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www.elsevier.com/locate/memsci

PII: S0376-7388(17)33242-8
DOI: https://doi.org/10.1016/j.memsci.2018.01.039
Reference: MEMSCI15893

To appear in: *Journal of Membrane Science*

Received date: 13 November 2017
Revised date: 17 January 2018
Accepted date: 18 January 2018

Cite this article as: Xueting Zhao, Runnan Zhang, Yanan Liu, Mingrui He, Yanlei Su, Congjie Gao and Zhongyi Jiang, Antifouling membrane surface construction: Chemistry plays a critical role, *Journal of Membrane Science,* https://doi.org/10.1016/j.memsci.2018.01.039

Antifouling membrane surface construction: Chemistry plays a critical role

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ABSTRACT

Membrane technology has been broadly utilized in water purification including wastewater treatment, seawater or brackish water desalination. However, it often suffers from the severe membrane fouling due to the nonspecific interactions between membrane surface and foulants. Antifouling membrane surface construction thus becomes an everlasting and ubiquitous issue, where chemistry plays a critical role in membrane material design, hierarchical structure manipulation, antifouling mechanism integration and separation performance intensification. Many emerging chemistries enable the rational design and construction of state-of-the-art antifouling membrane surfaces. This review will highlight the recent progress in antifouling membrane surface construction

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