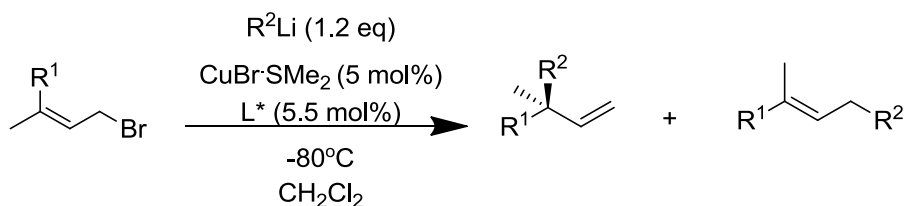


Enantioselective synthesis of quaternary stereogenic centers via Copper Catalyzed Allylic Alkylation with organolithium compounds

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Copper-catalyzed asymmetric allylic alkylation (AAA) has been reported as an excellent tool for the synthesis of tertiary and quaternary stereogenic centers using Grignard reagents.¹ Recently, aromatic and aliphatic organolithium compounds have been employed as nucleophiles resulting in a successful and highly regio and enantioselective methodology for the catalytic alkylation of *E* allyl halides.²

Here we reported the application of this methodology for the synthesis of the most challenging quaternary centers starting from aliphatic and aromatic *Z* allyl bromides. A wide series of phosphoramidite ligands have been screened and the influence of the allyl bromide geometry on the catalytic system have been studied for both aromatic and aliphatic organolithium compounds.



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