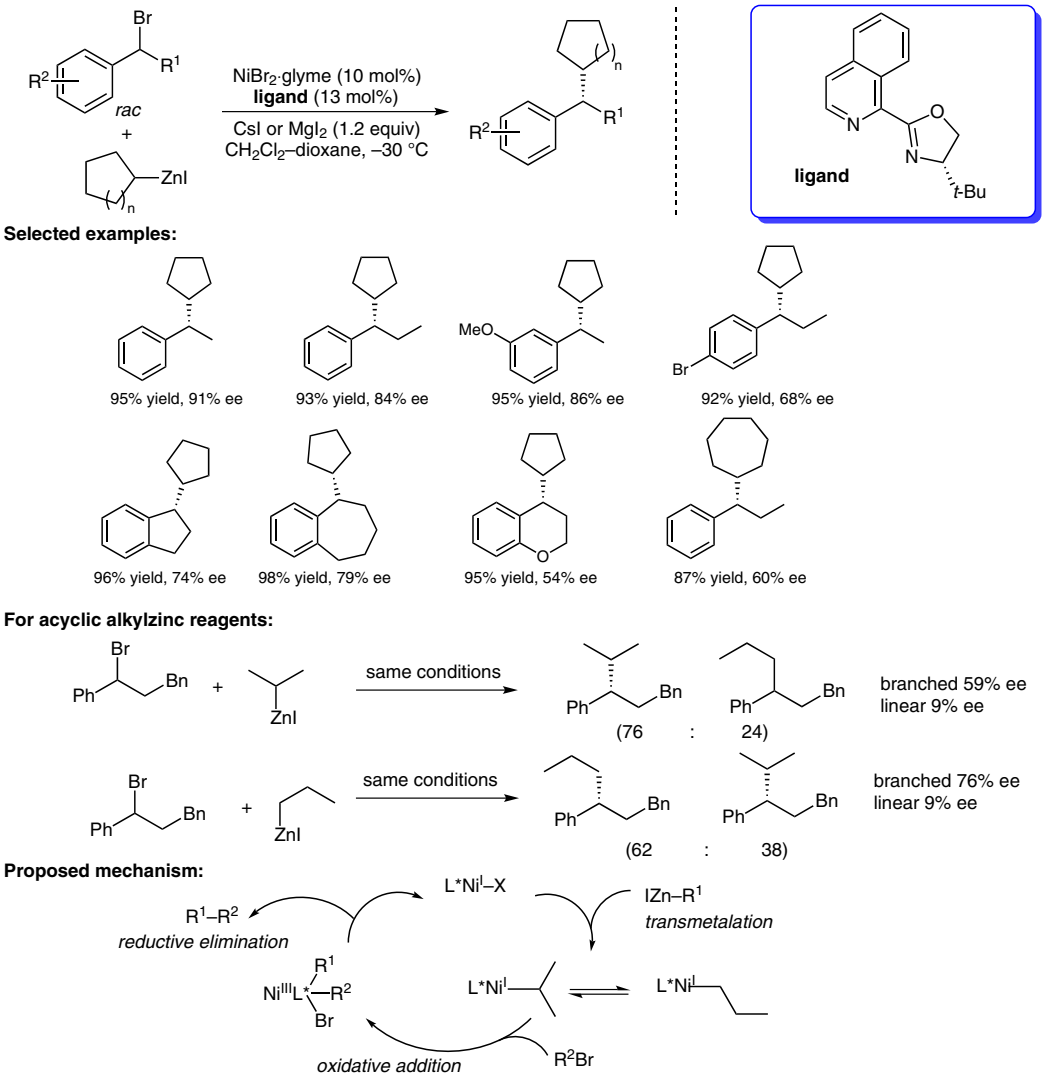
J. T. BINDER, C. J. CORDIER, G. C. FU* (MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE AND CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, USA)
Catalytic Enantioselective Cross-Couplings of Secondary Alkyl Electrophiles with Secondary Alkylmetal Nucleophiles: Negishi Reactions of Racemic Benzylic Bromides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

Negishi Reaction of Racemic Benzylic Bromides and Alkylzinc Reagents



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.

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Synfacts 2013, 9(1), 0073 Published online: 17.12.2012
DOI: 10.1055/s-0032-1317780; **Reg-No.:** H16012SF

Category
Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

Key words
nickel
Negishi coupling
oxazoline ligands