J. T. BINDER, C. J. CORDIER, G. C. FU* (MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE AND CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, USA)
Catalytic Enantioselective Cross-Couplings of Secondary Alkyl Electrophiles with Secondary Alkylmetal Nucleophiles: Negishi Reactions of Racemic Benzylic Bromides with Achiral Alkylzinc Reagents
J. Am. Chem. Soc. **2012**, *134*, 17003–17006.

Negishi Reaction of Racemic Benzylic Bromides and Alkylzinc Reagents

Category

Metal-Catalyzed
Asymmetric
Synthesis and
Stereoselective
Reactions

Key words

nickel

Negishi coupling

oxazoline ligands

Significance: Reported here is an enantioselective cross-coupling of racemic benzylic bromides with achiral alkylzinc reagents. A novel bidentate oxazoline-type ligand was developed, leading to the desired products in good yield and enantioselectivity.

Comment: It is surprising that both reagents are achiral. For acyclic alkylzinc reagents, an usual isomerization was observed and a substantial amount of a branched product was generated from an unbranched nucleophile.

SYNFACTS Contributors: Hisashi Yamamoto, Jiajing Tan
Synfacts 2013, 9(1), 0073 Published online: 17.12.2012
DOI: 10.1055/s-0032-1317780; Reg-No.: H16012SF