

Tentative Outline

Special Thematic Issue for the Journal "Recent Innovations in Chemical Engineering"

Title: Nanomaterial Enhanced Membrane Separation Processes

Sectional Editor: Zhao Dieling

• **Scope of the Thematic Issue:**

The twenty-first century has brought many exciting new opportunities associated with nanomaterials to membrane separation as they provide plentiful probable pathways to circumvent current technical hurdles. Through manipulation of chemical structure, morphology and size of nanomaterials, they can endow membranes with many preferable properties, such as simultaneous high permeability and selectivity beyond the upper bound and enhanced antifouling propensity. This special issue entitled "Nanomaterials Enhanced Membrane Separation Processes" focuses on the recent researches on rational design and fabrications of novel membranes based on nanomaterials. We accept high-quality review articles as well as research papers. Given your insightful works in the field, we invite you and your colleagues to submit a contribution to this special issue in which some leading experts will describe works, ideas, and findings.

Keywords: nanomaterials, membrane separation, wastewater treatment, gas separation, desalination, antifouling

Sub-topics:

- Fabrication of nanomaterial based membranes for liquid separation
- Fabrication of nanomaterial based membranes for gas separation
- Nanomaterials enabled antifouling properties of membranes
- Mechanism study on the effects of nanomaterials on membrane performance

Tentative titles of the articles:

- Future direction of R&D in membrane based desalination processes
- 2D nanomaterials based membranes for desalination
- Nanomaterials enhanced membrane distillation (MD) processes
- FO based desalination process involves
- Nanomaterials enhanced membrane distillation (MD) processes
- Nanomaterials enhanced organic solvent filtration (OSN) processes
- Nanomaterials enhanced nanofiltration (NF) processes
- Nanomaterials enhanced MBR processes

Schedule:

- ◇ Thematic issue submission deadline: Dec 30, 2023

Contacts:

Sectional Editors Name: Zhao Dieling

Affiliation: College of Geography and Environmental Sciences, Zhejiang Normal University, Jinhua, China

Email: zhaodieling@zjnu.edu.cn