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Glucose Production from Biomass–Kinetics, Thermodynamics and Catalysis

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Message from the Guest Editors

Dear Colleagues,

Glucose from biomass is the economic driver for the upcoming biorefinery. Selective production of glucose from ellulose is a challenge. Extensive research efforts are currently devoted to the development of solid acid catalysts that could substitute mineral acids for the hydrolysis of cellulose to glucose. In addition, unconventional activation techniques like microwave irradiation, sonochemical irradiation and electricity are used as means to accelerate the selective production of glucose from biomass. Biomass fractionation to cellulose, hemicellulose and lignin comprise of the vital step towards the commercialization of glucose production from cellulose. Any successful process for glucose production from biomass must address the three key aspects of the chemical/biochemical conversion process, namely, kinetics, thermodynamics and catalysis and this forms the core of the current Special Issue. We do hope enthusiastic contribution from the scientific fraternity around the globe for making the know-how to produce glucose at commercial scale available for the upcoming biorefinery facility.