

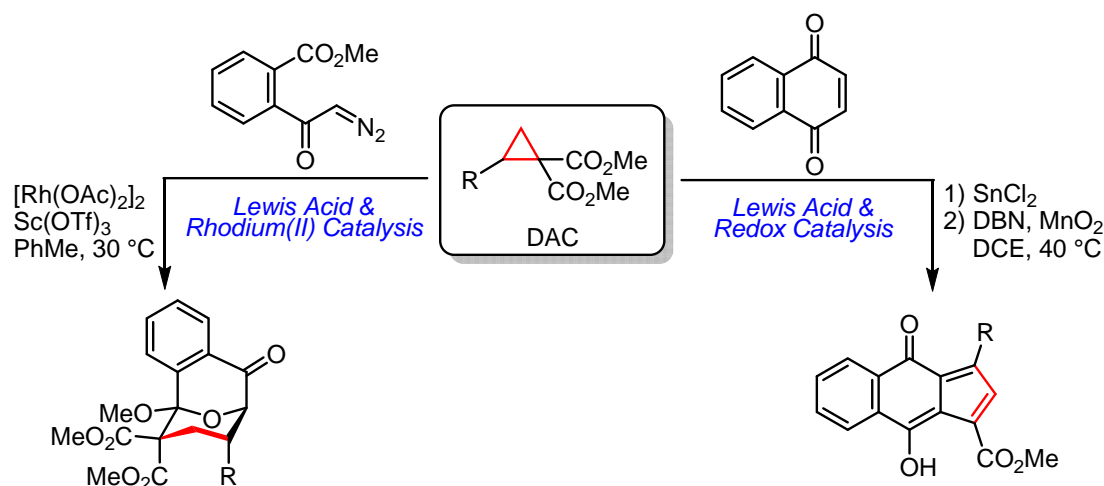
# SYNERGISTIC CATALYSIS IN DONOR-ACCEPTOR CYCLOPROPANE CHEMISTRY

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Donor-acceptor cyclopropanes (DACs) are highly strained entities which are unique building blocks for hetero- and carbocyclic systems [1,2]. For the last decade, we have been developing novel methodologies starting from these type of three-membered rings leading to oligopyrroles, chalcogen-containing heterocycles, and 1,3-bisfunctionalized products [3], just to name a few. To get deeper insights into their intrinsic reactivity in-depth physical organic studies were performed recently [4].

In this contribution, we will present our newest contributions using cyclopropanes in synergistic catalytic reactions. Commonly, DACs require the activation by Lewis acids. However, the other component to react with might be generated as a fleeting intermediate in situ by a second catalytic system. Two examples, one using Lewis acid and Rh catalysis (affording intermediate carbonyl ylides) [5] and another using Lewis acid and redox catalysis are presented [6]. In the former example highly substituted pyranes are generated, in the latter unusual fulvene-type dyes.



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