

عنوان مقاله:

Effect of Crosslink Density on the Characteristics of the Poly (Vinyl Alcohol)Membranes having Boromo Ethane Sulfonic Acid

محل انتشار:

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نویسندگان:

Sajede Shabanpanah - *Faculty of Chemistry, University of Mazandaran, P. O. Box ۴۵۳, Babolsar, Iran*

Abdollah Omrani - *Faculty of Chemistry, University of Mazandaran, P. O. Box ۴۵۳, Babolsar, Iran*

خلاصه مقاله:

In the present study, the hybrid crosslinked membranes of poly (vinyl alcohol)(PVA) comprising boromo ethane sulfonic acid were prepared. Crosslinking modifies PVA through its hydroxyl groups, as a result creates a series of applications for this material. for example, the crosslinking of PVA can leads to water-insoluble hydrophilic vinyl alcohol which have been used for a wide range of applications. The membranes were synthesized at various concentrations of the crosslinker under acidic conditions. Various concepts of the membranes performance like methanol permeability, proton and electrical conductivities were addressed. Results showed that the degree of crosslinking is decreased due to the reduction in available volume and compression of the membrane structure [1-2]. Also, the proton conductivity of the membranes decreased as the cross-link density increased. The X-ray diffraction patterns confirmed an extension in the amorphous character of the membranes by enlarging the crosslink density. The reaction between the – OH group of PVA and the –CHO group of GA may be responsible for the observed behavior (schem.1).

کلمات کلیدی:

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