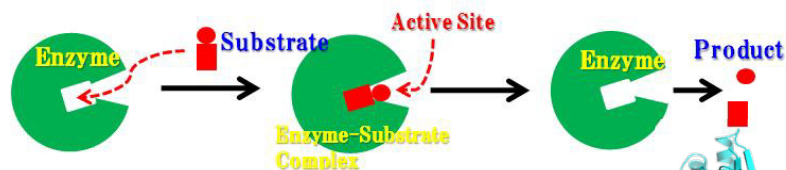
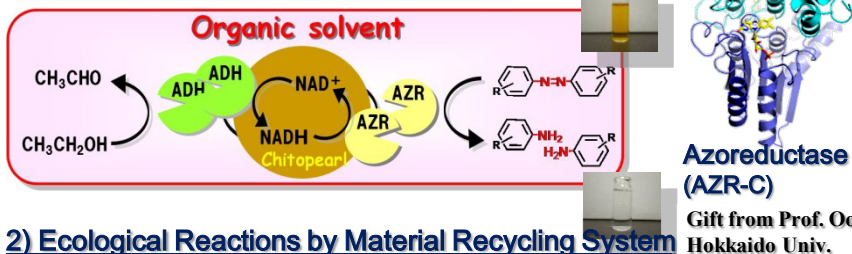


Material Transformation by Bio(Enzyme)Technology

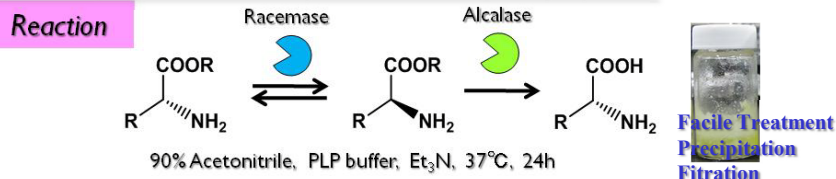
Associate Professor Tatsuhiro Kijima



1) Biosensor indicated by decolorization



2) Ecological Reactions by Material Recycling System



3) Development of Chiral Derivatizing Agent Reaction System



4) Development of Extra Pure Bio Diesel Fuel

Two bottles of waste oil are shown on the left, and a bottle of Bio Diesel Fuel (BDF) is shown on the right. A large yellow box labeled "BDF" is in the center. A piece of industrial equipment is shown on the right. Text: "Waste Oil", "BDF", "Left: Old, Right: New", "Brand-New Distillation Type".

Content :

Perspective from scientific and engineering curiosity, "Biotechnical production of useful materials" and "The application of biofunctional technology" have been developing with organic synthesis as a core technology. Enzymes and microbial technology, biocatalyst, biomimics have been carried out for developing the technology of organic synthesis. From the viewpoint of molecular level to the global environment, fundamental research has been studied actively.

- 1) Biosensor indicated by decolorization has been developed using AZR: Azoreductase coupling with another oxidoreductase.
- 2) Ecological reactions by material recycling system has been studied using DKR: dynamic kinetic reaction methods.
- 3) Long- chained secondary alcohol has been resolved and determined configurations by chiral derivatizing agent using HPLC easily.
- 4) Extra pure biodiesel fuel has been synthesized by brand-new BDF synthesizer using distillation process. Obtained BDF was colorless (right bottle of photo) and cleared the EU standard.

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