

Special Issue

Homologation Reactions in Organic Synthetic Chemistry

Message from the Guest Editors

Homologation reactions—defined as synthetic operations that transform a given reactant into the next member of a homologue series—constitute powerful and versatile tools for preparative chemistry. In recent years, carbenoids have emerged as suitable reagents for accomplishing homologations. They are organometallic compounds containing a metal atom (e.g., Li, Mg, Zn) and at least one heteroatom-containing element (e.g., halogen, N, O) linked to the same carbon. This feature makes them unique entities in the synthetic panorama, in primis for their constitutive ambiphilicity, enabling them to manifest nucleophilic or electrophilic behaviour, depending on the reaction conditions. This Special Issue aims to cover the general field of homologations, focusing on the development and synthetic uses of these techniques in synthesis. Researchers active in the fields are, therefore, warmly invited to propose original research articles, as well as relevant state-of-the-art reviews or perspectives, to be published in this Special Issue of *Molecules*.

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Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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