



In order to design a sustainable low-carbon society, Green Innovation shifting from oil-refinery to bio-refinery should be significantly important. Biorefinery is an excellent technology to produce biofuels, bio-plastics, bio-fibers, and bio-chemicals from biomass using carbon dioxide as a recyclable resource.

Bioprocess engineering is one of the most important mass-production technologies using cell factories, which can help produce various target products directly from pretreated biomass. To improve the productivity, it is essential to optimize conditions under large-scale culture. Since pre-treated biomass contains fermentation inhibitors and high-density solid biomass such as lignin, the control of fermentation process is one of the key factors for efficient fermentation.

Biorefinery Group of Kobe University led by Prof. Akihiko Kondo aims to optimize the large-scale fermentation as well as total process of biorefinery.

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