

Special Issue

Polyoxometalate Catalysis for Sustainable Bio-Derived Products (Chemicals, Materials and Fuels)

Message from the Guest Editor

Polyoxometalates (POMs), early transition metal oxygen anion clusters, represent an important class of synthetic inorganic catalysts. The unique complex of heteropolyoxometalate (HPA) properties can be easily controlled during a rather simple and low cost synthesis, high solubility in water and various oxygen-containing organic solvents, high stability over a wide range of reaction conditions, and, finally, easy regeneration after utilization, make HPAs very attractive catalysts in biomass conversion technologies.

This Special Issue invites original research papers covering all aspects of homogeneous or heterogeneous catalysis by POMs in the field of lignocellulosic biomass biorefinery and chemical conversion of isolated biomass components, including, but not limited to, the following topics: POM-catalyzed fractionation of biomass; POM-catalyzed oxidation reactions; POM-catalyzed hydrolysis/acid reactions; POM-catalyzed synthesis and modification of biomass components; POM catalysis of biomass conversion in green solvents; POM solid catalysts for biomass conversion; POM and product recovery during biomass conversion; new POM catalysts for biomass fractionation/upgrading; etc.

Guest Editor

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