

Special Issue

Novel Drug Delivery Systems: From Material Design to Biomedical Applications

Message from the Guest Editors

The synergy between materials science, nanotechnology, and biotechnology is currently improving the performance of active ingredients, offering solutions to problems such as poor water solubility, premature degradation, and adverse systemic effects. This Special Issue covers all topics related to recent studies in the following areas:

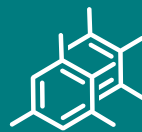
- Advanced materials: Synthesis and characterization of biocompatible polymers (natural and synthetic) of stimulus-responsive hydrogels (pH, thermal, or photosensitive) and inorganic nanomaterials designed to optimize the stability and bioavailability of active pharmaceutical ingredients (APIs).
- Precision targeting and controlled kinetics: Study of the mechanisms underlying release kinetics and ligand-mediated targeting strategies aimed at achieving localized therapeutic action, thus maximizing the efficacy of active ingredients and mitigating their off-target toxicity.
- Translational biomedical applications: Highlighting studies in oncology, neurology, and regenerative medicine, with a focus on emerging frontiers such as mRNA-based therapies and personalized nanomedicine.

Guest Editors

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Dr. Federica Curcio

Deadline for manuscript submissions

30 November 2026



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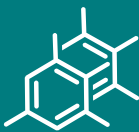


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About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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