

Author's Accepted Manuscript

Influence of the porous support on diffusion in composite membranes

J.G. Wijmans, Pingjiao Hao



PII: S0376-7388(15)30075-2
DOI: <http://dx.doi.org/10.1016/j.memsci.2015.07.047>
Reference: MEMSCI13866

To appear in: *Journal of Membrane Science*

Received date: 5 May 2015
Revised date: 14 July 2015
Accepted date: 22 July 2015

Cite this article as: J.G. Wijmans and Pingjiao Hao, Influence of the porous support on diffusion in composite membranes, *Journal of Membrane Science* <http://dx.doi.org/10.1016/j.memsci.2015.07.047>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Influence of the porous support on diffusion in composite membranes

J.G. Wijmans*, Pingjiao Hao

Membrane Technology and Research, Inc., 39630 Eureka Drive, Newark, CA 94560, USA

Presented in part at the ICOM 2014 meeting in Suzhou, China in the session honoring

Professor Shin-ichi Nakao.

*Corresponding author. Tel.: +1-650-543-3379.

Email addresses: hans.wijmans@mtrinc.com (J.G. Wijmans)

pingjiao.hao@mtrinc.com (P. Hao)

Highlights

- Simulated diffusion in composite membranes using CFD
- The support material is assumed to be impermeable: molecules only pass through the support via the pores
- Developed a correlation for the effect of the porous support on diffusion in a single layer on top of the support
- Investigated the effect of a gutter layer on composite membrane performance

Download English Version:

<https://daneshyari.com/en/article/7020912>

Download Persian Version:

<https://daneshyari.com/article/7020912>

[Daneshyari.com](https://daneshyari.com)