Special Issue

New Advances in Chemoenzymatic Synthesis

Message from the Guest Editors

Chemoenzymatic strategies for the synthesis of complex molecules have recently enriched the field of organic chemistry. Currently, various examples of the development of chemoenzymatic processes have been described, which have successfully replaced existing chemical processes thanks to the integrated approach of biocatalysis and traditional chemical synthesis. Biocatalysis has been used for laboratory scale and industrial production in order to obtain synthetic pathways characterized by fewer steps, less waste and efficient global synthesis in terms of yields, regio- and stereoselectivity, process robustness and safety. Under this paradigm, enzyme-catalyzed reactions and the flexibility of chemical derivatization are powerful tools for streamlining access to relevant bioactive molecules. This Thematic Issue covers all aspects of the current applications of chemoenzymatic routes in the synthesis of organic compounds (pharmaceuticals, fine chemicals, food additives, flavors, fragrances) at both the laboratory and industrial scales.

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