



catalysts



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Microbial Biocatalysis

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Message from the Guest Editors

Whole-cell biocatalysts offer some unique advantages of cascade reactions catalyzed by multienzymes as well as a single bioredox reaction with cofactor regeneration in a single strain. Therefore, whole-cell biocatalysts are widely applied for biosynthesis/biotransformation to produce value-added chemicals as well as the complete mineralization of organic pollutants.

In addition to the traditional screening of microbial strains and immobilized whole-cell biocatalysts, modern genetic engineering, metabolic engineering, and synthetic biology make tailored whole-cell biocatalysts possible. At the same time, some integrated processes have successfully been applied in the catalytic processing using living whole-cell biocatalyst, such as harnessing biocompatible chemistry to interface with the microbial metabolism as well as using various separation techniques for in situ product removal.

The purpose of this Special Issue is to collect original research papers and reviews, focusing on progress using living whole-cell biocatalysts in biosynthesis, biotransformation, and biodegradation.



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