Special Issue

Research on Polyoxometalate Materials

Message from the Guest Editor

Polyoxometalates (POMs) are a large and rapidly growing class of early transition metal oxide clusters. All of the molecular properties of these POMs can be altered by fine-tuning the structure and chemical composition of the POMs at the atomic level. POMs can not only be used widely in different disciplines, but can also be combined with polymers, oxides, ionic liquids or carbonaceous supports to construct new and advanced composite (hybrid) materials, which have important, extensive applications in catalysis, electrode materials, electrocatalysis, photocatalysis and so on. This Special Issue focuses on the fundamentals of POMs and POM-based materials, including synthetic methods, reactivity, spectroscopic or spectrometric studies, structures, mechanistic insights and DFT calculations, and potential applications, such as redox- and acid-base catalysis, photo- and electrochemistry, magnetism, electronics, optics, bio-medicine, energy conversion and storage, sorption and separation, environmental remediation and medicine. Full papers, communications, and reviews on these topics are welcome.

Guest Editor

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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.

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