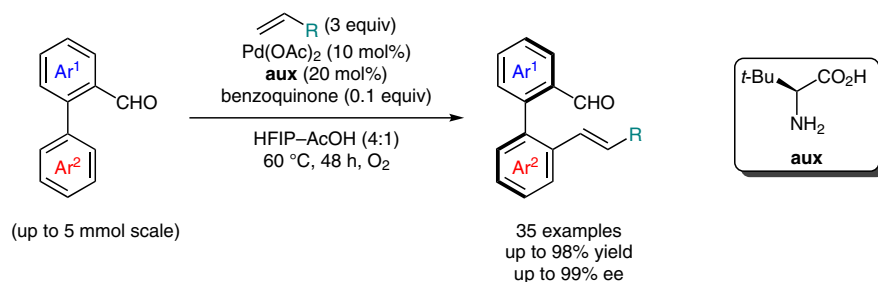
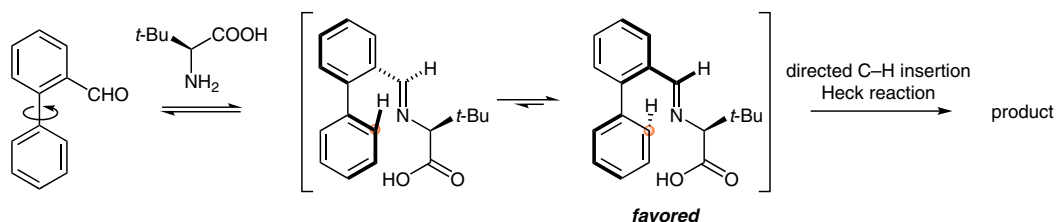


Q.-J. YAO, S. ZHANG, B.-B. ZHAN, B.-F. SHI* (NANKAI UNIVERSITY, TIANJIN, AND ZHEJIANG UNIVERSITY, HANGZHOU, P. R. OF CHINA)
 Atroposelective Synthesis of Axially Chiral Biaryls by Palladium-Catalyzed Asymmetric C–H Olefination Enabled by a Transient Chiral Auxiliary
Angew. Chem. Int. Ed. **2017**, *56*, 6617–6621.

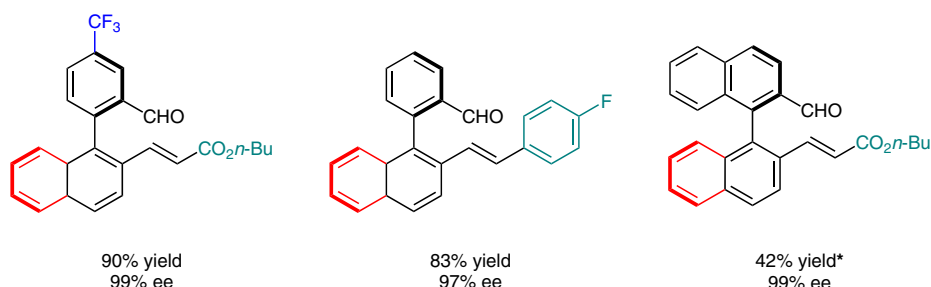
Dynamic Kinetic Resolution Approach: Synthesis of Axially Chiral Biaryls



Mechanism:



Selected examples:



* Substrates substituted at both the 6- and 2'-positions have restricted rotation; thus, products are formed by kinetic resolution.

Significance: Shi and co-workers report a protocol to access axially chiral biaryl systems by dynamic kinetic resolution. The approach relies on using *tert*-leucine as an inexpensive chiral auxiliary to allow selective C–H insertion into the favored atropisomer. Rotation is locked by a terminating Heck reaction.

Comment: The products are delivered in excellent yields and enantioselectivity. The reaction displays great scalability and is performed on up to 5 mmol. Additionally, both enantiomers can be accessed by simply using the amino acid of opposite chirality. The authors found that if the substrates are substituted at both the 6- and 2'-positions, the reaction does not exhibit dynamic reversibility and hence a maximum of 50% yield can be achieved in such cases.

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