Introduction to Chemicals from Biomass, Second Edition

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Abstract

Pretreated biomass can efficiently convert to desirable products or energy through two main platforms: thermochemical or biological. Thermochemical conversion technologies involve thermo-decomposition of biomass into products. Biological conversion mainly involves conversion of biomass to sugars for fermentative chemicals production with the help of microorganisms such as bacteria or fungi. This chapter discusses the concepts of various pretreatment processes including mechanical, physical, chemical, and biological methods. Pretreatment helps alter the physical properties and chemical composition of biomass, and makes it more suitable for conversion. Bioconversion of biomass into products through fermentation is a very flexible process which could lead to a wide range of products including biofuels, biochemicals, or biomaterials.