Special Issue

Innovations in Metal–Organic Frameworks: Their Synthesis, Properties and Multifaceted Applications

Message from the Guest Editors

Metal–organic frameworks (MOFs) have attracted significant attention due to their high surface area, tunable pore sizes, and versatile functionalities. MOFs exhibit exceptional adsorption capacities, stability, and selectivity, making them ideal for gas storage, separation, and catalysis. Their luminescent properties enable use in sensing and imaging technologies. Recent research has also explored MOFs for drug delivery, showing their potential in biomedical applications. The broad applications of MOFs highlight their versatility and adaptability. This Special Issue of *Molecules* aims to provide an updated view on the synthesis, properties, and applications of MOFs. Submissions include, but are not limited to, original research articles, reviews, and communications in fields such as CO2 capture, CO2 reduction, oxygen evolution/reduction, H2 storage, H2 evolution, CH4 storage, O2/N2 separation, immobilization of N2, water treatment, drug delivery, biomedical applications, catalysis, photocatalysis, fluorescent sensors, and electronic devices based on MOFs.

Guest Editors

Prof. Dr. Francis Verpoort

State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology, Wuhan 430000, China

Dr. Cheng-Xing Cui

School of Chemistry and Chemical Engineering, Institute of Computational Chemistry, Henan Institute of Science and Technology, Xinxiang 453003, China

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

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As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th 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 multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all 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

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