

Special Issue

Advances in Surfactant Systems: Thermodynamics, Molecular Interactions, and Applications

Message from the Guest Editor

Surfactants are particles that possess both hydrophobic and hydrophilic molecular segments. They come in various architectural forms, including surfactants with rigid hydrophobic or hydrophilic chains, flexible hydrophobic chains, and gemini, bolaform, and polymeric surfactants. Designing and chemically synthesizing a surfactant with a specific architecture and properties is challenging. Similarly, developing a mathematical model that can predict surfactant properties, such as a critical micellar concentration, aggregation number, and micelle geometric shape, presents its own set of difficulties. There is ongoing research into the relationship between the thermodynamic functions of micelle formation and the state functions of surfactants at the interface. The scientific community has discussed applying phase separation theory to micelle formation in conjunction with the association model based on the law of mass action. Consequently, there is a pressing need to develop new theories and state functions for mixed surfactant systems or for theories that are utilized for carryout out validations using the regular solution approach.

Guest Editor

Prof. Dr. Mihalj Poša

Department of Pharmacy, Faculty of Medicine, University of Novi Sad, Hajduk Veljka 3, 21000 Novi Sad, Serbia

Deadline for manuscript submissions

20 October 2026



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 10.0
Indexed in PubMed



mdpi.com/si/238721

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
ijms@mdpi.com

mdpi.com/journal/

[ijms](https://ijms.mdpi.com)





International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 10.0
Indexed in PubMed



[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)



About the Journal

Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, and molecular biophysics. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. José L. Quiles

Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Inorganic Chemistry)