



New Advances in Heterogeneous Catalysis Materials

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Message from the Guest Editor

Due to an urgently needed change in the use of raw materials as well as an increasing demand for enduring storage of electrical power from renewable energy sources, new catalyst materials and advanced concepts for the utilization of biomass for industrially relevant basic chemicals as well as Power-To-X (gas, liquid, and heat) technologies represent major challenges these days. Current industrial processes and catalyst-based environmental technologies have to be transformed into more green and sustainable procedures to achieve the objective of climate neutrality in the carbon cycle. To realize a continuous transition from a fossil fuel-based economy into a climate-neutral economy, chemical conversions of the most important greenhouse gas—carbon dioxide—into basic chemicals by catalytic or electrocatalytic processes must also be intensified. Finally, the return of already existing products and micro-pollutants must be given an increased focus with the objective to integrate them into these new raw material cycles by catalytic processes.





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Message from the Editor-in-Chief

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