

عنوان مقاله:

A novel hydrophilized blended HDPE/EVA microporous flat sheet membranes via thermally induced phase separation (TIPS) method

محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

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خلاصه مقاله:

In this work, hydrophilic microporous flat sheet membranes were prepared using binary blended of high density polyethylene (HDPE) and ethylene vinyl acetate (EVA) via thermally induced phase separation (TIPS). Polyethylene and ethylene vinyl acetate were used as polymeric mixture and paraffin oil was used as diluent. Homogeneous polymer-diluent samples were prepared in three different ratios of EVA to HDPE, while the total polymer-diluent ratio was kept constant. The hot blended polymeric mixtures were cast over pre-heated flat glass at 180°C to fabricate flat plate polymeric membranes. The cast polymeric solution immersed in water bath containing water at 60°C. The fabricated HDPE/EVA blended membranes showed that with increasing the EVA ratio to HDPE, the water permeation as well as mechanical strength considerably increased.

کلمات کلیدی:

Thermally induced phase separation, microporous membranes, hydrophilic membranes, polyethylene, ethylene vinyl acetate

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