catalysts

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The Design and Development of Precious Metal Catalysts

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Message from the Guest Editors

In recent decades, a wide range of precious metal catalysts have emerged as key catalytic materials for the production of fine chemicals and liquid/gas fuels. Precious metal catalysts, in the form of supported mono, bimetallic or multimetallic nanoparticles are the most common materials of sustainable and green catalytic processes. A range of supported metal nanoparticles have been evaluated for a range of catalytic applications. Finally, the crucial role of reactor design and final chemical processes for controlling activity, selectivity and deactivation phenomena has been demonstrated.

We invite the scientific community to submit their contributions in the form of original research articles and review articles that seek interactions between precious metal catalysts and their catalytic applications on selected topics. We are particularly interested in articles describing: 1) Biomass transformation; 2) Hydrogen peroxide synthesis; 3) Alcohol oxidation; 4) CO_2 valorization; 5) Deactivation studies using in situ and ex situ spectroscopic techniques; 6) Continuous flow processes for selective transformation; 7) Computational modeling and simulation of catalytic sustainable processes