

NOVEL REACTIONS VIA ELECTROPHILIC ENOLONIUM SPECIES

Alex M. Szpilman

Department of Chemical Sciences, Ariel University, Israel

Nucleophilic Enolates and enol ethers of carbonyl compounds is mainstay of classical organic synthesis. Recently, we have reported on the umpolung of ketone enolates to discrete electrophilic Enolonium Species using hypervalent iodine. The ability to prepare these enolonium species in a discrete manner has made their reaction with a large number of previously incompatible nucleophiles possible. We will give an overview of the development, scope and mechanistic studies of enolonium species in alkylation, allylation, arylation, N-heteroarylation, azidation as well in coupling with enolates. Furthermore, we will report on the first Umpolung Morita-Baylis-Hillman reaction (unpublished results). The resulting α -products should find great utility in the synthesis of functional molecules.

