

عنوان مقاله:

The effect of plasticization for CO₂ separation polymeric membranes

محل انتشار:

چهارمین کنفرانس بین المللی نوآوری های اخیر در شیمی و مهندسی شیمی (سال: 1396)

تعداد صفحات اصل مقاله: 6

نویسندگان:

S Bandehali - *Department of Chemical Engineering, Faculty of Engineering, Arak University, Arak*

A.R Moghadassi - *Department of Chemical Engineering, Faculty of Engineering, Arak University, Arak*

H Sanaeepur - *Department of Chemical Engineering, Faculty of Engineering, Arak University, Arak*

F Parvizian - *Department of Chemical Engineering, Faculty of Engineering, Arak University, Arak*

خلاصه مقاله:

CO₂ capture is attracting the broad attention of both science and technology. Membrane separation of CO₂ from natural gas components and gas transport properties is known to be more efficient at high feed gas pressure. However, one of the main challenges of high pressure operations is penetrant - induced plasticization phenomenon. Hence, it is equally important to ensure that membranes are physically durable and resistant to both chemical attack and plasticization, while still being flexible enough for manufacture into various membrane types. There are some strategies to overcome the problem plasticization for gas separation in polymeric membranes, specially, to CO₂ separation, such as crosslinking polymer, polymer blending and polymer grafting, Polymer Sulfonation and Thermal Rearrangement. In this topic, these strategies be explained to decrease plasticization and Cross-linking and thermal treatment be determined as the best methods to overcome plasticization due to be simple and economical.

کلمات کلیدی:

membrane gas separation, plasticization, polymeric membrane

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/675728>

