

عنوان مقاله:

PVA-based Pervaporation Membranes for Separation of Water-Alcohol Solutions: A Review

محل انتشار:

مجله تحقیقات شیمی تجزیه و تجزیه زیستی، دوره 8، شماره 3 (سال: 1400)

تعداد صفحات اصل مقاله: 25

نویسندگان:

Zohreh Raeisi - *Department of Chemistry, Dehloran Branch, Islamic Azad University, Dehloran, Iran*

Laleh Hosseinzadeh - *Department of Chemistry, Dehloran Branch, Islamic Azad University, Dehloran, Iran*

Ahmad Moheb - *Department of Chemical Engineering, Isfahan University of Technology, Isfahan ۸۴۱۵۶۸۳۱۱۱, Iran*

Morteza Sadeghi - *Department of Chemical Engineering, Isfahan University of Technology, Isfahan ۸۴۱۵۶۸۳۱۱۱, Iran*

خلاصه مقاله:

Dehydration of alcohols has attracted a great deal of attention owing to its wide application in several medical, pharmaceutical and chemical industries. High separation efficiency, low energy consumption, simplicity and minimum contamination are the main characteristics which make pervaporation (PV) a promising method in the area of alcohol dehydration to provide extremely pure alcohols. Due to their permselectivity and high processability, polymers are the main materials for PV membranes. For this purpose, poly(vinyl alcohol) (PVA) is the most commonly used polymer because of its desired hydrophilicity, flexibility, good film-forming ability and low cost. However, excessive swelling is the main challenge in fabrication of PVA membranes for dehydration application; to overcome this disadvantage, various attempts have been made to modify PVA membranes for separation of water and alcohols. In this paper, various modifications and developments that have been made to improve the PV performance of PVA-based membranes for separation of water and alcohols have been reviewed.

کلمات کلیدی:

Separation, Alcohols, Poly(vinyl alcohol), Membrane, dehydration

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1598203>

