

## Symposium

# The 5th Japan-China Symposium on Biocatalysis and Biotransformation

Amano Enzyme holds the Japan-China Symposium on Biocatalysis and Biotransformation every other year in collaboration with Zhejiang University in China. The symposium aims to connect Chinese companies interested in enzyme-based sustainable industrial processes with professors from Japanese and Chinese universities and public research institutions conducting cutting-edge research in the field, and to contribute to the development of the field.

Marking 10 years, the fifth symposium was held on November 16, 2024, in Hangzhou, Zhejiang Province, China. This year's symposium was the first to be held entirely in person since the second symposium in 2018, due to the impact of the COVID-19 pandemic. Approximately 130 people from business and academia were in attendance. A total of 11 lectures were given (see below), including two guest speakers from Japan, Professor Hiroshi Shimizu (Osaka University) and Professor Michihiko Kobayashi (University of Tsukuba). The lectures covered a wide range of topics, but primarily focused on the results of studies on the functional modification of enzymes using AI technology and their practical application. The insightful lectures spurred lively discussions with the attendees. To commemorate the 10th year of

the symposium, a special round-table discussion was held. Representatives from Japanese and Chinese companies and academia joined to discuss recent trends in enzyme-based processes, as well as future prospects.

Green chemistry using enzymes will be an essential technology in the realization of a sustainable society. As a Japanese enzyme producer, we hope to continue to contribute to the development of the field.



Group photo



Round-table discussion



Symposium

## Lecture topics

<b>Hiroshi Shimizu</b>	Osaka Univ.	<i>In silico</i> design and experimental analysis of metabolic pathways for microbial bioproduction of valuable compounds
<b>Qi Wu</b>	Zhejiang Univ.	Directed evolution and application of stereoselective enzymes for precision synthesis
<b>Michihiko Kobayashi</b>	Univ. of Tsukuba	Microbial enzymes and metabolism: Traditional biotechnological research
<b>Special program for 5th anniversary conference – A review of progress in biocatalysis and biotransformation, and prospects for the future</b>		
<b>Kazunori Yoshida</b>	Amano Enzyme Inc.	Application of microdroplet technology to industrial enzyme development
<b>Jing Wu</b>	Jiangnan Univ.	Creating new functional enzyme based on enzyme promiscuity
<b>Zhiqi Cong</b>	Chinese Academy of Sciences	Rational design of unnatural P450 peroxizymes for catalytic applications
<b>Yajie Wang</b>	Westlake Univ.	Expanding the repertoires of biocatalysis by AI-BT-Chem
<b>Hui Chen</b>	Shandong Univ.	The biotransformation of inert chemicals driven by electrical energy
<b>Xiaoqing Mu</b>	Jiangnan Univ.	Molecular modification of $\alpha$ -amino acid dehydrogenase based on analysis of substrate recognition mechanism mediated by steric hindrance
<b>Huiying Luo</b>	Chinese Academy of Agricultural Science	Green innovation in enzyme production
<b>Zhiguang Zhu</b>	Chinese Academy of Sciences	Construction of bioelectrocatalytic systems by integrating synthetic biology and electrochemistry