



Journal of Chemistry

Special Issue on

Nano-Enabled Membranes for Water Treatment

CALL FOR PAPERS

Water treatment has become more challenging recently due to emerging contaminants and climate change around the globe. In order to meet the quality standard of the drinking water mandated by agencies, current treatment methods have to be technologically upgraded. Membrane separation process for drinking water treatment has evolved and transformed significantly over the past decade when scientists discovered that nanomaterials can change the dimensions of the membranes from just being sieving filters to reactive sites. The nanomaterials incorporated on the membrane surface react with feed components either in presence or in absence of a catalyst. Thus filtration becomes a synergistic process between the membrane material (or the functional groups of it) and the nanomaterial. There has been numerous ways of how nanomaterials are incorporated onto membranes both chemically and physically. The work would mainly focus on carbon based nanomaterials such as carbon nanotubes and graphene; however metals and metal oxides are not exceptions provided there are no implications to the quality of the treated water.

We invite manuscripts that discuss how different types of membranes are developed and modified with nanomaterials, their characterization, durability (stability), and application into drinking water treatment. The manuscripts may focus on the current main issues, probable solutions and future trends of this technology.

Potential topics include, but are not limited to:

- ▶ The fabrication of membranes enabled with nanomaterials that may involve complete synthesis of the membranes with polymer or ceramic materials in microfiltration, ultrafiltration, and nanofiltration range, or the surface modification of these membranes involving grafting, layer-by-layer modification, spin coating, or other modifications
- ▶ The characterization of the membrane surfaces, filtration flux studies, and nanomaterial characterization including quantification and density and morphological studies
- ▶ Application of the membranes into water treatment and fouling control including but not limited to rejection studies, antibacterial studies, biofouling control, virus removal, and separation of organic compounds

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jchem/environmental.chemistry/nemw/>.

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Friday, 25 March 2016

First Round of Reviews

Friday, 17 June 2016

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