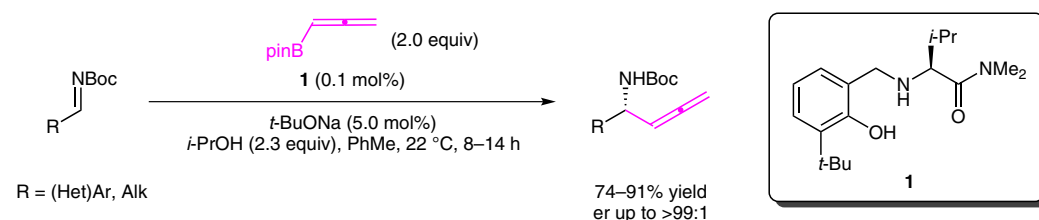
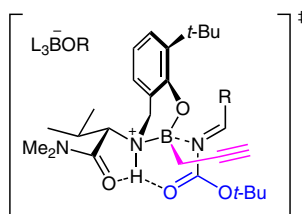


H. WU, F. HAEFFNER, A. H. HOVEYDA* (BOSTON COLLEGE, CHESTNUT HILL, USA)
 An Efficient, Practical, and Enantioselective Method for the Synthesis of Homoallenylamides Catalyzed by an
 Aminoalcohol-Derived, Boron-Based Catalyst
J. Am. Chem. Soc. **2014**, *136*, 3780–3783.

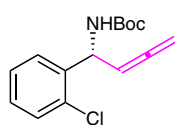
Enantioselective Allene Addition to Aryl and Alkyl Imines



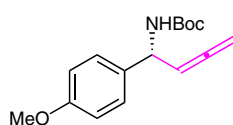
Transition state:



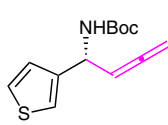
Selected examples:



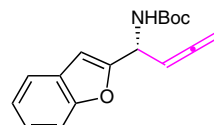
86% yield
er = 98:2



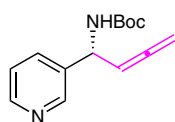
74% yield
er = 97:3



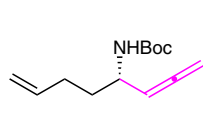
88% yield
er = 97:3



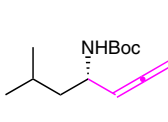
89% yield
er = 95:5



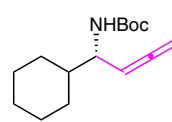
77% yield
er = 84:16



80% yield
er = 99:1



75% yield
er = 99:1



91% yield
er > 99:1

Significance: Hoveyda and co-workers report a highly efficient method for the enantioselective preparation of aryl-, heteroaryl-, and alkyl-substituted homoallenylamides. The addition of an allenyl unit to various Boc-protected imines proceeds with high yield and very good enantioselectivity.

Comment: The application of this new protocol shows its relevance in the total syntheses of the natural products anisomycin and *epi*-cytoxazone. Furthermore, it is shown that the allenyl addition performed on gram scale proceeds with high efficiency and selectivity, providing the corresponding product in excellent yield.

SYNFACTS Contributors: Paul Knochel, Diana Haas
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Category

Metal-Mediated
Synthesis

Key words

allenes

boron

enantioselectivity

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of the month

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