Special Issue

Homogeneous Catalysis with Main Group Organometallics

Message from the Guest Editors

In the recent past, there has been considerable interest in developing homogeneous catalysts based on structurally well-characterized compounds of the main group metals. Following the recognition that elementary reactions such as oxidative addition or sigma-bond metathesis, main group compounds are indeed found to catalyze reactions previously reserved to transition metal compounds. This surge in interest clearly stems from novel concepts such as frustrated Lewis base pairs which make it possible to view s- and p-block metals as potentially useful and often inexpensive earth-abundant metals. More recently, by introducing main group metals as ligand parts in organotransition metal catalysts, new perspectives for homogeneous catalysts on transition metals have evolved. This area of heterobimetallic compounds as catalyst precursors hold great promise for the future design of more active and/or selective homogeneous catalysts. In this Special Issue, we wish to cover the most recent advances in all aspects of main group chemistry relevant to homogeneous catalysis by hosting both original research articles and short critical reviews.

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Inorganic chemistry remains a lynchpin of modern chemistry, not only embracing the function and reactivity of combinations of most elements of the periodic table, but also providing a footing for studies of materials, catalysts, drugs, fuels and industrial chemicals. Arguably, the role and reach of inorganics in society have never been as great as today. Adventurous research at the heart and at the extremes of inorganic chemistry is vital to further advances and Inorganics offers authors the opportunity to publish exciting new research in an open access format.

Editor-in-Chief

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