

第5回 バイオ・サステイナブル研究セミナー

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zoom URL

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Process engineering strategies towards efficient biocatalytic transformations

Abstract

The application of nature's catalysts, "enzymes," for the synthesis of chemicals is a crucial emerging field of industrial biotechnology to meet the current and future needs of our society for sustainable manufacturing of chemicals. Nature uses an elegant and efficient synthetic strategy: Coupling enzymes in multi-step pathways without intermediate isolation and purification steps with precise spatial control of catalysis. Inspired by nature, the design of multi-step biotransformations has been attracting significant attention within the biocatalysis community. The talk will introduce decarboxylase enzymes used either for carboxylation or decarboxylation (in cascading systems), exploring the use of non-conventional media, enzyme immobilization, and different operational modes for enhancing the efficiency of these enzymatic applications.

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