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Trends in Biorefinery and Pretreatments of Lignocellulosics by White Rot Fungi

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Abstract: Biorefinery is a production system for fuels, energy, and chemicals from biomass in integrated chemical and energy industries, and it provides a new concept to change the petrochemical industry developed in 20th century. There is a growing demand to establish biorefinery to solve the problems of global warming and deficiency of fossil fuels because the biomass feedstock is produced by fixation of carbon dioxide by the photosynthesis of plants. In recent years, research and development for the production of bioethanol and value-added chemicals are progressively expanding, and the U.S. Department of Energy (DOE) selected 12 platform compounds as key intermediates for the biorefinery in USA. In this review, trends in the establishment of platforms for biorefinery and biological pretreatments for the conversion of lignocellulosics using white rot fungi are introduced.

Keywords: biorefinery, biomass, white rot fungi, bioethanol

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