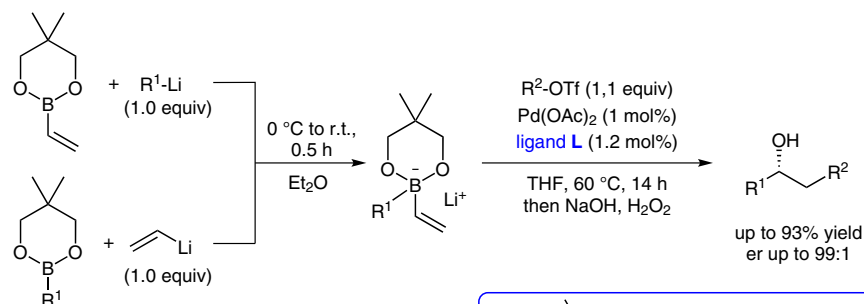
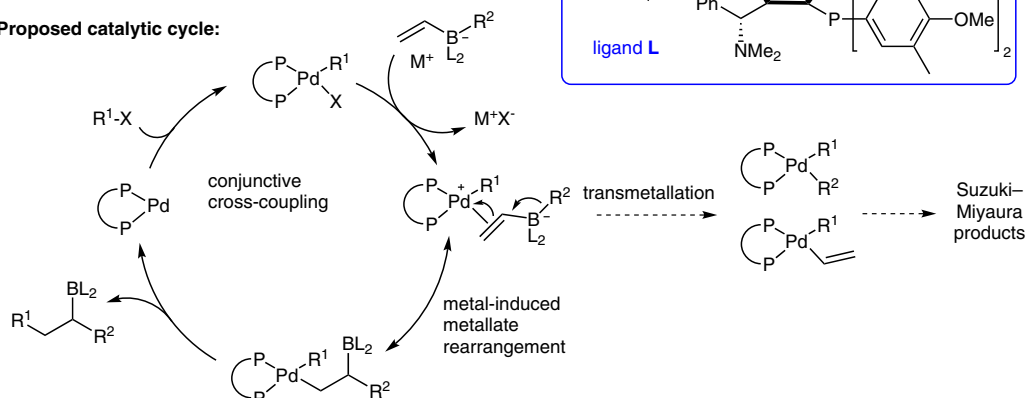


Catalytic Conjunctive Cross-Coupling

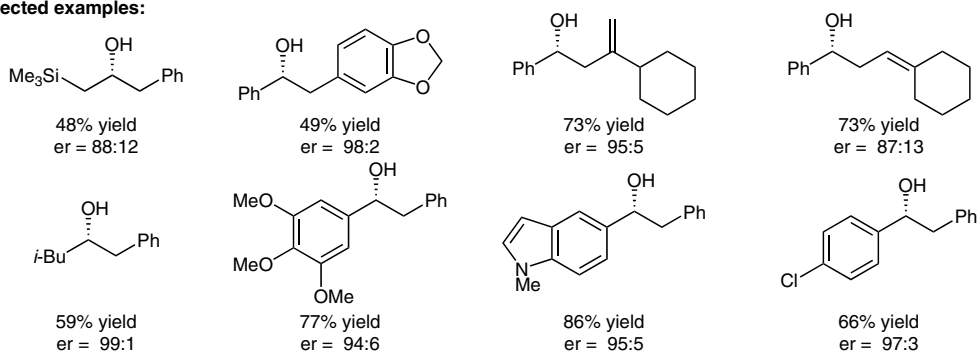


R^1 = Ph, *i*-Pr, *n*-Bu, *t*-Bu, *n*-Hex, Cy,
 CH_2SiMe_3 , Ar
 R^2 = Ph, Ar, vinyl

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
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