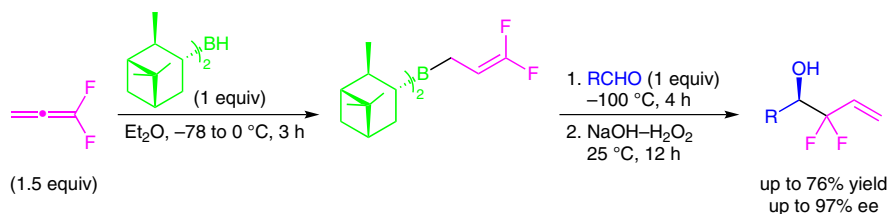


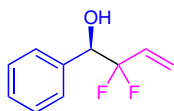
P. V. RAMACHANDRAN,* A. TAFELSKA-KACZMAREK, A. CHATTERJEE (PURDUE UNIVERSITY, WEST LAFAYETTE, USA)
B-(3,3-Difluoroallyl)diisopinocampheylborane for the Enantioselective Fluoroallylboration of Aldehydes
J. Org. Chem. **2012**, *77*, 9329–9333.

Enantioselective Fluoroallylboration of Aldehydes

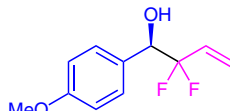


R = Ph, PMP, Naph, (CH₂)₂Ph, (*E*)-CH=CHPh, 2-furyl

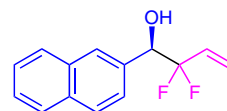
Selected examples:



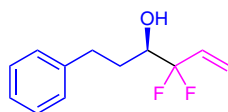
72% yield
94% ee



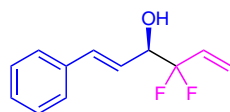
71% yield
93% ee



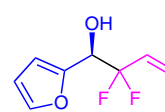
70% yield
94% ee



76% yield
97% ee



70% yield
91% ee



69% yield
92% ee

Significance: An enantioselective fluoroallylboration of a variety of aldehydes with *B*-(3,3-difluoroallyl)diisopinocampheylborane has been disclosed. The resulting 2,2-gem-difluorinated homoallylic alcohols have been obtained in good yield and high enantioselectivity.

Comment: The described reaction proceeds in one pot. After the synthesis of *B*-(3,3-difluoroallyl)diisopinocampheylborane out of freshly prepared 1,1-difluoroallene, the aldehyde is added directly to the reaction mixture, followed by an oxidative workup.