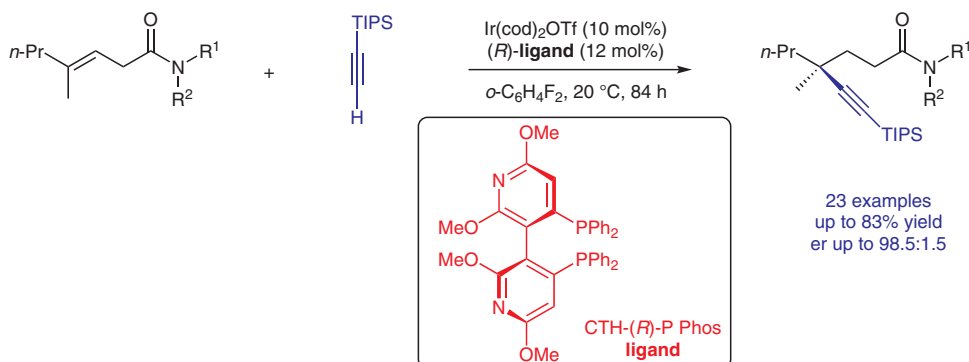
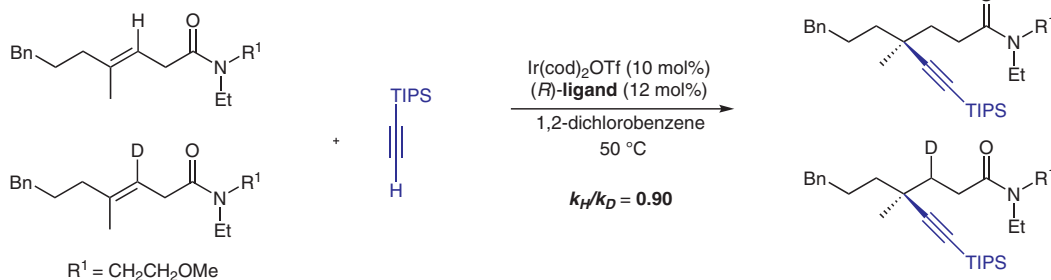


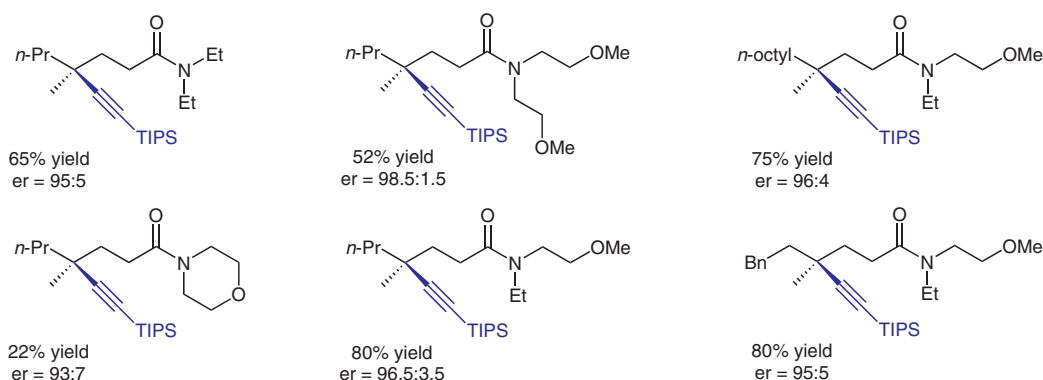
# Iridium-Catalyzed Asymmetric Hydroalkynylation of Unactivated Alkenes



## Kinetic isotope effect of alkene:



## Selected examples:



**Significance:** The authors have developed an enantioselective iridium-catalyzed hydroalkynylation reaction. The reaction transforms trisubstituted  $\beta,\gamma$ -unsaturated amides with excellent  $\gamma$ -selectivity, forming new alkyne-substituted acyclic quaternary carbon stereocenters.

**Comment:** The kinetic isotope experiments of the alkenes resulted in an inverse KIE; suggesting that the migratory insertion of the alkene is related to the turnover-limiting step. Notably, the authors propose that the selectivity arises from both a facial preference as well as an alkene isomerization process.