Special Issue

Combining Synthesis and Biosynthesis to Access Complex Molecules

Message from the Guest Editors

The construction of complex molecules has always benefited greatly from the field of biosynthesis. This can be clearly seen in the inspired biomimetic syntheses of complex molecules, and enzymes from biosynthesis have been used to construct complex molecules such as the vancomycin aglycone core structure. The complementarity between modern synthetic chemistry and enzyme catalyzed reactions make the pairing of the two highly powerful. As natural product biosynthesis is providing researchers with an expanded biocatalyst toolbox and protein engineering is significantly improving the properties and function of these biocatalysts, many of the key hurdles to robust chemo-enzymatic pathways are being overcome. This Special Issue of Molecules is designed to capture the highly interdisciplinary interplay between synthesis and biosynthesis in accessing complex molecules. We welcome original articles as well as reviews of recent studies combining synthesis and biosynthesis, particularly focusing on chemo-enzymatic synthesis but also including enabling studies such as biomimetic total synthesis, new biocatalyst discovery, and in vitro biosynthesis.

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Deadline for manuscript submissions

closed (30 January 2020)

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed

mdpi.com/si/18942

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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.

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