# Special Issue

# Advances in Graphene-Based Membranes for Next-Generation Separation Technologies

## Message from the Guest Editor

Two-dimensional (2D) graphene-based membranes have revolutionized membrane separation technologies due to their atomic-layer thickness, tunable mass transport channels, and versatile functionalization capabilities. These unique properties have resulted in significant advancements, enabling exceptional selectivity, permeability, and stability in both gas and liquid separations. This Special Issue aims to highlight cutting-edge research on graphene-based membranes and their transformative role in separation science and technology. It focuses on innovative design strategies, fabrication techniques, and emerging applications in advanced separation processes. Topics of interest include, but are not limited to, the following research areas:

- Novel preparation methods for graphene-based membranes;
- Applications in gas and liquid separation;
- Mass transport mechanisms and modeling.

We welcome original research articles, reviews, and perspectives that contribute to the development and application of graphene-based membranes. Submissions should emphasize innovative approaches, fundamental insights, and practical advancements in separation processes.

## Guest Editor

Dr. Quan Liu

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## Deadline for manuscript submissions

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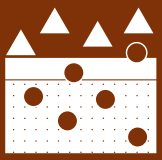

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## About the Journal

### Message from the Editor-in-Chief

You are cordially invited to contribute a research article or a comprehensive review for consideration and publication in *Membranes* (ISSN 2077-0375). *Membranes* is an international, peer-reviewed open accessjournal of membrane technology published monthly online by MDPI. The journal covers the broad aspects of the science and technology of both biological and non-biological membranes, including membrane dynamics and the preparation and characterization of membranes and their applications in water, environment, energy, and food industries. Articles contributing to better understanding of transport processes in all types of membranes are also welcome. The scientific community and the general public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

### Editor-in-Chief

Prof. Dr. Spas D. Kolev
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