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Heterogeneous Catalysis and Photocatalysis in Materials

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Message from the Guest Editors

Dear Colleagues,

By selectively tuning the activation barrier of a specific reaction pathway, via preferentially enriching kinetically relevant species under working conditions, a catalyst alters the kinetics of a chemical reaction without changing the intrinsic thermodynamic equilibrium between materials. So far, metal (oxide), semiconductor, and even insulator-based materials are found in various forms in heterogeneous catalysis and photocatalysis, where thermal- or photo-energy drives the turnover of a reaction and transform energy into chemical bonds. Large-scale production of fine chemicals and commodities has been dominantly catalyzed by heterogeneous catalysis in the chemical industry and will continue to do so in the forthcoming future. The mimicking of photocatalytic activities in nature is often termed artificial photosynthesis. This Special Issue focusing on “Heterogeneous Catalysis and Photocatalysis in Materials” calls for the submission of manuscripts from the general fields of heterogeneous catalysis and photocatalysis.

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Message from the Editor-in-Chief

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