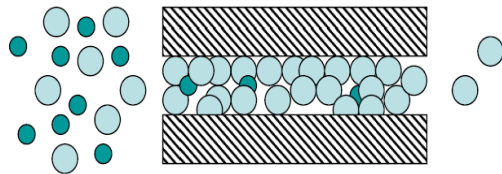
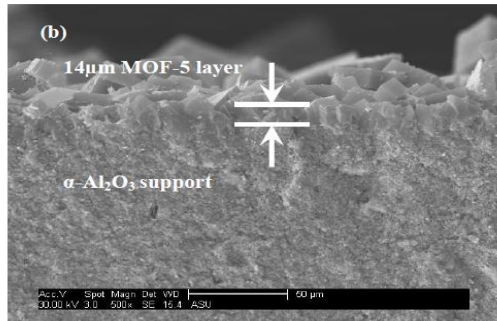
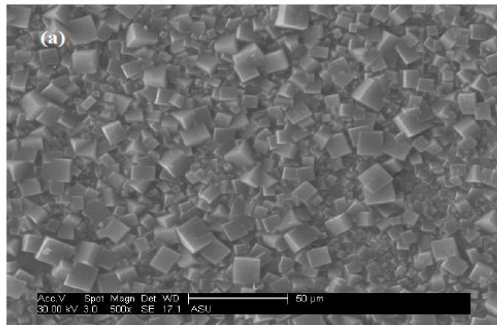


Synthesis and High Pressure Gas Separation Properties of Thin Metal-Organic Framework Membranes

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MOF-5 Membranes: Defect-free, high quality, thin MOF-5 membranes are prepared by the secondary growth method. The membrane shows desired crystal structure and good mechanical integrity. The absence of the intercrystalline defects is confirmed by the molecular probing method.

The MOF-5 membranes are perm-selective for carbon dioxide over nitrogen due to preferential adsorption of carbon dioxide over nitrogen. The selectivity increases with feed pressure – a previously unobserved phenomenon, but highly desirable for separation applications

