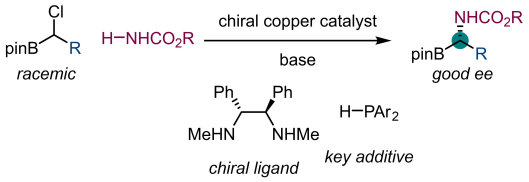
Enantioselective Synthesis of α-Aminoboronic Acid Derivatives via Copper-Catalyzed N-Alkylation

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Optically active α-aminoboronic acids, bioisosteres of natural α-amino acids, find application in medicinal chemistry as antitumor, antiviral, and antibacterial agents and for the treatment of type II diabetes. Herein, we present a new direct synthetic strategy based on the enantioselective cross-coupling of readily available racemic α-chloro boronates with carbamates using an earth-abundant copper catalyst with commercial DMPEDA and a diaryl phosphine as the ligands. These reaction conditions originated from a detailed mechanistic study of a photoinduced system.



reaction development: driven by mechanistic studies

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