

Applying polyoxometalates for enhanced catalytic performance

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One of the current main challenges of our society is the future supply of energy and platform chemicals based on renewable feedstock. A sustainable and flexible availability of energy feedstock forms the basis for a future highly developed industrial society.

Polyoxometalates (POMs) are a fascinating group of anionic metal-oxide clusters with a broad variety of structural properties and various applications in catalysis, medicine, biotechnology, nanotechnology, electrochemistry as well as materials science.

This presentation gives a compact overview of several catalytic applications using POMs in industrially relevant reactions. Hereby, both homogeneous as well as heterogeneous applications are addressed accompanied by kinetic, electrochemical as well as spectroscopic investigations