Boron–Ate Complexes as Chiral Nucleophiles for Asymmetric Synthesis

**Significance:** The authors report that secondary chiral boronic esters can be converted into reactive nucleophiles by addition of an aryllithium reagent. These enantiomerically enriched nucleophiles react with a broad range of electrophiles with inversion of stereochemistry.

**Comment:** By changing the substituents on the aryl group on boron, a switch in mechanism from a classical 2e− pathway (nucleophilic substitution) to a radical pathway was observed. Therefore, electron-poor boronic esters favor the desired nucleophilic substitution, whereas electron-rich esters give racemized products.