Special Issue

Design Principles and Biomedical Applications of Multifunctional Biological Membranes

Message from the Guest Editors

Biological membranes are essential for life through their compartmentalization into cells and organelles therein. The bilayer structure, composed of various kinds of lipids, membrane proteins and bioactive polymers anchored thereon, can perform many significant biological functions, including biochemical signaling, ion transportation, membrane trafficking and protein scaffolding, morphological change, membrane fission/fusion, and cell motility. This Special Issue focuses on the recent developments regarding theory, simulation and experiments focused on biological membranes interacting with complex environments, such as external fields, BAR protein regulation, phase separation and viscous fluid, and the novel applications emerging from such studies. At present, their applications are constrained by many open questions regarding the diversity of components, heterogeneity of membrane structures, non-equilibrium thermodynamics, nonlinear elasticity and their interaction with complex environments, which are under intense investigation.

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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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