



Metal Oxides for Heterogeneous Catalysis

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Message from the Guest Editors

Catalysis plays a key role in chemical, physical, and biological sciences and is one of the most important fields in industrial chemistry.

For the majority of different industrial catalytic reactions, the use of metal oxide catalysts is essential; these materials find uses in the majority of refining and petrochemical processes, the synthesis of chemicals, biomass transformation reactions, and the abatement and control of environmental pollution. These catalysts include simple or mixed metal oxides such as alumina, silica–alumina, metal organic frameworks (MOFs), complex oxides such as polyoxometalates (POMs) of Keggin or Dawson type, phosphates, multicomponent mixed oxides (e.g., molybdates), hexaaluminates, and high-entropy oxides. In particular, MOFs—a relatively new type of material with potential for rational design, are attracting increasing interest for heterogeneous catalysis applications.

This Special Issue invites contributions that focus on the development of solid metal-oxide-type catalysts for use in gas or liquid phase heterogeneous catalytic or photoelectrocatalytic reactions. Novel methods for the preparation of metal oxides are especially welcome.





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Message from the Editor-in-Chief

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