

Development of bio-based processes for the production of bioplastics

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Production of bioplastics has been suggested as one of the promising solutions to solve environmental problems such as plastic waste problems since bioplastics having biodegradability have much potential to solve plastic accumulation caused by improper disposal of non-degradable plastics. Also, bioplastics produced from renewable resources are carbon-neutral materials that can reduce CO<sub>2</sub> emission. Development of bioprocesses for the production of bioplastics have extensively investigated by employing engineered microorganisms as host catalysts, in which plastics are completely synthesized as final products in biological manner or precursors produced by bioprocesses are used for further chemical process for the synthesis of plastics after purification into polymer grade. In this presentation, the strategies for bio-based production are mainly discussed.