

عنوان مقاله:

A comparative study on the electrochemical and morphological characteristics of the homogeneous cation exchange membranes based on SPPO & PVC prepared through different methods

محل انتشار:

اولین همایش ملی تکنولوژی های نوین در شیمی و پتروشیمی (سال: 1393)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Homogeneous cation exchange membranes were prepared by evaporation and phase inversion methods using sulfonated poly (2,6-dimethyl-1,4-phenylene oxide) (SPPO) and polyvinylchloride (PVC) as binders. The effect of polymers blend ratio and preparation method on structure and electrochemical properties of the prepared membranes were evaluated. The microstructures of the membranes have been investigated by scanning electron microscopy (SEM). Also the Ion exchange capacity (IEC), areal resistance, water content and the mechanical strength of prepared membranes have been studied for this aim. The results indicate that water content and IEC are enhanced by increasing binder ratio (SPPO: PVC) in the casting solution for prepared membranes by both methods. The mechanical strength and electrical resistance of membranes were increased with decline in blending ratio of SPPO to PVC. The prepared membranes by evaporation method exhibited higher efficiency and suitable electrochemical properties in comparison with others

کلمات کلیدی:

Homogeneous, Evaporation, Phase inversion, SPPO, PVC

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