New Cycloaddition Reactions of Anionically Activated Dipoles

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New reactions of anionic dipoles: Based on the high reactivity of an anionic form of trimethylsilyldiazomethane, various unprecedented transformations were developed. These include cycloaddition, tandem cycloaddition—1,2-addition—cycloaddition, and cycloaddition—1,2-addition—fragmentation starting from α,β -unsaturated ketones.

Cyclopropenation via C–Si bond insertion: The reaction of lithiated trimethyldiazomethane was further expanded to its reaction with α -silylketones, which leads to the unprecedented C–Si bond insertion to generated silylated cyclopropenes.