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## METAL ORGANIC FRAMEWORKS AS VERSATILE HETEROGENEOUS CATALYSTS FOR ORGANIC TRANSFORMATIONS

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**M**etal organic frameworks (MOFs) are porous crystalline materials whose crystal lattice contains metal ions or metal clusters held by rigid, normally aromatic, bi- or multipodal organic linkers. MOFs are increasingly used in heterogeneous catalysis due to their intrinsic activity derived from the presence of metal ions having coordinatively unsaturated sites or to the substituents at the organic linker, but also because MOFs can host in the pore voids catalytically active guests. One of the important features that make MOFs so appropriate in heterogeneous catalysis is their high porosity and large surface area. This high pore volume makes MOFs particularly suited to incorporate guests that can exhibit catalytic activity, the role of MOFs being as insoluble supports allowing easy recovery of the occluded guests and also providing stabilization of the guest under reaction conditions due to confinement and geometric restrictions. In the present lecture, recent developments of using MOFs as heterogeneous catalysts for organic transformations will be discussed by our group.

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