

Special Issue

Metal Promoted Cyclocarbonylation Reactions in the Synthesis of Heterocycles

Message from the Guest Editor

Oxygen and nitrogen heterocycle systems are found in a vast number of natural substrates and biologically active molecules such as antimycotics, antibiotics, antioxidants, pigments, and fluorophores. Therefore, several procedures dedicated to the building of such heterocycles have been developed. Many of them are based on the cyclization of suitable substrates, multi-component reactions, and ring expansion processes. In this field, metal-catalyzed cyclocarbonylative reactions represent atom-economical and efficient methods for the synthesis of several functionalized compounds. Indeed, when the cyclization reaction is performed under CO pressure or in the presence of its surrogates the potentiality of the process is enhanced since the formation of the ring takes place with the contemporary introduction of the carbonyl functional group. This Special Issue will focus on metal-catalyzed cyclocarbonylation reactions applied to the synthesis of heterocyclic rings of different sizes, including diastereoselective and enantioselective approaches, homogeneous and heterogeneous metal catalysis, and the application of these reactions to the total synthesis of natural products.

Guest Editor

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