Asymmetric $\alpha$-Allylation of Aldehydes with Simple Allylic Alcohols

**Significance:** List and co-workers developed an enantioselective direct $\alpha$-allylation of $\alpha$-branched aldehydes with allylic alcohols generating products with all-carbon quaternary stereogenic centers in high yields and excellent enantioselectivities. The general reaction scale for this transformation is 0.2 mmol.

**Comment:** It is suggested that the high enantioselectivity for the described transformation arises from an asymmetric counteranion-directed catalysis (ACDC) complex – three different catalytic species are involved: $[\text{Pd(PPh}_3]_2$, the chiral Brønsted acid TRIP, and benzhydryl amine.