

Accepted Manuscript

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PII: S1383-5866(17)31808-7
DOI: <https://doi.org/10.1016/j.seppur.2017.09.023>
Reference: SEPPUR 14032

To appear in: *Separation and Purification Technology*

Received Date: 6 June 2017
Revised Date: 7 September 2017
Accepted Date: 7 September 2017

Please cite this article as: G. Dudek, R. Turczyn, M. Gnus, K. Konieczny, Pervaporative dehydration of ethanol/water mixture through hybrid alginate membranes with ferroferic oxide nanoparticles, *Separation and Purification Technology* (2017), doi: <https://doi.org/10.1016/j.seppur.2017.09.023>

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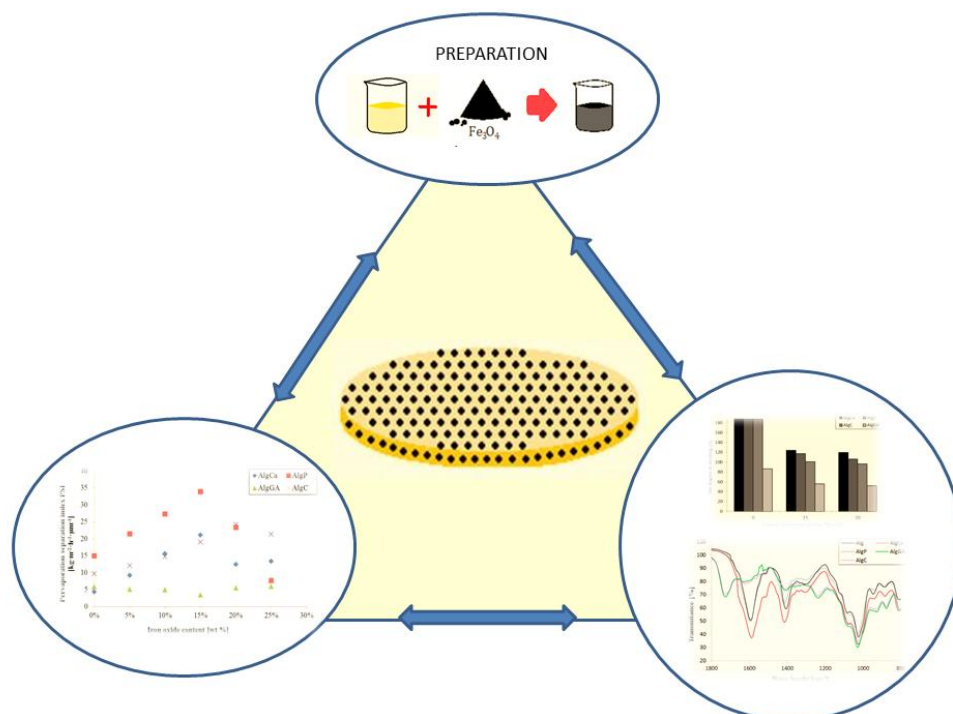


Pervaporative dehydration of ethanol/water mixture through hybrid alginate membranes with ferroferric oxide nanoparticles

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Highlights

Study of hybrid alginate/magnetite AlG/Fe₃O₄ membranes in pervaporative dehydration of ethanol.

Membranes are crosslinked with four crosslinking agents: glutaraldehyde, phosphoric(V) acid, calcium chloride or citric acid, respectively.

Presence of Fe₃O₄ in polymer matrix further improves all separation parameters.

The highest PSI is obtained for hybrid alginate membrane loaded with 15 wt% of ferroferric oxide.

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