

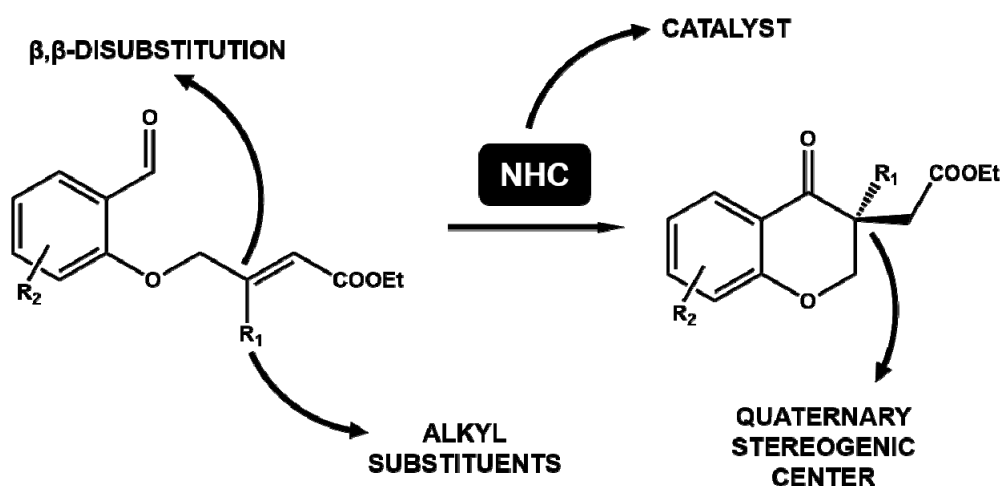
ENANTIOSELECTIVE SYNTHESIS OF CHROMANONES WITH QUATERNARY STEREOGENIC CENTER VIA NHC ORGANOCATALYSIS

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The carbon-carbon bond formation in *N*-heterocyclic carbene-catalysed reactions occur usually via *umpolung* strategy, switching the polarity of a carbonyl carbon atom [1], but it is also possible via acylazolium generation (e.g. oxidative path) [2]. A bigger challenge is stereoselective synthesis of substances bearing a quaternary chiral carbon atom (so-called all-carbon quaternary stereogenic center) [3].

The project involves stereoselective synthesis of chromanones via intramolecular Stetter reaction catalyzed by generated *in situ* *N*-heterocyclic carbenes. Simple in synthesis α,β -unsaturated esters (Michael acceptors), derived from salicylaldehydes, were used as substrates. The developed procedure enabled synthesis of expected products with high yields and excellent enantiomeric excesses. Moreover, the use of substrates with various R_1 and R_2 substituents confirmed a broad applicability of the developed strategy.



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