

## Special Issue

# Catalysts: New Preparation Methods and Advanced Characterization

### Message from the Guest Editor

The synthesis of well-defined heterogeneous catalysts is important for the achievement of selectivity in catalytic substrate conversion. A clear structure–function relation is a prerequisite for the understanding of key catalytic steps and for the future improvement of catalyst performance. Traditional catalyst preparation techniques such as impregnation, deposition–precipitation, or chemical vapor decomposition (CVD) lead to mixtures of surface species, which notably complicate the gain of mechanistic information. Hence, new synthesis approaches are needed to obtain heterogeneous catalytically active materials, characterized by well-defined surface catalytic sites, which promote specific catalytic reactions and thus notably increase the selectivity of catalytic processes. Obviously, new catalytically active materials need to be characterized by physical methods which allow for an in depth analysis of the number of catalytically active sites and their specific, selectivity steering, chemical environment.

### Guest Editor

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