

Biotransformation of various organic compounds using Biocatalyst and the Development of Novel Organic Synthetic Methods



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Keywords	Organic chemistry, Biocatalyst
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Technical Support Skills	• Structure of organic compounds • Organic synthesis
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Research Contents

Our research focuses on the development of novel organic synthetic reactions using biocatalysts.
 Development of novel organic synthetic reactions using microwave irradiation.

<Organic Synthesis Using Biocatalysts>

We use a variety of biocatalysts, such as enzymes, fungi, plants, plant cell cultures, and algae. Our research focuses on the development of novel organic synthesis based on the use of algae and fungi as biocatalysts.

<Development of Novel Organic Synthesis Methods Using Microwave Irradiation>

Microwave-assisted reactions can establish new environmentally friendly synthetic methods.

References

- [1] T. Utsukihara, C. A. Horiuchi, Indian J. Chem. Sec B. 58B (2019) 921.
- [2] T. Utsukihara, C. A. Horiuchi, Indian J. Chem. Sec B. 58B (2019) 69.
- [3] T. Utsukihara, M. Matsushita, E. Miyamoto, H. Murakami, C.A. Horiuchi, Indian J. Chem. Sec B. 58B (2019) 1037.
- [4] T. Utsukihara, K. Hoshiyama, S. Kobayashi, M. Koshimura, C. A. Horiuchi, Indian J. Chem. 62 (2023) 327.

Available Facilities and Equipment

NMR: Nuclear Magnetic Resonance	FTIR: Fourier transform infrared spectrometer
Gas Chromatograph	HPLC: High Performance Liquid Chromatography