



Bifunctional Catalysts for Selective Hydrogenation and Oxidation

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Message from the Guest Editors

Depletion of fossil fuels and the potential risks related to climate changes have driven enormous efforts towards replacing petroleum with more sustainable lignocellulosic biomass to produce fuels and chemicals. In this framework, developing potential cascade chemical processes using heterogeneous catalysts with ample amounts of acid, base or redox-active sites is essential. On the other hand, due to constantly emerging portable devices, developing ways to store high density of energy is another important research area requiring multifunctional materials.

The main purpose of the present Special Issue is to show the current progress in the development of bifunctional catalysts for variety of reactions. These include, but are not limited to, hydrogenation, oxidation, hydrolysis, fast pyrolysis, hydroprocessing, oxidation, (trans) esterification, amination, dehydration, and isomerization. This Special Issue also welcomes original submissions dealing with bifunctional materials for energy production and energy storage devices, including materials preparation, characterization, and application.

