Special Issue

Metal-Organic Framework Materials as Catalysts

Message from the Guest Editors

Heterogeneous catalysis plays an increasingly crucial role in chemical manufacturing, often leading to a major reduction in waste. The use of MOFs as heterogeneous catalysts has helped enormously in the last two decades as they are an eco-friendly alternative to homogeneous catalysis. MOFs have been employed as solid catalysts for a variety of organic transformations, including alkylation, acylation, oxidation, epoxidation, hydrogenation, condensation, esterification, metathesis, and Diels–Alder reactions, etc. The separation of the reaction products, the reusability of catalysts, and fewer leaching problems make MOFs superior as active heterogeneous catalysts.

The goal of this Special Issue's is to showcase the frontiers of academic research into catalysis with MOFs and their derivates. MOF catalysis can be based on the active sites in a framework, i.e., metal nodes and organic linkers and the loading of nano-metals and metal oxides. Moreover, the encapsulation of catalytically active species, post-chemical modifications of MOFs, multifunctional MOFs, mixed linker MOFs, and asymmetric MOFs for catalyzed organic transformations are all of interest for this Special Issue.

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