

Figure 1: Plot of normalized N_2 permeance (-) vs. kelvin radius (nm) for a 450 MLD cycles alumina support. It is deduced from the plot of normalized N_2 permeance (-) vs. p/p_s (-) using Kelvin equation. A 10 nm TiO_2 ALD/MLD from $TiCl_4$ and ethylene glycol (ethane-1,2-diol) layer acting as an intermediate layer is used to prepare the membrane with small nanopore size and uniform pore size distribution.

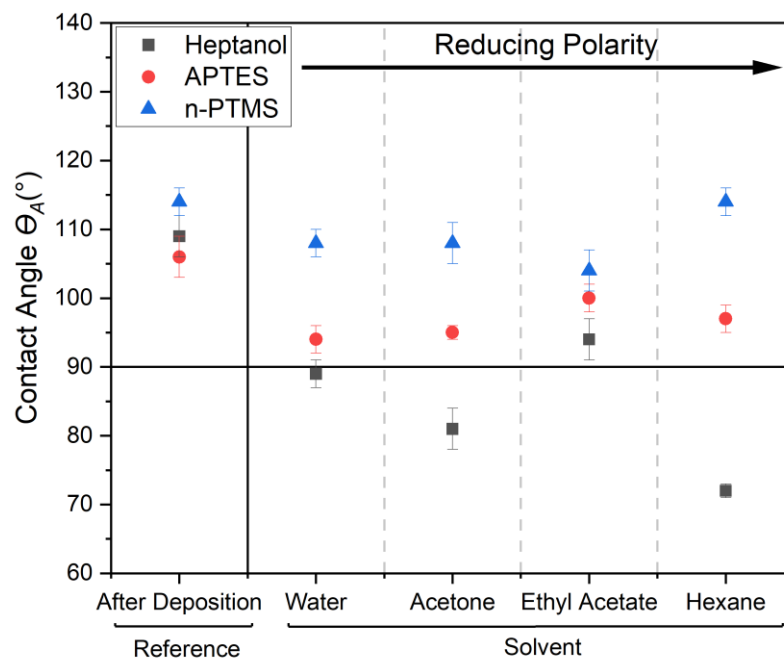


Figure 2: Plot of contact angle results obtained after deposition and putting in different solvents for different organic co-reactants, being heptanol, 3-aminopropyltriethoxysilane (APTES), and n-phenyltrimethoxy-silane (n-PTMS). It highlights the effect of solvents on the modified surface layer. A reference line is drawn at 90° .