

### Highly permeable asymmetric polybenzoxazole membranes using phase separation phenomena

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Highly permeable polybenzoxazole (PBO) hollow fiber membrane, which comes from hydroxyl - containing poly(amic acid) as a precursor, is made by phase separation phenomena. Phase separation phenomena makes 2 kind of layers, dense and porous layer. Porous layer as membrane supporter has cavities like finger and dense layers play important role in hollow fiber membranes since that has selectively permeable layer by fractional free volume which has intrinsic polymer factor to transport gases. polybenzoxazole synthesized ortho-functional polyimide from 4,4'-hexafluoroisopropylidene diphthalic anhydrides and 2,2'-bis(3-amino-4-hydroxyphenyl) hexafluoropropane. We checked polymer morphology by scanning electron microscope (S.E.M) and percent of thermal rearrangement by Thermogravimetric Analysis (T.G.A).