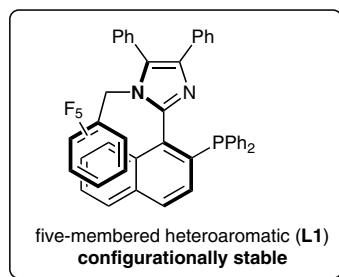
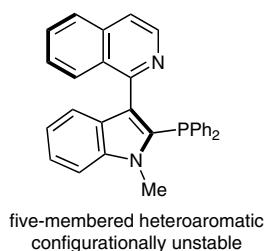
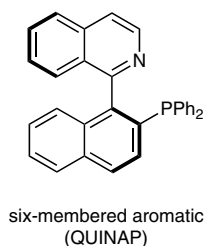
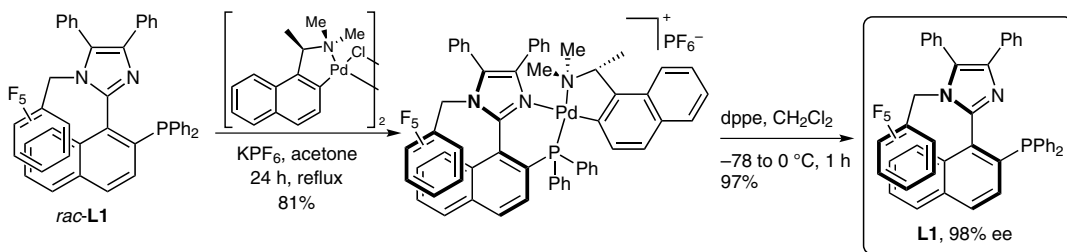
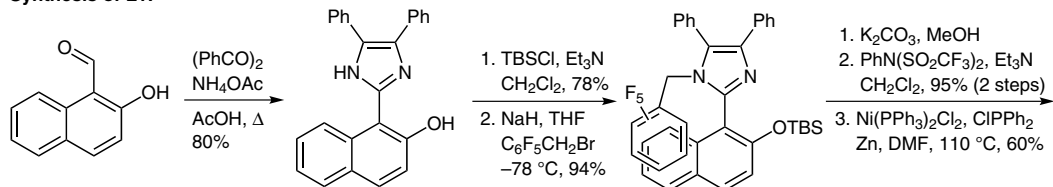


A Chiral Biaryl P,N-Ligand for Asymmetric Catalysis

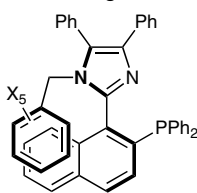
Concept:



Synthesis of L1:

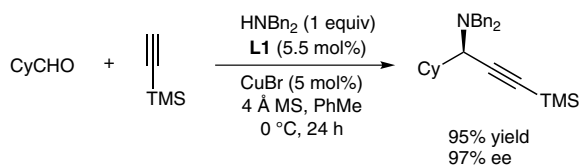


Importance of π -stacking:



L1 (X = F) half-life: 8.7 h at 75°C in DCE
L1-H₅ (X = H) half-life: 22 min

Selected example:



Significance: The authors reported the preparation of a new chiral biaryl P,N-ligand incorporating a five-membered electron-rich heteroaromatic. This ligand is easy to prepare and an effective catalyst for the enantioselective alkyne-ylidene reaction of imines.

Comment: In contrast to the six-membered P,N-ligands, five-membered P,N-ligands are configurationally unstable. The authors have succeeded in preparing a configurationally stable five-membered P,N-ligand involving π -stacking interaction, which would offer a new, unexplored chemical diversity.