

CO₂/CH₄ SEPARATION PERFORMANCE OF MIXED-MATRIX MEMBRANES BASED ON MOF 808/POLYAMIDE

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Semi fluorinated aromatic polyamide (PY PA) based Mixed-Matrix Membranes (MMMs) using MOF-808 as filler were prepared. MOF-808 incorporated at 5%, 10%, and 15% weight percent of loading in polyamide matrix. MMMs were explored for single gas separation (CH₄, N₂, O₂ and CO₂) performances. Permeability-selectivity trade-off of polymer has been overcome with incorporation of MOF-808 filler. The MOF-808 is incorporated into the polyamide matrix membrane as a result membranes exhibits a significantly higher CO₂ permeability (91 bar) and CO₂/CH₄ selectivity (44).
