G. A. MOLANDER,* D. E. PETRILLO (UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, USA)

Suzuki–Miyaura Cross-Coupling of Potassium Trifluoroboratoenolates

Org. Lett. **2008**, *10*, 1795–1798.

Suzuki–Miyaura Cross-Coupling of Trifluoroboratoenolates

R¹ = Et, OMe, O*t*-Bu, NMe₂

R² = 4-NO₂, 4-CHO, 3-COMe, 3-CN, etc.

Ru-Phos = 2-dicyclohexylphosphino-

X = Cl, Br, OTf

2',6'-diisopropoxy-1,1'-biphenyl

Significance: The application of the corresponding alkyltrifluoroborates as nucleophiles in a cross-coupling reaction with aryl and alkenyl halides or triflates allowed a simple preparation of various 2-arylethyl ketones, amides and esters. The method tolerates a broad variety of functional groups, and, due to its simplicity and excellent versatility, can be very useful in combinatorial synthesis and creation of compound libraries.

Comment: The trifluoroboratoenolates were prepared via the Cu(I)-catalyzed conjugate addition of bis(pinacolato)diboron to unsaturated carbonyl compounds (S. Mun, J.-E. Lee, J. Yun *Org. Lett.* **2006**, *8*, 4887), followed by the treatment with KHF₂. Another variant is the C-alkylation of enolates with iodomethylpinacol boronate (A. Whiting *Tetrahedron Lett.* **1991**, *32*, 1503). Most alkyltrifluoroborates are known to be very convenient to handle, stable free-flowing powders.