

عنوان مقاله:

Formation of iPP Microporous membranes via thermally induced phase separation: Effect of Polymer concentration on membrane morphology

محل انتشار:

یازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1393)

تعداد صفحات اصل مقاله: 2

نویسندگان:

Majid Pirali Hamedani - Iran Polymer and Petrochemical Institute, P.O. Box 14965/115, Tehran, Iran

Seyed-Hassan Jafari - School of Chemical Engineering, College of Engineering, University of Tehran, P.O. Box: 11155-4563, Tehran, Iran

Ghasem Amoabediny - School of Chemical Engineering, College of Engineering, University of Tehran, P.O. Box: 11155-4563, Tehran, Iran

Mohammad Karimi - Department of Textile Engineering, Amirkabir University of Technology, Hafez Avenue, 15914 Tehran, Iran

خلاصه مقاله:

The effect of the polymer concentration on the morphology of the resulting microporous membrane was investigated for membrane formation via thermally induced phase separation (TIPS). Isotactic polypropylene (iPP) and diphenyl ether (DPE) were used as a polymer and diluent, respectively. The homogeneous polymer-diluent samples (20, 40 and 60 wt.% iPP) were prepared by previous method. An anisotropic membrane structure was obtained by evaporating the diluent from one side prior to phase separation. Morphology and pore size were analyzed by scanning electron microscopy (SEM). The SEM micrographs revealed that the morphology of the membrane changes from a typical bicontinuous structure to a cellular structure by increase of polymer concentration. Furthermore, the pore size becomes smaller when higher polymer concentration mixture is applied.

کلمات کلیدی:

Thermally induced phase separation, Isotactic polypropylene, Microporous membrane, Polymer concentration

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/579190>

