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.

**Proposed reaction mechanism:**

- **with (Z)-3**
  - [Chemical structure of the reaction products with (Z)-3]
- **with (E)-3**
  - [Chemical structure of the reaction products with (E)-3]