2(L-asp)_2(bpe)] \cdot (G)$ membrane.



Fig. S3 Gas sorption isotherms of the $[Ni_2(L-asp)_2(bpe)] \cdot (G)$ crystals scraped from the membrane at 298 K.