

Special Issue on
Chitosan Membranes: Physicochemical Properties and Applications

CALL FOR PAPERS

Chitosan membranes have attracted the attention of researchers due to their unique physicochemical and biological characteristics making them ideal candidates for wide range of science and engineering applications. Chitosan membranes have been employed in pristine form, as well as in combination with compounds as composite membranes in order to improve their overall performance efficiency. The excellent biocompatibility and antimicrobial nature of chitosan membranes coupled with thermomechanical property enhancements through compositization make chitosan-derived membranes suitable for applications in niche industrial areas including health, environment, food, energy, and others.

In spite of the favorable features of chitosan and chitosan-derived composite membranes, challenges are still encountered when developing biodegradable membranes with high levels of performance, especially in terms of selectivity, permeability, and durability. Additionally, various recent advancements in the application sectors demand further efforts in the development of multifaceted membranes to serve a range of purposes including commercial plastic membrane substitution, for which chitosan is an excellent starting material.

This special issue is intended to cover all aspects of chitosan membranes, including both experimental and theoretical studies. Original research on chitosan membranes for focused application in areas like medicine, active film packaging, separation processes, emerging contaminants, and tissue engineering is encouraged. Review articles describing the state of the art in related topics involving chitosan membranes are also appropriate.

Potential topics include but are not limited to the following:

- ▶ Chemical and thermal properties of chitosan membranes for separation
- ▶ Active packaging films composed of chitosan membranes and the correlation between their properties and the shelf-life of the film
- ▶ Tissue engineering uses of chitosan membranes and biochemical interactions
- ▶ Composite chitosan-based membranes in biohybrid and biodegradable systems
- ▶ Pharmaceutical and related industrial applications of chitosan membranes including biofabrication of tissues
- ▶ Recovery of bioproducts using chitosan membranes for extraction, electro dialysis, distillation, clarification, and organic acid separation
- ▶ Chitosan membrane usage in fuel cells and energy systems and properties of chitosan or chitosan composite proton exchange membranes

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jchem/materials.chemistry/chme/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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