

Accepted Manuscript

Title: Structure of water in hybrid cellulose acetate-silica ultrafiltration membranes and permeation properties

Authors: Gonçalo Mendes, Mónica Faria, Alexandra Carvalho, M. Clara Gonçalves, Maria Norberta de Pinho



PII: S0144-8617(18)30178-4
DOI: <https://doi.org/10.1016/j.carbpol.2018.02.030>
Reference: CARP 13292

To appear in:

Received date: 13-10-2017
Revised date: 18-1-2018
Accepted date: 10-2-2018

Please cite this article as: Mendes, Gonçalo., Faria, Mónica., Carvalho, Alexandra., Gonçalves, M Clara., & de Pinho, Maria Norberta., Structure of water in hybrid cellulose acetate-silica ultrafiltration membranes and permeation properties. *Carbohydrate Polymers* <https://doi.org/10.1016/j.carbpol.2018.02.030>

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.

Structure of water in hybrid cellulose acetate-silica ultrafiltration membranes and permeation properties

Gonçalo Mendes^a, Mónica Faria^{a*}, Alexandra Carvalho^b,
M. Clara Gonçalves^{a,c}, Maria Norberta de Pinho^a

^aDepartamento de Engenharia Química, Instituto Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, 1049-001 Lisboa, Portugal

^bIEQUALTECS, Lda. Rua Cavaleiros da Espora Dourada, nº15 2560-668 Torres Vedras, Portugal

^cCentro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Portugal

Gonçalo Mendes goncalo_mendes01@hotmail.com

Mónica Faria* monica.faria@tecnico.ulisboa.pt

Departamento de Engenharia Química

Instituto Superior Técnico

Universidade de Lisboa

Av. Rovisco Pais

1049-001 Lisboa

Portugal

telephone: (+351) 21 841 79 46

fax: (+351) 21 353 72 46

Alexandra Carvalho alexandra.carvalho@iequaltecs.pt

Maria Clara Gonçalves clara.goncalves@tecnico.ulisboa.pt

Maria Norberta de Pinho marianpinho@tecnico.ulisboa.pt

Highlights

Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

- i) Synthesis of hybrid Si-CA membranes by coupling wet phase inversion and sol-gel methodologies.
- ii) SEM micrographs display asymmetry.
- iii) Monophasic nature of hybrid membranes confirmed by the presence of $\nu(\text{Si-O-C})$.
- iv) Bound and free water molecules identified by transverse relaxation times (RMN).

Download English Version:

<https://daneshyari.com/en/article/7783319>

Download Persian Version:

<https://daneshyari.com/article/7783319>

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