Special Issue

Electrostatics in Cell Membranes and in Artificial Membrane Models

Message from the Guest Editor

Cell membranes are proposed as a lipid matrix with embedded proteins. The dielectric constant of the apolar region of the lipids contrasts with that of the aqueous phase and the polar region, going from about 2 to 80 in a very short distance. Therefore, interfacial electrostatics is very complex and affects the membrane properties in general, giving an interdependence between mechanical properties of membranes and interface electrostatics.

- Modeling electrostatic interactions in thin films;
- Electrostatic interactions as driving forces for the binding of molecules to the membrane;
- Ionization state of the molecules within the membrane and their lateral interactions;
- Surface potentials and ion adsorption;
- Membrane potential as driving force for cell processes;
- Domain segregation in charged membranes;
- The interaction of cationic peptides and antibiotics with membranes;
- Cationic surfactans;
- Charged vesicles;
- Experimental determinations of the ionization state of lipid bilayers and membrane proteins;
- Molecular simulations of electrostatic processes in lipid bilayers and membrane proteins.

Guest Editor

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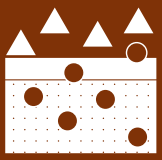

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Message from the Editor-in-Chief

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

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