Special Issue

Biocatalysis in Organic Synthesis

Message from the Guest Editors

The preparation of valuable chiral compounds requires the development of more efficient methodologies, in which selectivity and atom economy of the processes become the 'evolutionary pressure'. Biocatalysis, i.e., the use of purified enzymes, cell free extracts or whole cells, as catalyst in organic processes, offers several advantages for the synthesis of high-added value materials. Thus, biocatalysts generally display exquisite selectivities while using mild and eco-friendly reaction conditions. Enzymatic reactions are economically feasible. Biocatalysis often face some drawbacks that hampered their complete application in organic methodologies, including low substrates concentrations or the need of expensive cofactor molecules for different types of reactions. In the last few years, several efforts have been devoted to overcoming these bottlenecks, including the preparation of immobilized biocatalysts, medium engineering with the use of different non-conventional media for biocatalyzed reactions, the development of efficient cofactor recycling systems, and even designing cascade reactions.

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Deadline for manuscript submissions

closed (31 May 2019)

Molecules

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Indexed in PubMed

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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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