

Preface: Recent Advancements in The Chemistry of Diazo Compounds

The chemistry of diazo group is more than a century old but still continues to draw attention from the scientific community. The inherent ambiphilicity of the diazo group imparts diverse reactivity to the diazo compounds making them valuable building blocks in synthetic organic chemistry. This special issue on "Recent Advancements in The Chemistry of Diazo Compounds" is a collection of original and review articles that highlight the significant developments towards synthesis as well as transformations of various classes of diazo compounds.

The collection features an excellent review by Luis A. López and co-workers on the gold-catalyzed reactions of vinyldiazo compounds. Although, the gold-catalyzed transformations of diazo compounds have been extensively reviewed, the chemistry of vinyldiazo compounds under gold catalysis has not been reviewed earlier. The review covers reactions of vinyldiazo compounds involving gold carbene as well as non-carbene intermediates.

Doyle and co-workers, on the other hand, reported an efficient protocol for electrophilic C-H functionalization of vinyldiazoacetates with 3-phenyl-3-hydroxyisoindolinone. The Bronsted acid catalyzed reaction provided easy access to *E*-substituted isoindolinone vinyldiazo compounds.

Maguire and Collins investigated copper-mediated C-H insertions of α -diazo- β -keto sulfonamides leading to a variety of products including alkynesulfonamides, enamines as well as α -halosulfonamides.

The research group of Marcus M. Sá reported a diastereoselective synthesis of functionalized 1,3-dienes from α -diazo- γ,δ -unsaturated esters through a silver-catalyzed β -hydride migration.

Although, metal-catalyzed transformations of diazo compounds constitute a sizable portion of this collection, the recent advancements in the visible light-mediated photochemistry of diazo compounds too found their rightful place in this collection.

Rastogi and co-workers documented alkylation of *o*-hydroxyarylenaminones with acceptor-acceptor diazo compounds, photoactivated through energy transfer by the photosensitizer. Vaitla and co-workers reported a visible-light-mediated multicomponent reaction involving diazo esters, vinyl sulfoxonium ylides and thiols to access tertiary sulfides.

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