



Editorial on Ethanol Production from Renewable Biomass

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The production of ethanol from biomasses such as lignocellulosic materials like potato peel waste, wood, and agricultural and forest residues has the potential to replace the fuel extracted from nonrenewable resources.

The common method for converting biomass into ethanol is called fermentation. During fermentation, microorganisms (e.g., bacteria and yeast) metabolize plant sugars and produce ethanol whereas Biofuels manufactured from plant-based biomass represent renewable energy resources contributing to the survival and maintenance of natural ecosystem.

Bioethanol is one of the most used fuels in the current times and proved to be promising and eco-friendly alternatives to fossil fuels, which is produced from renewable sources.

Production of biofuels from renewable feedstocks has captured considerable scientific attention since they might be used to supply energy and alternative fuels. Bioethanol is one among the foremost interesting biofuels thanks to its positive impact on the environment. Currently, it's mostly produced from sugar- and starch-containing raw materials. However, various available sorts of lignocellulosic biomass like agricultural and forestry residues, and herbaceous energy crops could function feedstocks for the assembly of bioethanol, energy, heat and value-added chemicals.

Lignocellulose may be a complex mixture of carbohydrates that needs an efficient pretreatment to form accessible pathways to enzymes for the assembly of fermentable sugars, which after hydrolysis are fermented into ethanol. Despite technical and economic difficulties, renewable lignocellulosic raw materials represent low-cost feedstock's that don't compete with the food and feed chain, thereby stimulating the sustainability. Different bioprocess operational modes were developed for bioethanol production from renewable raw materials. Furthermore, alternative bioethanol separation and purification processes have also been intensively developed.

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