A Chiral Biaryl P,N-Ligand for Asymmetric Catalysis

Concept:

Synthesis of L1:

Importance of π-stacking:

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 alkynylation 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.