

Correction to Markovnikov-Selective Hydroboration of Olefins Catalyzed by a Copper N-Heterocyclic Carbene Complex

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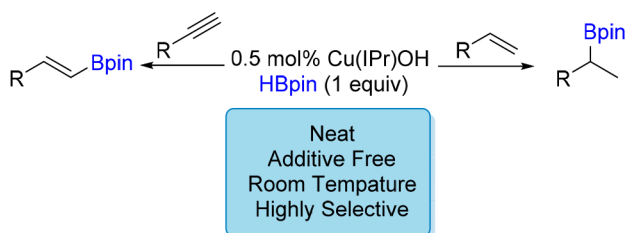
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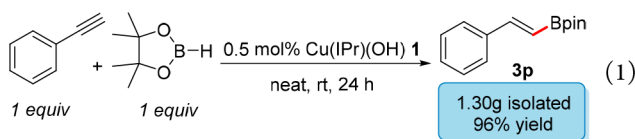
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 Article Recommendations

 Supporting Information



It has come to our attention that some of the products listed in Table 2 of the article and in eq 1 have the incorrect stereochemistry. The reactions of alkynes with HBpin give the linear *E*-olefin products, not the branched products as were shown. ¹H NMR spectra clearly show two doublets with a large *J* (18 Hz) for the *trans*-hydrogens of the alkene product. A DEPT-135 spectrum also confirms that CH and not CH₂ is present. Corrected eq 1, Table 2, TOC graphic are shown. Note that the alkene addition products are correctly assigned as branched, displaying a doublet and a quartet for the methyl and methine groups, respectively. NMR spectra for all products are included in the revised Supporting Information. We thank Prof. Jaesook Yun for pointing out this error, as her group has worked on related copper borylations for many years.¹



■ ASSOCIATED CONTENT

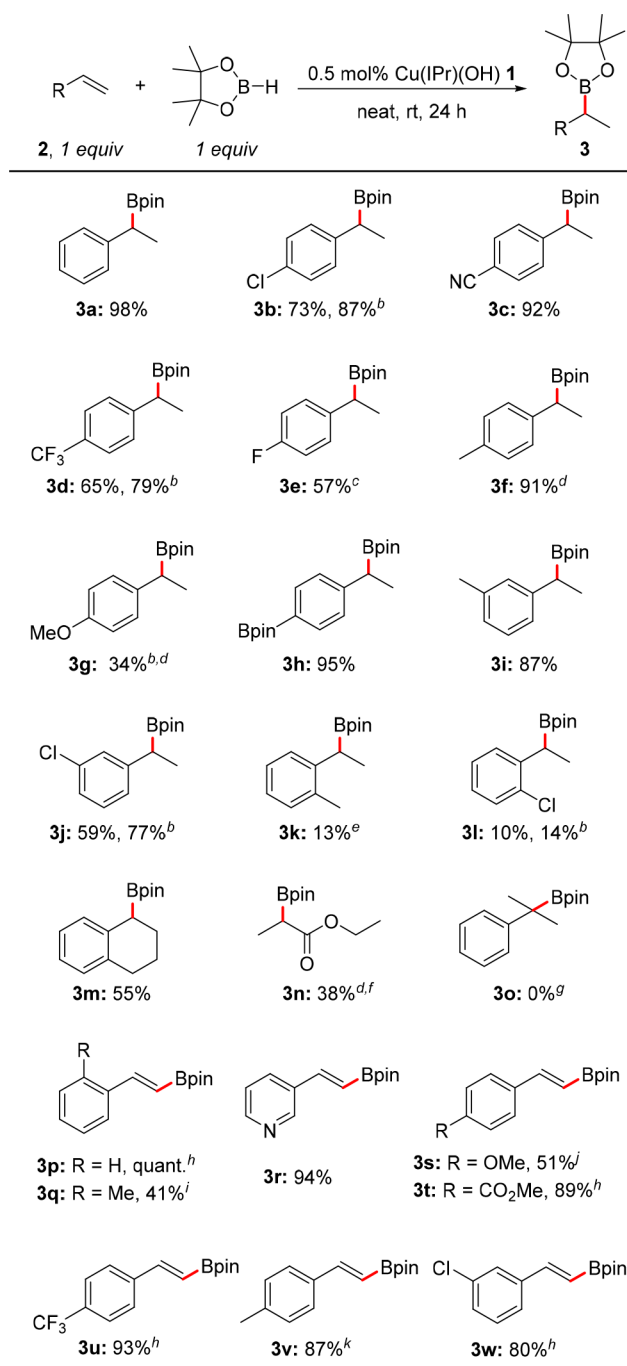
Supporting Information

The Supporting Information is available free of charge at <https://pubs.acs.org/doi/10.1021/acs.organomet.0c00629>.

Revised file (PDF)

■ REFERENCES

- (1) (a) Jang, W. J.; Lee, W. L.; Moon, J. H.; Lee, J. Y.; Yun, J. *Org. Lett.* 2016, 18, 1390–1393. (b) Jang, W. J.; Kang, B.-N.; Lee, J. H.; Choi, Y. M.; Kim, C.-H.; Yun, J. *Org. Biomol. Chem.* 2019, 17, S249–S252.

Table 2. Hydroboration Substrate Scope^a

^aYield determined via ¹H NMR spectroscopy vs 2,4,6-trimethylbenzaldehyde as an internal standard (IPr = 1,3-bis(2,6-diisopropylphenyl)imidazol-2-ylidene). ^b1.0 mol % catalyst loading. ^cYield determined via ¹⁹F NMR spectroscopy vs 4-fluorobenzoic acid as an internal standard. ^dTrace amount of linear product observed by GC-MS (<1%); not observed by ¹H NMR spectroscopy. ^eIsolated yield. ^f α,α,α -Trifluorotoluene used as the internal standard. ^gBranched product observed by GC-MS (<5%). ^hTrace amount of branched product observed by GC-MS (<1%); not observed by ¹H NMR spectroscopy. ⁱ47% of the branched product observed by ¹H NMR spectroscopy. ^j4% of branched product observed by ¹H NMR spectroscopy. ^k8% of branched product observed by ¹H NMR spectroscopy.