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New Insights into Nanoparticles in Sustainable Catalysis

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Message from the Guest Editors

Research on catalysis, namely on the fundamental properties of heterogeneous catalysts as well as on the nature of catalytically active sites, have remained largely understudied. Nanostructured materials play an important role in today's chemical processes, acting as catalysts in heterogeneous, photo, thermal, and electrocatalytic processes for the production of cost-effective feedstock chemicals, smart/sensing surfaces or fuel cells, just to mention a few.

New insights are necessary to understand the rate-determining processes and steps of many heterogeneous reactions and identify important structure-activity/selectivity synergies, enabling a knowledge-driven improvement of catalysts. Furthermore, the traditional need for efficient and selective catalytic reactions that also strives for waste reduction, atomic efficiency, high reaction rates, and catalyst recovery are topics that still need more input. This Special Issue aims to highlight key examples of advanced designed nanomaterials with applications in catalytic and sustainable processes.



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Special Issue



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Message from the Editor-in-Chief

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