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PROGRAM & ABSTRACTS

Lewis Acid Catalyzed Intramolecular Allylation of Trichloroacetimidates: A Versatile Approach to Unsaturated β - and γ -Amino Alcohols

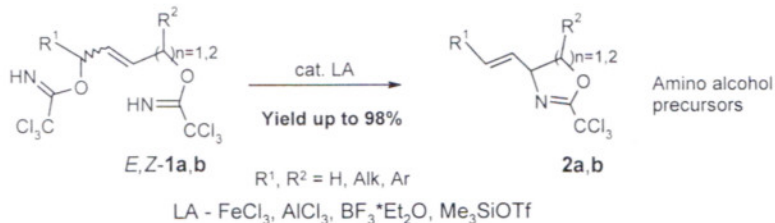
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A diverse range of natural products and pharmaceuticals involve amino alcohol substructure. This determines the need for efficient synthetic methods of such compounds.

Vinyloxazolines **2a** and vinyloxazines **2b** are versatile amino alcohol precursors that prompted us to explore the methods for their preparation¹. In our poster, we present Lewis acid catalyzed cyclization of bis-trichloroacetimidates **1a,b** to the corresponding *E*-oxazolines **2a** ($n=1$) or *E*-oxazines **2b** ($n=2$).



It is demonstrated that the cyclization of bis-trichloroacetimidates **1a** ($R^2=\text{H}$) is highly regioselective leading to mono-substituted vinyloxazolines **2a** ($R^2=\text{H}$). Several examples for the cyclization of disubstituted imidates **1a** ($R^1, R^2=\text{Alk, Ar}$) are also given. Poor chirality transfer in the cyclization of homochiral imidate **1a** ($R^1=i\text{-Pr}, R^2=\text{H}$) to **2a** was observed suggesting that the reaction likely proceeds by S_N1 type intramolecular allylation at nitrogen of imidate.

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References: 1. Maleckis, A.; Jaunzeme, I.; Jirgensons, A; *Eur. J. Org. Chem.* **2009**, 36, 6407.