

Construction of Enantioenriched Chromans *via* Tandem Michael/Michael Strategy with Bifunctional Organocatalyst

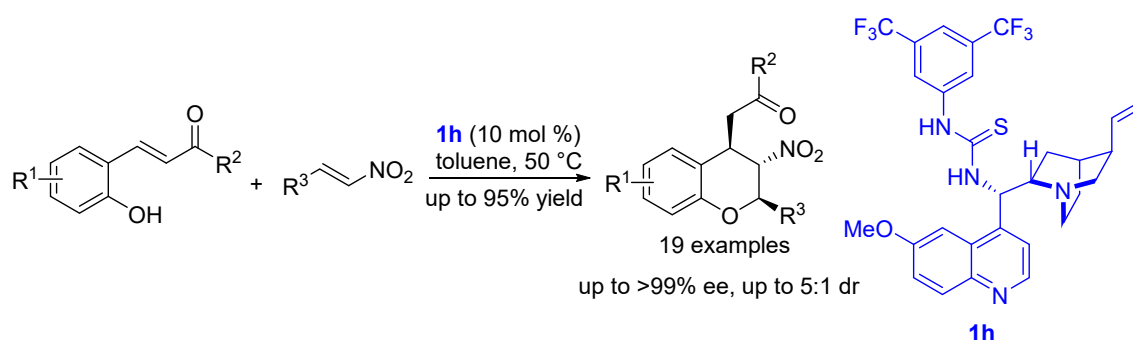
Prasenjit Saha, Arnab Biswas, Nagaraju Molleti, and Vinod K. Singh*

Department of Chemistry, IISER Bhopal, Madhya Pradesh, INDIA

(E-mail: arnabb@iiserb.ac.in)

Abstract:

Chiral chromans represent an important class of heterocycles which are found in many natural products and biologically active compounds. For example, Centchroman is one of the selective estrogen receptors and this compound is primarily used as oral contraceptive pills. Significant efforts have been made by several scientific groups for the enantioselective synthesis of chiral chroman derivatives. However, there was no report for asymmetric synthesis of Chromans using a tandem Oxa-Michael-Michael reaction with bifunctional thiourea organocatalyst. Thus, an enantioselective synthesis of chiral chroman derivatives *via* double Michael cascade reaction was developed in our group using bifunctional thiourea organocatalyst.



Scheme: Enantioselective Synthesis of Highly Substituted Chromans *via* Oxa-Michael-Michael Cascade Reaction with Bifunctional Organocatalyst.

Highly functionalized chromans were obtained in excellent enantioselectivities (up to >99%), good yields (up to 95%) and moderate diastereoselectivities (up to 5:1). The synthetic utility of our methodology was demonstrated by transforming the chroman derivatives to ring fused tricyclic chroman derivatives.

References and Notes:

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