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Theory and Experiment of Heterogeneous Catalyst with Symmetric Structure

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Deadline for manuscript submissions:
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Message from the Guest Editor

Heterogeneous catalysis plays a key role in the production of numerous essential products. Understanding the relationship between catalyst structure and its performance, and constructing catalysts with well-designed target structures, are of great significance for the development of ideal catalysts.

To simplify the complex heterogeneous catalytic system, highly symmetrical materials are commonly used as model systems to study the reaction mechanism and the structure of active sites.

The aim of the present Special Issue is to emphasize a fundamental understanding of heterogeneous catalytic reactions and the role of catalyst structural symmetry. We are soliciting contributions (research and review articles), including (though not limited to) the following: relationships between substrate adsorption configuration and catalyst symmetry, effects of catalyst structure on reaction selectivity, catalytic reaction mechanisms, dynamics under different catalytic environments, etc.

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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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