

Accepted Manuscript

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PII: S0144-8617(18)30032-8
DOI: <https://doi.org/10.1016/j.carbpol.2018.01.032>
Reference: CARP 13182

To appear in:

Received date: 5-9-2017
Revised date: 10-1-2018
Accepted date: 10-1-2018

Please cite this article as: Wang, Jie., Gong, Chunli., Wen, Sheng., Liu, Hai., Qin, Caiqin., Xiong, Chuanxi., & Dong, Lijie., Proton exchange membrane based on chitosan and solvent-free carbon nanotube fluids for fuel cells applications. *Carbohydrate Polymers* <https://doi.org/10.1016/j.carbpol.2018.01.032>

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Proton exchange membrane based on chitosan and solvent-free carbon nanotube fluids for fuel cells applications

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Graphical Abstract

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Highlights

- Solvent-free carbon nanotube fluids were prepared via an ion exchange method.
- CNT fluids were incorporated into a CS matrix to fabricate composite membranes.
- Electrostatic interactions generated between the CNT fluids and the CS matrix.
- CS/CNT fluid composite membranes were simultaneously reinforced and toughened.

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