Y. LIANG, G. C. FU* (CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, USA)
 Stereoconvergent Negishi Arylations of Racemic Secondary Alkyl Electrophiles: Differentiating between a CF₃ and an Alkyl Group
J. Am. Chem. Soc. **2015**, *137*, 9523–9526.

Asymmetric Arylation of Secondary Alkyl Electrophiles

Selected examples:

Significance: Enantiodivergent cross-coupling of an arylzinc reagent and a secondary alkyl halide with a trifluoromethyl substituent was achieved by using a readily available nickel/bis(oxazoline) catalyst. The fluorinated products were obtained in good yields and with high enantioselectivities.

Comment: Fu and co-workers have previously reported an enantiodivergent cross-coupling of a racemic secondary electrophile by using a chiral nickel catalyst (*J. Am. Chem. Soc.* **2005**, *127*, 4594; *J. Am. Chem. Soc.* **2014**, *136*, 12161). The chiral catalyst can differentiate between a trifluoromethyl and an alkyl group to deliver the cross-coupling product with high enantioselectivity. The cross-coupling reaction is not air-sensitive, as identical results were obtained when the reaction was conducted in the presence of air.

SYNFACTS Contributors: Hisashi Yamamoto, Ramesh C. Samanta
 Synfacts 2015, 11(10), 1077 Published online: 18.09.2015
 DOI: 10.1055/s-0035-1560233; Reg-No.: H11715SF