T. Hashimoto, H. Nakatsu, Y. Takiguchi, K. Maruoka* (Kyoto University, Japan)

Axially Chiral Dicarboxylic Acid Catalyzed Activation of Quinone Imine Ketals: Enantioselective Arylation of Enecarbamates


Enantioselective Arylation of Enecarbamates with Quinone Imine Ketals

**Significance:** The asymmetric enantioselective arylation of enecarbamates catalyzed by a chiral Brønsted acid is reported. An axially chiral dicarboxylic acid (1) catalyzes the reaction of quinone imine ketals 2 with enecarbamates 3 to give α-amino-β-aryl ethers 4 in good yields and enantioselectivities. The products could be transformed into various useful chiral building blocks.

**Comment:** It is notable that opposite enantiomers of the products are obtained by changing from Z- to E-enecarbamates. The authors propose that the isomeric enecarbamates approach the quinone imine ketals 2 from the same prochiral face, and that diastereomeric intermediates are generated that lead to the opposite enantiomers after aromatization.