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Review

Various Pretreatments of Lignocellulosics

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Various Pretreatments of Lignocellulosics

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Abstract

Biomass pretreatment for depolymerizing lignocellulosics to fermentable sugars has been studied for nearly 200 years. Researches have aimed at high production of sugars with minimal degradation to inhibitory compounds. Chemical, physico-chemical and biochemical conversions are the most promising technologies. This article reviews the advances and current trends in the pretreatment of lignocellulosics for a prosperous biorefinery.

Introduction

The alarming environmental, economic and social issues engendered by massive use of fossil resources have encouraged intensive researches on substitute raw materials for energy, materials and chemical production. Alternative energy production can be implemented by the use of different renewables such as wind, water and sun, but the industries based on sustainable materials, chemicals and fuels rely mostly on lignocellulosic biomass.

Lignocellulosics are abundantly available, relatively distributed worldwide and may alleviate the conflict in use between food and energy. Bioconversion of lignocellulosics to

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