

论文

## 聚乙二醇对聚醚砜微孔膜致孔作用的研究

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**摘要** 以聚醚砜聚乙二醇溶剂为铸膜液体系、采用干湿相转化法制备微孔滤膜,研究了各种制膜条件对膜孔径结构的影响.实验发现聚乙二醇在体系中起到分散稳定的作用,只有到浓度大于70%时,才会对铸膜液的粘度产生明显影响,聚合物在铸膜液中的溶解状态也随之改变,进而影响膜的结构.不同溶剂NMP、DMF、DMAc、DMSO等极性溶剂或固体溶剂己内酰胺均可制得开孔率较高的微孔膜,但对膜的结构和性能影响差别不大.在本研究体系中,膜的结构取决于聚乙二醇、溶剂的浓度比例关系.

**关键词** [聚乙二醇](#) [聚醚砜](#) [微孔滤膜](#)

分类号

## EFFECTS OF PEG ON PORE FORMATION OF POLYETHER SULFONE MICROPOROUS MEMBRANES

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**Abstract** Polyethersulfone (PES) microfiltration membranes can be produced from PES/polyethylene glycol(PEG)/solvent systems by dry/wet phase inversion process. Some factors influencing pore size of microfiltration membranes are discussed including kinds of solvent and the concentration of PEG and PES. The results indicated that the surface morphology and properties of microporous membranes were determined by the concentration of PEG and PES. and the kind of solvent had little influence on the morphology of the membrane. In such casting solutions an increase of PEG concentration from 70% to 80% (by weight) increased the viscosity of the solution significantly. It also changed the size of polymer aggregates and the demixing rate of the casting solution in air and in water, therefore PES membranes having different morphologies were obtained. By adjusting the concentration of PES and PEG, microfiltration membranes with various average pore size can be produced.

**Key words** [PEG](#) [Polyethersulfone](#) [Microfiltration](#)

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