Special Issue

Advance in Catalytic C–H Functionalization for Chemical Synthesis and Other Applications

Message from the Guest Editors

Reactions of hydrocarbons and alcohols occurring with the functionalization of C-H bonds can be catalyzed by metal complexes. These transformations are widely applied for organic synthesis, water photo-oxidation, the fixation of CO, CO2 and N2, etc. The efficient and selective functionalization of C–H bonds in saturated and aromatic hydrocarbons is one of the very important goals of organic chemistry. All these processes lead to the formation of extremely valuable chemical products. New catalytic systems based on metal complexes have been discovered during the last decades, which allow us to introduce various groups into aromatic and even saturated hydrocarbons and their derivatives, as well as other C–H compounds and oxidize alcohols into aldehydes, ketones and acids. Full comprehensive and mini-reviews covering various fields of catalytic transformations and highlighting specific problems, describing new unusual catalysts, new unusual solvents, new methods of inducing reactions (by light irradiation, *etc.*), will be very helpful for the reader.

Guest Editors

Prof. Dr. Georgiy B. Shul'pin

Russian Academy of Sciences, Semenov Institute of Chemical Physics, Moscow, Russia

Dr. Kamran T. Mahmudov

Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, 1049–001 Lisboa, Portugal

Deadline for manuscript submissions

closed (15 July 2020)

Catalysts

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Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/28897

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

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Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

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