catalysts

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Bioeconomy Driven Catalytic Reactions

Guest Editors:

Dr. Nicoletta Ravasio
CNR, Istituto di Scienze e Tecnologie Chimiche "G. Natta", Via Golgi 19, 20133 Milan, Italy

Dr. Federica Zaccheria
CNR, Istituto di Scienze e Tecnologie Chimiche "G. Natta", Via Golgi 19, 20133 Milan, Italy

Deadline for manuscript submissions:
closed (31 March 2021)

Message from the Guest Editors

Catalysis has a highly relevant role in this scenario to ensure clean processes and the efficiency of resources and catalysis may be considered as an enabling technology for this transition. However, it is necessary to adapt catalytic processes to new feedstocks.

Catalysis is a core technology of the current fossil-based economy dealing with the transformation of hydrocarbons and their functionalization. On the contrary, raw materials for the new economy will be lignocellulose, lignin, starch and sugars, and vegetable oils, all of which are highly oxygenated substrates. Therefore, the development of new processes is quite challenging.

This Special Issue welcomes manuscripts dealing with the catalytic transformation of sugars, vegetable oils, and platform molecules derived from cellulose or lignin to obtain new bio-based products for the industry, and the following topics in particular:

- Surfactants;
- Lubricants;
- Fuel additives and fuel extenders;
- Monomers for the bioplastic industry;
- New polymers.

Chemocatalysts operating under both heterogeneous and homogeneous conditions will be considered.