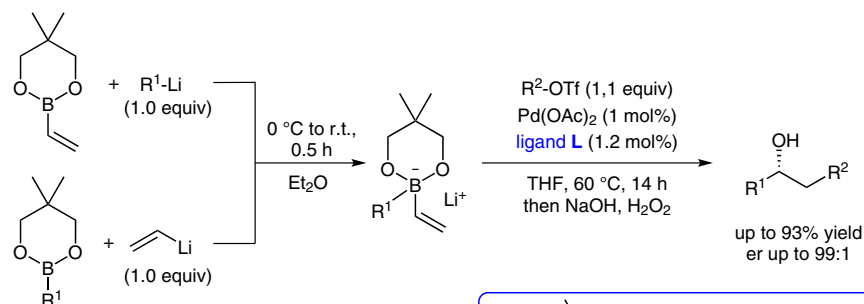


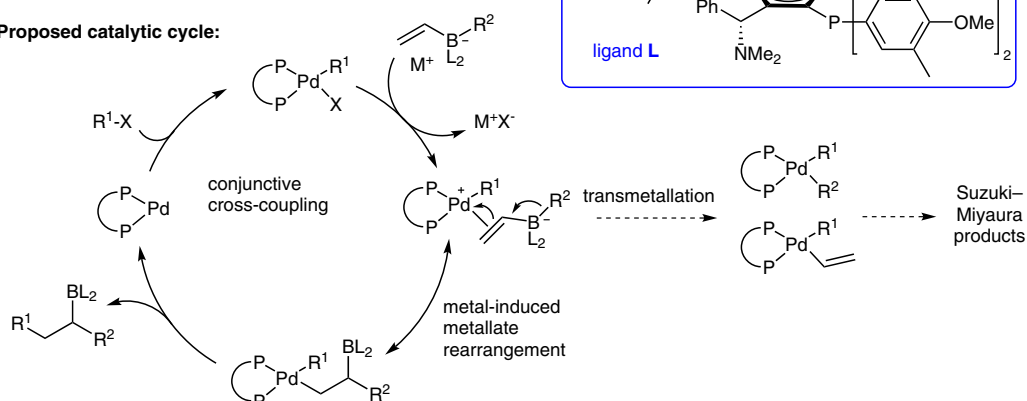
Catalytic Conjunctive Cross-Coupling

Synfact
of the month

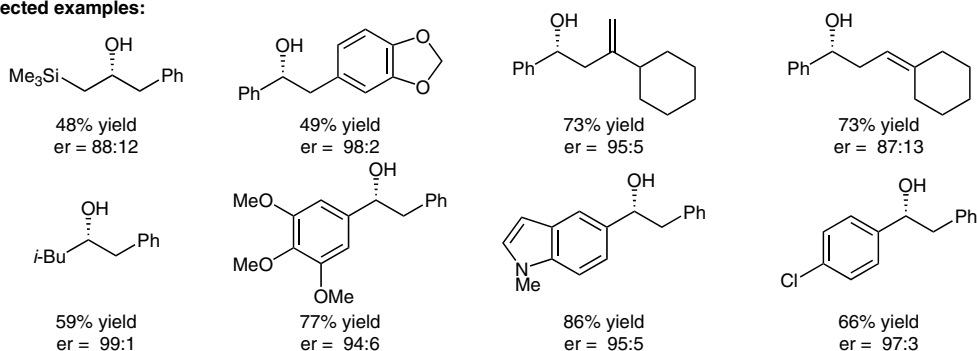


R¹ = Ph, *i*-Pr, *n*-Bu, *i*-Bu, *n*-Hex, Cy,
 CH₂SiMe₃, Ar
 R² = Ph, Ar, vinyl

Proposed catalytic cycle:



Selected examples:



Significance: Morken and co-workers report a catalytic conjunctive cross-coupling of organoborates, organolithium reagents and organotriflates for the synthesis of chiral boronic acids with high enantioselectivity.

Comment: The intermediate boronic ester ate-complex reacts in a palladium-induced metallate rearrangement, wherein 1,2-migration of an alkyl or aryl group from the boron atom to the vinyl α -carbon occurs simultaneously with C–Pd σ -bond formation.

SYNFACTS Contributors: Paul Knochel, Diana Haas
 Synfacts 2016, 12(3), 0289 Published online: 16.02.2016
 DOI: 10.1055/s-0035-1561257; Reg-No.: P00916SF