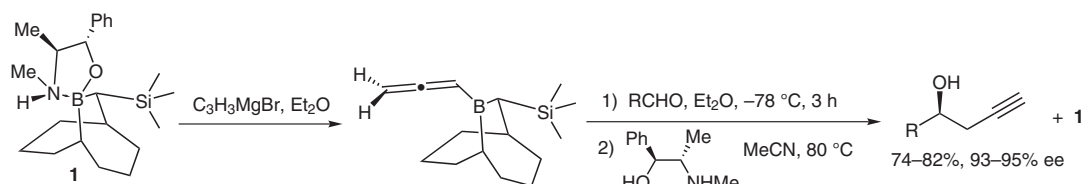


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Nonracemic Homopropargylic Alcohols via Asymmetric Allenylboration with the Robust and Versatile 10-TMS-9-borabicyclo[3.3.2]decanes

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Novel Asymmetric Synthesis of Homopropargylic Alcohols via Allenylboration



Significance: Non-racemic homopropargylic alcohols are important intermediates for the synthesis of different classes of useful compounds. This approach offers the use of readily accessible and recoverable chiral auxiliary, along with excellent selectivity and simplicity of the whole process. Allenylmagnesium bromide serves as a convenient C3-chain source without the need of using tin or silicon intermediates.

Comment: Allenyl-9-BBN reacts smoothly with carbonyl compounds. The proper modification of the structure and the optimal choice of the chiral auxiliary led to a stable and readily available precursor for the propargylating agent. The chiral auxiliary **1** is available in optically pure form and excellent yield after a two-step synthesis from commercial chemicals and is an air-stable crystalline compound. The overall method is probably the most convenient synthesis of homopropargylic alcohols to date.

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