

## Author's Accepted Manuscript

Using green solvent, triethyl phosphate (TEP), to fabricate highly porous PVDF hollow fiber membranes for membrane distillation

Jian Chang, Jian Zuo, Liling Zhang, Gregory S. O'Brien, Tai-Shung Chung



PII: S0376-7388(17)30813-X  
DOI: <http://dx.doi.org/10.1016/j.memsci.2017.06.002>  
Reference: MEMSCI15314

To appear in: *Journal of Membrane Science*

Received date: 21 March 2017  
Revised date: 2 June 2017  
Accepted date: 3 June 2017

Cite this article as: Jian Chang, Jian Zuo, Liling Zhang, Gregory S. O'Brien and Tai-Shung Chung, Using green solvent, triethyl phosphate (TEP), to fabricate highly porous PVDF hollow fiber membranes for membrane distillation, *Journal of Membrane Science*, <http://dx.doi.org/10.1016/j.memsci.2017.06.002>

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.

**Using green solvent, triethyl phosphate (TEP), to fabricate highly porous PVDF hollow fiber membranes for membrane distillation**

Jian Chang<sup>a</sup>, Jian Zuo<sup>a,b</sup>, Liling Zhang<sup>c</sup>, Gregory S. O'Brien<sup>d</sup>, Tai-Shung Chung<sup>a,\*</sup>,

<sup>a</sup>Department of Chemical & Biomolecular Engineering, National University of Singapore, 4  
Engineering Drive 4, Singapore 117585

<sup>b</sup>Chemical Engineering and Food Technology, Singapore Institute of Technology, 20 Dover  
Drive, Singapore 138682

<sup>c</sup>Institute of High Performance Computing, 1 Fusionopolis Way, Connexis, Singapore  
138632

<sup>d</sup>Kynar Industrial Products R&D, Arkema Inc., 900 First Avenue, King of Prussia,  
Pennsylvania 19406

\*Corresponding author. Tel.: 65 6516 6645; fax: 65 6779 1936. E-mail address:

chencts@nus.edu.sg (T. S. Chung)

**Abstract**

While membrane technology continues to thrive in seawater desalination, it would defeat the very purpose of saving the environment if toxic solvents are involved in membrane manufacture. As a paradigm of green chemistry, a non-toxic solvent, triethyl phosphate (TEP), was used for the first time to fabricate polyvinylidene fluoride (PVDF) hollow fiber

Download English Version:

<https://daneshyari.com/en/article/4988789>

Download Persian Version:

<https://daneshyari.com/article/4988789>

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