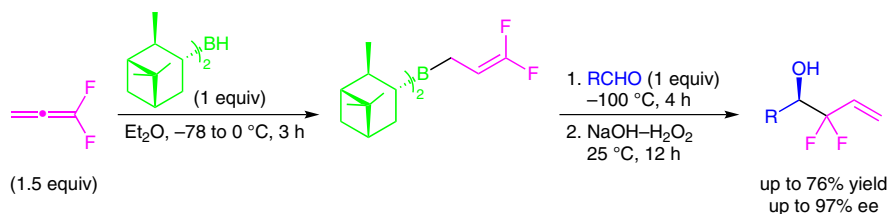


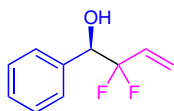
P. V. RAMACHANDRAN,\* A. TAFELSKA-KACZMAREK, A. CHATTERJEE (PURDUE UNIVERSITY, WEST LAFAYETTE, USA)  
*B*-(3,3-Difluoroallyl)diisopinocampheylborane for the Enantioselective Fluoroallylboration of Aldehydes  
*J. Org. Chem.* **2012**, *77*, 9329–9333.

## Enantioselective Fluoroallylboration of Aldehydes

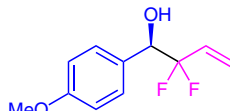


R = Ph, PMP, Naph, (CH<sub>2</sub>)<sub>2</sub>Ph, (*E*)-CH=CHPh, 2-furyl

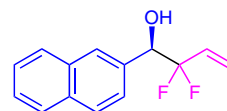
### Selected examples:



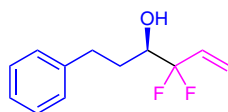
72% yield  
94% ee



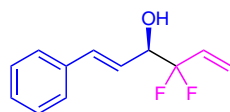
71% yield  
93% ee



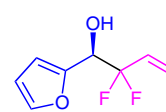
70% yield  
94% ee



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.