Special Issue

Charge Dynamics and Stability Engineering in Next-Generation Quantum Dots

Message from the Guest Editor

This Special Issue aims to garner recent advances that directly address the challenges of understanding and engineering charge dynamics and long-term stability in next-generation quantum dots. We seek contributions that introduce innovative synthesis and surface engineering strategies, employ advanced spectroscopic and microscopic techniques to probe charge-carrier behavior, or utilize theoretical and computational approaches to unravel charge transport, trapping, and recombination mechanisms. Studies that link structural and interfacial design to enhanced stability, improved optical and electronic performance, or targeted functionality in optoelectronics, energy conversion, sensing, and biomedical applications are particularly encouraged. Both original research articles and comprehensive reviews are welcome. By integrating diverse methodologies and perspectives, this Special Issue seeks to advance the fundamental understanding of charge dynamics and stability while fostering the rational design of robust, high-performance quantum dot systems.

Guest Editor

Prof. Dr. Fatih Ungan

Department of Physics, Faculty of Science, Sivas Cumhuriyet University, Sivas, Turkey

Deadline for manuscript submissions

30 June 2026

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed

mdpi.com/si/262438

Molecules
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
molecules@mdpi.com

mdpi.com/journal/molecules

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed

mdpi.com/journal/molecules

About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 29th 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.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt
Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Reaxys, CaPlus / SciFinder, MarinLit, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

MDPI