Homogeneous Palladium-Catalyzed Reactions

Message from the Guest Editor

Dear Colleagues,

Palladium is probably the most versatile and exploited transition metal in catalysis due to its capability to promote a myriad of organic transformations, both on laboratory and industrial scale. Despite the inherently arduous recovery of the catalyst, homogeneous palladium-catalyzed reactions continue to play an essential role in organic synthesis. Natural alkaloids, bioactive compounds, pharmaceutical agents, agrochemicals, specialty polymers, etc., can be efficiently accessed by means of homogeneous palladium catalysts. In general, palladium-based catalysts are involved in a variety of homogeneous organic reactions, such as alkylation, arylation, cyclization, hydrogenation, oxidation, isomerization, cross-coupling, cascade, radical reactions, etc. Particular attention is devoted to the use of homogeneous palladium catalysts in C-H bond activation, carbonylation, and asymmetric reactions or in combination with other metals. High chemo-, regio-, and diastereoselectivities as well as high levels of molecular sophistication can be achieved by employing tailored palladium-based catalytic systems under homogeneous and mild reaction conditions. However, despite these developments, every day new, exciting palladium-based applications are disclosed, giving renewed emphasis to palladium chemistry. Original research papers and reviews focusing on recent advancements in the field of homogeneous palladium-catalyzed transformations are welcome for inclusion in this Special Issue of Catalysts.

Deadline for manuscript submissions:
31 August 2019