## Accepted Manuscript

Title: Zwitterionic surface modification of forward osmosis membranes using N-aminoethyl piperazine propane sulfonate for grey water treatment

Authors: Jin Wang, Tingting Xiao, Ruyi Bao, Tao Li, Yanqiang Wang, Dengxin Li, Xuemei Li, Tao He

PII: S0957-5820(18)30083-1

DOI: https://doi.org/10.1016/j.psep.2018.03.029

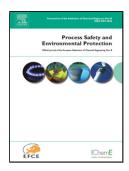
Reference: PSEP 1335

To appear in: Process Safety and Environment Protection

Received date: 22-1-2018 Revised date: 26-3-2018 Accepted date: 27-3-2018

Please cite this article as: Wang, Jin, Xiao, Tingting, Bao, Ruyi, Li, Tao, Wang, Yanqiang, Li, Dengxin, Li, Xuemei, He, Tao, Zwitterionic surface modification of forward osmosis membranes using N-aminoethyl piperazine propane sulfonate for grey water treatment. Process Safety and Environment Protection https://doi.org/10.1016/j.psep.2018.03.029

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.



Zwitterionic surface modification of forward osmosis membranes

using N-aminoethyl piperazine propane sulfonate for grey water

treatment

Jin Wang<sup>1,2</sup>, Tingting Xiao<sup>2,3</sup>, Ruyi Bao<sup>3</sup>, Tao Li<sup>3</sup>, Yanqiang Wang<sup>4</sup>, Dengxin Li<sup>1</sup>, Xuemei

Li<sup>2</sup>, Tao He<sup>2\*</sup>

<sup>1</sup> College of Environmental Science and Engineering, State Environmental Protection

Engineering Centre for Pollution Treatment and Control in Textile Industry, Donghua

University, Shanghai, China, 201620

<sup>2</sup> Laboratory for Membrane Materials and Separation Technology, Shanghai, Advanced

Research Institute, Chinese Academy of Sciences, Shanghai, China, 201210

<sup>3</sup>School of Physical Science and Technology, ShanghaiTech University, Shanghai, 201210,

China

<sup>4</sup> The Walt Disney (China) Co., Ltd. Disney Research China, Shanghai 200031, China

Corresponding: het@sari.ac.cn,

Tel: 0086-21-20325162; Fax: 0086-21-20325034

**Abstract** 

Zwitterionic amide monomer (N-aminoethyl piperazine propane sulfonate, AEPPS) was

used to modify the active layer of the thin-film composite (TFC) Forward Osmosis

Membranes (FOMs) by either adding into the water phase before the interfacial

polymerization (route 1) or grafting to the initial active separation layer after the interfacial

1

## Download English Version:

## https://daneshyari.com/en/article/6974150

Download Persian Version:

https://daneshyari.com/article/6974150

<u>Daneshyari.com</u>