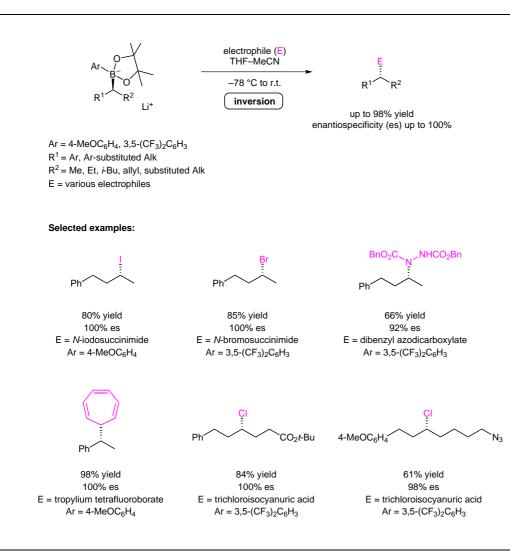
R. LAROUCHE-GAUTHIER, T. G. ELFORD, V. K. AGGARWAL\* (UNIVERSITY OF BRISTOL, UK)

Ate Complexes of Secondary Boronic Esters as Chiral Organometallic-Type Nucleophiles for Asymmetric Synthesis *J. Am. Chem. Soc.* **2011**, *133*, 16794–16797.

## 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<sup>-</sup> 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.

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## Category

Metal-Mediated Synthesis

## Key words

ate complexes

boronic esters

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