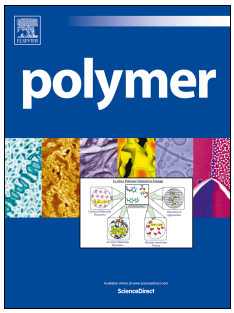
Accepted Manuscript



Synthesis and properties of poly(arylene ether sulfone) anion exchange membranes with pendant benzyl-quaternary ammonium groups

Qian Shi, Pei Chen, Xueliang Zhang, Qiang Weng, Xinbing Chen, Zhongwei An

PII: S0032-3861(17)30564-5

DOI: 10.1016/j.polymer.2017.06.004

Reference: JPOL 19737

To appear in: *Polymer*

Received Date: 10 February 2017

Revised Date: 23 May 2017

Accepted Date: 3 June 2017

Please cite this article as: Shi Q, Chen P, Zhang X, Weng Q, Chen X, An Z, Synthesis and properties of poly(arylene ether sulfone) anion exchange membranes with pendant benzyl-quaternary ammonium groups, *Polymer* (2017), doi: 10.1016/j.polymer.2017.06.004.

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 proof before it is published in its final 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.

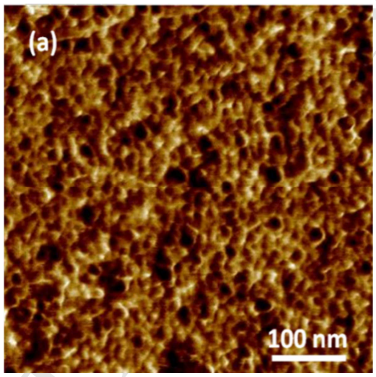
ACCEPTED MANUSCRIPT

GRAPHICAL ABSTRACT

Synthesis and properties of poly(arylene ether sulfone) anion exchange membranes with pendant benzyl-quaternary ammonium groups

Qian Shi [a], Pei Chen [a], Xueliang Zhang [a], Qiang Weng [a], Xinbing Chen [a,*], Zhongwei An [a,b]

This work develops a new difluoro aromatic ketone monomer DFDM and a series of side-chain type poly(arylene ether sulfone)s (sPAE) bearing pendent 3,5-dimethylphenyl groups. The corresponding side-chain anion exchange membranes derived from DFBDM-based PAEs display high alkaline stability and high conductivity. The present membranes sQPAE(*x/y*) exhibit high conductivity, which is attributed to distinct microphase separation morphology resulting from its greater length and dense distribution of the pedant quaternary ammonium groups.



ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/5177977

Download Persian Version:

https://daneshyari.com/article/5177977

Daneshyari.com