

My research interest mainly focus on the design and synthesis of organocatalyst and study their catalytic application. We have carried out various reactions, such as: Michael reaction, aldol, Mannich reaction, α -amination and etc. We are interested in developing cascade reaction that to construct multifunctional group in the products with high chemical yield and stereoselectivities.

Techniques used in study

Reaction setup and monitor; TLC analysis; HPLC analysis; Flash column chromatography; Separation and purification; NMR spectroscopy; HRMS; Single crystal X-ray analysis.

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Background:

PhD in Chemistry, University of Pennsylvania, Philadelphia, PA, USA

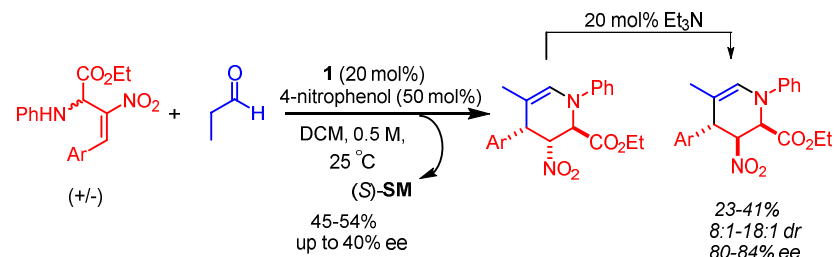
Funding:

Ministry of Science and Technology
National Taiwan Normal University

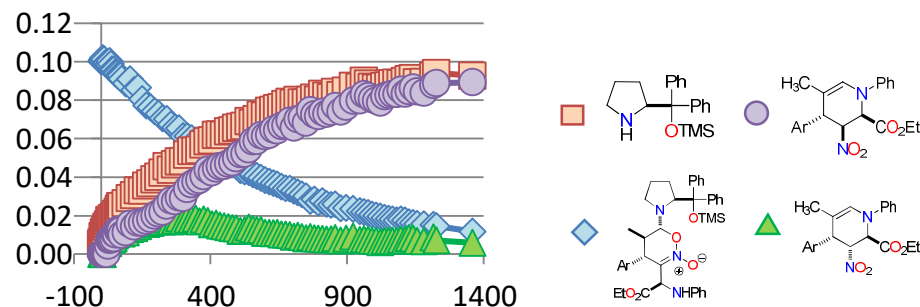


Asymmetric catalysis and beyond

Formation of Dihydroxazine N-Oxides and subsequently Hydrolysis:



Progress Studies of the Hydrolysis Reaction by 1H NMR:



Publications

- Wan-Yun Huang, Ramani Gurubrahamam, and Kwunmin Chen* "An Unprecedented Organocascade Synthesis of Functionalized Bicyclic Nitrones from 2-Aminomalonate Derived Nucleophiles and 1-Nitro-1,3-Enynes via Allenes Formation and Subsequent Rearrangement" *Adv. Synth & Catal.* 2019, 361, 170-175.
- Ramani Gurubrahamam, Koppanathi Nagaraju and Kwunmin Chen* "Organocatalytic synthesis of densely functionalized oxa-bridged 2,6-epoxybenzo[b][1,5]oxazocine heterocycles" *Chem. Commun.* 2018, 54, 6048-6051.

