Stereospecific Functionalization of Activated Alkylboronic Esters under Copper Catalysis

**Significance:** A copper-catalyzed method for the stereospecific functionalization of boron ‘ate’ complexes obtained from enantioenriched pinacol boronic esters and tert-butyllithium is disclosed. This protocol is operationally simple and can be carried out on gram scale.

**Comment:** The tert-butyl-activated boronate complexes undergo stereoretentive transmetalation to copper cyanide and subsequent coupling with various electrophiles such as allyl-, alkynyl-, propargyl- and acyl halides, β-haloenones and hydroxylamine esters.