Special Issue

Development and Applications of Single-Atom Catalysts

Message from the Guest Editors

As a class of catalysts with exceptional performance, single-atom catalysts maximize catalytic efficiency, selectivity, and stability at the atomic scale. In recent years, single-atom catalysts have shown immense potential in various domains, including energy conversion, environmental remediation, and chemical synthesis. This Special Issue will focus on the synthesis, catalytic mechanisms, performance optimization, and the diverse application of single-atom catalysts, including in electrocatalysis, photocatalysis, thermocatalysis, and biocatalysis. We welcome original research articles, review papers, and progress reports that address the development of single-atom catalysts. Through the publication of this Special Issue, we aim to provide a platform for the further advancement of single-atom catalysts and promote their transition from laboratory-scale research to practical application.

Guest Editors

Dr. Mingjun Xiao

School of Materials Science and Engineering, Lanzhou University of Technology, Lanzhou 730050, China

Prof. Dr. Jin Xie

School of Chemistry & Chemical Engineering, Nanjing University, Nanjing 210023, 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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