

STEVENS [2,3]-REARRANGEMENT OF *N*-ALLYL AMMONIUM YLIDES

Aleksandra Murre, Kristin Erkman, Tõnis Kanger

Department of Chemistry and Biotechnology, School of Science, TalTech, Estonia
aleksandra.murre@taltech.ee

Our research group has previously investigated enantioselective [2,3]-rearrangement of oxindoles [1] and allyloxymalonates [2]. In this work, we have studied Stevens [2,3]-sigmatropic rearrangement of *N*-allyl ammonium ylides, which affords homoallylic tertiary amines that can be also considered as α -amino acid derivatives.

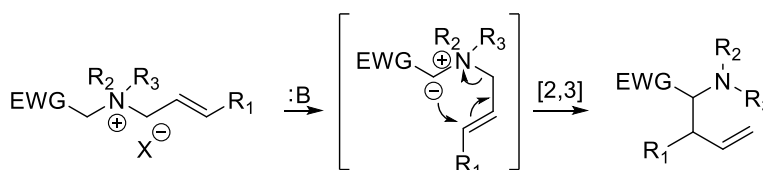


Fig. 1 General scheme of the Stevens [2,3]-rearrangement reaction

We will show that depending on the structure of allyl ammonium salts and the reaction conditions, we can perform Stevens [2,3]-rearrangement rapidly in high diastereoselectivity and yield.

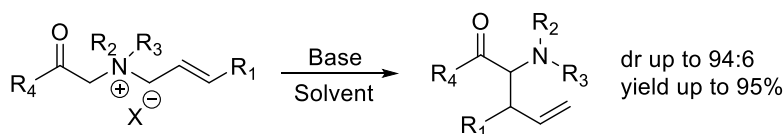


Fig. 2 Diastereoselective Stevens [2,3]-rearrangement reaction

In order to achieve enantioselective outcome, we have utilized chiral (*S*)-4-benzyloxazolidin-2-one in the synthesis of ammonium salt. Under the optimized conditions, enantioselective product was generated with diastereomeric ratio of 84:8:7:1.

References

1. Ošeka, M.; Kimm, M.; Kaabel, S.; Järving, I.; Rissanen, K.; Kanger, T. *Org. Lett.*, **2016**, *18*, 1358-1361.
2. Ošeka, M.; Kimm, M.; Järving, I.; Lippur, K.; Kanger, T. *J. Org. Chem.*, **2017**, *82*, 2889-2897.