



Organolithium Chemistry: Molecular Understanding of Reactivity

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Alkylolithium compounds are probably the most commonly used reagents in organic chemistry. Their exceptional nucleophilic and basic properties explain why these species play such an important role in organic synthesis. Nowadays, these reagents have become so commonplace that they are rarely considered worthy of their own scientific study. Only a few groups in the world are still interested in understanding the solution structure of these reagents and attempting to correlate these observations with reactivity and stereoselectivity.

In this communication, we will briefly discuss some examples of investigations we have conducted on organolithiated derivatives (chiral lithium amides, lithium phosphides, alkylolithiums, lithium halides....) in solution and the conclusions we have drawn regarding the relationship between structure and observed reactivity/selectivity during the use of these entities in organic synthesis.^[1-4] We will also provide detailed information on the case of the *ortho*-lithiation reaction of a sulfoximine.^[5]

References :

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