

Guides for an author

1. Please use MS Word to write your manuscript.
2. Please include table/figures in the manuscript text.
3. Be consistent with spelling; US English is preferred.
4. Please use consistent formatting (e.g. bold, font size) across the manuscript.
5. Indicate clearly the appropriate position for content provided separately, e.g. figures, tables.
6. List your references — those works cited in the text — at the end of each paper, and ensure your listings are complete in the information they provide and consistent in form. **Please use the Vancouver reference (NUMBERING) style.**
7. Reference code SHOULD NOT BE REMOVED.
8. Avoid the use of cross-references and footnotes.
9. The paper should be not less than 30 pages, font using Times New Roman and 2.0 spacing.

Text Examples

Preparation and characterization of glass hollow fiber membrane for water purification applications

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Abstract

This work discusses the preparation and characterizations of glass hollow fiber membranes prepared using zeolite-5A as a starting material. Zeolite was formed into a hollow fiber configuration using the phase-inversion technique. It was later sintered at high temperatures to burn off organic materials and change the zeolite into glass membrane. A preliminary study, that used thermogravimetric analysis (TGA), X-ray diffraction (XRD) and Fourier transform infrared (FTIR), confirmed that zeolite used in this study changed to.....

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1. Introduction

Seawater desalination has been regarded as promising technology, which can overcome fresh water deficit worldwide. To recover pure water from this source, reverse osmosis has been widely adopted. Reverse osmosis has become a current practice in desalination technologies, with water recovery reported to be ranging from 30% to 35 % [1]. Polymeric membranes have been used widely for desalination, but there is a growing interest to replace them with ceramic membranes. Among ceramic materials, zeolite has been regarded as the promising material for seawater desalination. Zeolite membranes have been shown to have an excellence performance for ion removal from aqueous solutions by reverse osmosis (RO) processes [2-4]. Xu et al reported that zeolite membranes enabled a selectivity of 10,000 when the membranes were used to purify water from organic solution [5].

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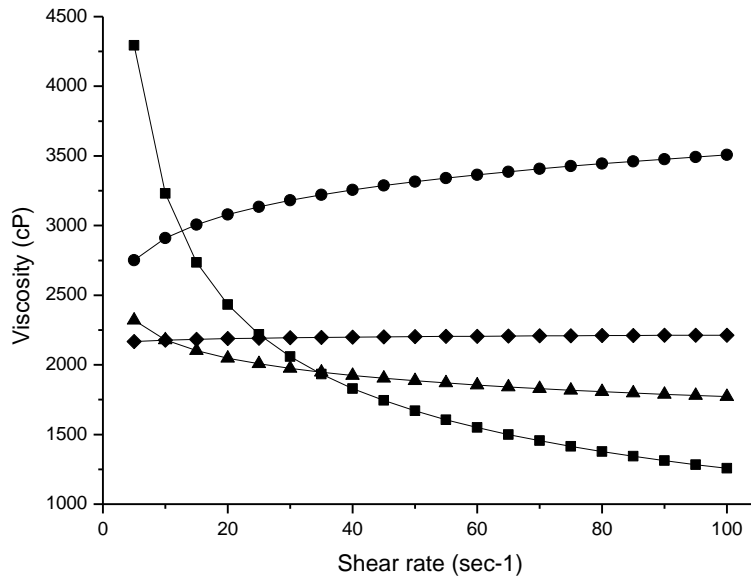


Fig. 2: The viscosity plots of zeolite/zirconia suspensions for preparing glass hollow fiber membranes using zeolite/zirconia loading of 45/5 wt.% (■), 40/10 wt.% (●), 35/15 wt.% (▲), and 30/20 wt.% (◆) vs. shear rate plots

Table 1 Conditions during spinning and sintering.

Parameters	Case 1			Case 2	Case 3
Al ₂ O ₃ loading (wt.%)	59	56	53	53	53
Spinneret orifice, OD/ID (mm)	3.0/2.8	3.0/2.8	3.0/2.8	3.0/2.8	3.0/2.8
Alumina to PESf ratio (wt./wt.)	10	10	6	6	6
Internal and external coagulant	Tap water	Tap water	Tap water	Tap water	Tap water
Temperature internal coagulant (°C)	25	25	25	10 ±1 50 ±1	25
Extrusion rate (ml/min)	8-12	8-12	8-12	9	9
Bore fluid rate (ml/min)	10	10	10	10	10
Air gap (cm)	15	15	15	15	0-25
Sintering temperature (°C)	1400	1400	1400	1400	1400
Heating rate (°C/min)	5	5	5	5	5