## **Special Issue**

# The Electrochemical Oxidation of Small Organic Molecules

## Message from the Guest Editors

The electrochemical oxidation of small organic molecules (SOMs) occupies significant attention due to its capacity to generate energy and value-added chemicals. It serves as a crucial process for energy conversion, wastewater treatment, and organic electrosynthesis. The small organic molecules suitable for electrochemical oxidation are divided into various categories. For instance, one practical application of SOMs is in low-temperature fuel cells, where the energy generated from the oxidation of methanol, ethanol, or formic acid is directly transformed into electricity. The oxidation of alkanes, including methane, ethane, propane, and butane, represents the most widely used small organic molecules as feedstocks in hightemperature solid oxide fuel cells or solid oxide electrolytic cells. Another commonly used feedstock is biomass, with notable examples of biomass-derived chemicals such as furfural, 5-hydroxymethylfurfural, and glycerol, which serve as renewable alternatives to products derived from petroleum. Lastly, electrochemical oxidation processes employ electricity to degrade organic pollutants found in wastewater.

## **Guest Editors**

Dr. Jelena D. Lović

Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, University of Belgrade, Njegoševa 12, 11000 Belgrade, Serbia

Dr. Sanja Stevanovic

Institute of Chemistry, Technology, and Metallurgy, National Institute of the Republic of Serbia, University of Belgrade, Njegoševa 12, 11000 Belgrade, Serbia

## 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/255445

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



## **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).

