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Heterogeneous Catalysts for the Valorization of Biomass Derived Compounds

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Message from the Guest Editor

The anthropogenic emissions caused by the use of fossil fuels prompt demand for sustainable renewable alternatives. Biomass plays an important role in mitigating climate change. The valorization of these residues is possible due to the components present therein (cellulose, hemicelluloses, lignin and starch). These components can be converted to important biofuels and chemicals, such as organic acids, furanic aldehydes, furanic ethers, levulinates, aromatics and amino acids with applications in several sectors of the chemical industry. Homogeneous catalysts can be very efficient in several conversion processes, but they present several drawbacks such as difficult recovery and separation from the target products, with increased costs. The use of multifunctional heterogenous catalysts is important to enhance the productivity of the processes and allow multiple steps to be carried out in only one reactor. Hence, the development of suitable heterogeneous catalysts for biomass valorization is crucial. This issue covers all aspects of heterogeneous catalysis applied to the valorization of vegetable biomass and derived compounds for producing useful chemicals, biofuels or fuel additives.

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Message from the Editor-in-Chief

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