



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

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)

Message from the Guest Editors

Dear Colleagues,

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.

