Isoxazolidin-5-ones as a Platform for Asymmetric Phase-Transfer Catalyzed Functionalizations: Access to Highly Enantioenriched $\beta^{2,2}$-Amino Acid Derivatives

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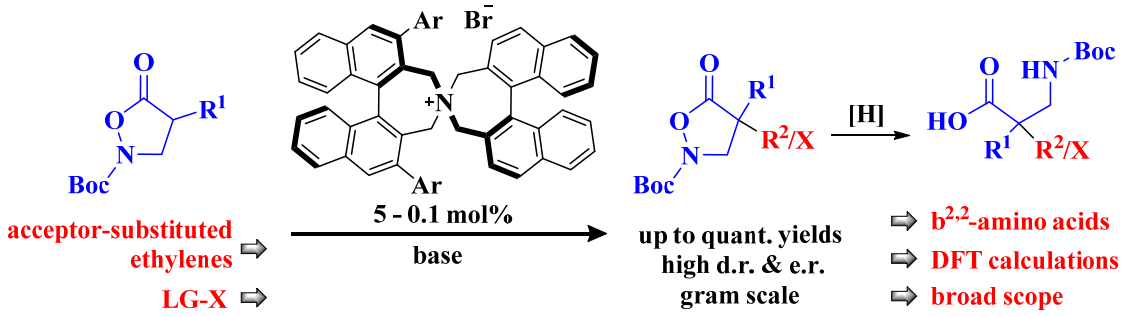
β-amino acids are present in a vast number of natural products and pharmaceuticals. It is therefore of great interest to access these structural motives in a stereochemically defined fashion. Isoxazolidin-5-ones, a class of β-amino acid precursors, show susceptibility towards different modes of asymmetric (organo)catalytic activation, as was impressively shown by the groups of Briere [1], Shibasaki [2] and Cossy [3].

Within this contribution we demonstrate efficient asymmetric phase-transfer catalyzed α-substitution protocols for isoxazolidin-5-ones. Highly selective conjugated additions and heterofunctionalizations (F^+) are achieved by employing commercially available *Maruoka*-type catalysts in low loadings. Subsequent hydrogenation under mild conditions yields the desired enantioenriched $\beta^{2,2}$-amino acid derivatives.



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