

Special Issue

Recent Advances in Biocatalysis and Metabolic Engineering for Biomanufacturing

Message from the Guest Editor

The use of biocatalysts, including enzyme and metabolically engineered cells, has attracted a great deal of attention in chemical and bioindustry because biocatalytic reactions can be conducted under environmentally-benign conditions and in sustainable ways. The catalytic efficiency and chemo-, regio-, stereoselectivity of enzyme can be readily enhanced and modulated using protein engineering. Metabolic engineering seeks to enhance cellular biosynthetic productivity of target metabolites via controlling and redesigning metabolic pathways using multi-omics analysis, genome-scale modeling, metabolic flux control and reconstruction of novel pathways. The aim of this Special Issue is to deal with the recent advances in biocatalysis and metabolic engineering for biomanufacturing of fuels, chemicals, biomaterials, and pharmaceuticals. Reviews and original research papers on the development of new strategies to improve the catalytic efficiency of enzyme, biosynthetic capability of cell factory and their applications in production of various bioproducts and chemicals are welcome.

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