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Recent Applications of Metal Catalysts in Organic Synthesis, 2nd Edition

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Message from the Guest Editors

In recent decades, the development of original and efficient processes to perform the synthesis of renewable and/or affordable chemicals with widespread applications in industry has become a topic of great interest. Transition-metal catalysis has undoubtedly participated in this area, with the topic being awarded five Nobel Prizes in chemistry since the 1960s. These were awarded for (1) Ziegler–Natta polymerizations, (2) the development of the metathesis, (3) palladium-catalyzed cross coupling reactions, (4) chirality and asymmetric catalysis, and last year (5) the "click" copper catalyzed azide-alkyne cycloaddition. In fact, all these prompt advances have significantly changed our world, notably by broadening the uses of fossil fuels, but also by enabling the discovery of many novel synthetic molecules and materials.

In this context, this Special Issue aims to cover the most recent progresses and advances towards the design, synthesis, and characterization of novel metal catalysts, as well as their applications in environmental remediations and new routes for the production of molecules of biological, (photo)physical, agrochemical, and pharmaceutical interest.