Palladium-Catalyzed Enantioselective Arylation of α-Imino Esters

Significance: This protocol provides a practical and direct route to chiral arylglycines with high enantioselectivity (up to 99% ee). These derivatives can be easily converted into optically active α-amino acids, which are commonly used as chiral auxiliaries in asymmetric catalysis.

Comment: A palladium(II)-catalyzed asymmetric arylation of N-aryl-α-imino esters using a chiral BOX ligand was developed. This method is applicable to various aromatic boronic acids. A stereochemical model, consistent with experimental results, suggests a re-face attack of the aryl group onto the N-arylimine carbon.