

Accepted Manuscript

Title: Bathroom Greywater Recycling using
Polyelectrolyte-Complex Bilayer Membrane: Advanced study
of membrane structure and treatment efficiency

Author: K.S Oh P.E. Poh M.N. Chong E.S. Chan E.V. Lau
C.P. Saint



PII: S0144-8617(16)30400-3
DOI: <http://dx.doi.org/doi:10.1016/j.carbpol.2016.04.039>
Reference: CARP 10979

To appear in:

Received date: 28-1-2016
Revised date: 31-3-2016
Accepted date: 9-4-2016

Please cite this article as: Oh, K.S., Poh, P.E., Chong, M.N., Chan, E.S., Lau, E.V., & Saint, C.P., Bathroom Greywater Recycling using Polyelectrolyte-Complex Bilayer Membrane: Advanced study of membrane structure and treatment efficiency. *Carbohydrate Polymers* <http://dx.doi.org/10.1016/j.carbpol.2016.04.039>

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.

Bathroom Greywater Recycling using Polyelectrolyte-Complex Bilayer Membrane: Advanced study of membrane structure and treatment efficiency

K.S., OH¹, P.E. POH^{1,2,*}, M.N. CHONG^{1,2}, E.S. CHAN¹, E.V. LAU³, C.P. SAINT⁴

¹*Chemical Engineering Discipline, School of Engineering, Monash University Malaysia Campus, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor, Malaysia*

²*Sustainable Water Alliance, Advanced Engineering Platform, Monash University Malaysia Campus, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor, Malaysia*

³*School of Engineering, Mechanical Engineering Discipline, Monash University Malaysia Campus, Jalan Lagoon Selatan, 46150, Bandar Sunway, Selangor DE, Malaysia*

⁴*Natural & Built Environments Research Centre, University of South Australia, Mawson Lakes Campus, Mawson Lakes, 5095 South Australia, Australia*

**Corresponding author: poh.phaik.eong@monash.edu; Tel: +603 5514 6272; Fax: +603 5514*

620\

Highlights:

- Fabrication of polyelectrolyte-complex bilayer membrane for greywater treatment.
- Change in water flux and porosity through the loading of alginate .
- Molecular weight cut-off study of bilayer membranes.
- Enhancement of removal efficiency through the formation of polyelectrolyte complex .
- Evaluation of greywater filtration efficiency using bilayer membranes.

Download English Version:

<https://daneshyari.com/en/article/7785620>

Download Persian Version:

<https://daneshyari.com/article/7785620>

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