OC15
COPPER-CATALYZED ASYMETRIC CONJUGATE ADDITIONS OF BIS(PINACOLATO)DIBORON AND DIMETHYLZINC TO ACYL-IMIDAZOLE MICHAEL ACCEPTORS: A HIGHLY STEREOSELECTIVE UNIFIED STRATEGY FOR 1,3,5,...N (OH, ME) MOTIF SYNTHESIS

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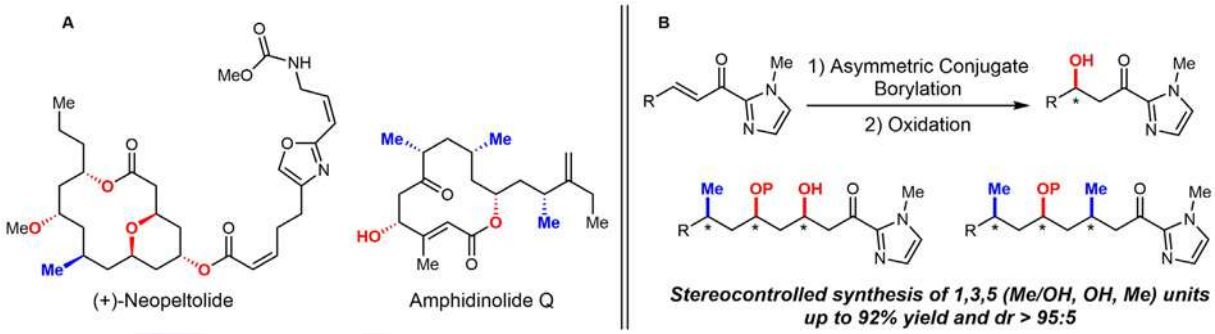
Polyketides are a broad and structurally diverse class of secondary metabolites with various medicinal applications.[1] Efficient strategies have been developed for the iterative construction of polyacetates, polypropionates, and poly-deoxypropionate motifs.[2] On the other hand, and despite the prevalence of 1,3,5,...n (OH, Me) motifs in biologically relevant molecules (Figure 1 A), no practical and broadly applicable unified strategy has been developed to date for the synthesis of these units with high stereocontrol.
To propose a solution to this challenging issue and thanks to the success obtained in ACA reactions,[3] we recently described a highly stereoselective unified strategy for the construction of 1,3,5,...n (OH, Me) motifs based on consecutive copper-catalyzed asymmetric conjugate borylation (ACB) and methylation (ACA) reactions involving α,β-unsaturated 2-acyl-N-methylimidazoles (Figure 1 B).[4]



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