catalysts

an Open Access Journal by MDPI

IMPACT FACTOR 4.0

CITESCORE 7.6

Advance in Selective Alcohol and Polyol Oxidation Catalysis

Guest Editor:

Dr. Werner Oberhauser
Istituto di Chimica dei Composti Organometallici (CNR-ICCOM), Via Madonna del Piano 10, 50019 Sesto Fiorentino, Italy

Deadline for manuscript submissions:
closed (10 January 2022)

Message from the Guest Editor

Dear Colleagues,

The selective oxidation of alcohols to carbonyl compounds or organic acids is a fundamental functional group transformation, which is much more challenging in terms of conversion and selectivity when polyols, such as glycerol or sugar molecules, are used as the substrate. In fact, polyol oxidation reactions mainly occur under harsh reaction conditions and hence the development of robust recyclable catalysts, which maintain their activity and selectivity over time, is mandatory for a sustainable catalytic substrate conversion.

This Special Issue welcomes original research articles and reviews dealing with any aspect of alcohol and polyol oxidation reactions. Topics of particular interest include:

- the synthesis and application of recyclable molecular catalysts for alcohol and polyol oxidation;
- the synthesis and application of well-defined metal nanoparticles localized on any type of solid support material for selective alcohol and polyol oxidation; and
- alcohol and polyol oxidation reactions conducted under aerobic conditions or that use other sustainable hydrogen acceptors.