

Special Issue

Development of Catalytic Systems for Green Chemistry

Message from the Guest Editors

One of the primary goals of green chemistry is to design products and processes that minimize the use and generation of hazardous substances. Developing catalytic systems for green chemistry is crucial for sustainable chemical processes. Catalysis enhances reaction efficiency, reduces energy consumption, and lowers waste production. Therefore, research focuses on creating effective and non-toxic catalysts from abundant resources. Heterogeneous catalysts, which are easily separated and reused, offer economic and environmental benefits. Biocatalysts, such as enzymes, provide high specificity and operate under mild conditions, reducing energy use and the need for harsh chemicals. Nano-catalysts, with their large surface area and unique properties, improve reaction rates and selectivity. Additionally, using renewable feedstocks like biomass and safer aqueous media is a key advancement. These efforts reduce the environmental impact of the chemical industry and support sustainable processes.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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