

Special Issue

Design of Catalysts for Hydrogen Production from Renewable Sources and Waste Materials

Message from the Guest Editors

This Special Issue focuses on the design of catalysts for hydrogen production from biomass and waste plastics. Hydrogen is a highly promising energy carrier; however, the vast majority of current hydrogen production still relies on fossil fuels. Replacing these conventional feedstocks with biomass and waste plastics poses a significant challenge that requires the development of competitive technologies for their efficient conversion. In this context, the role of catalysts is critical. We invite contributions related to the design of new catalysts, including the determination of their surface properties and their activity and selectivity in the aforementioned conversion processes. This Special Issue also covers topics such as catalyst stability under reaction conditions, resistance to deactivation, the optimization of reaction parameters and catalyst pretreatment, the application of biomass pretreatment methods, and the development of integrated processes within modern biorefineries. Studies on reaction mechanisms are also welcome.

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