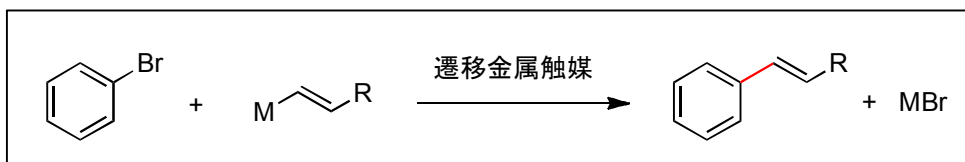
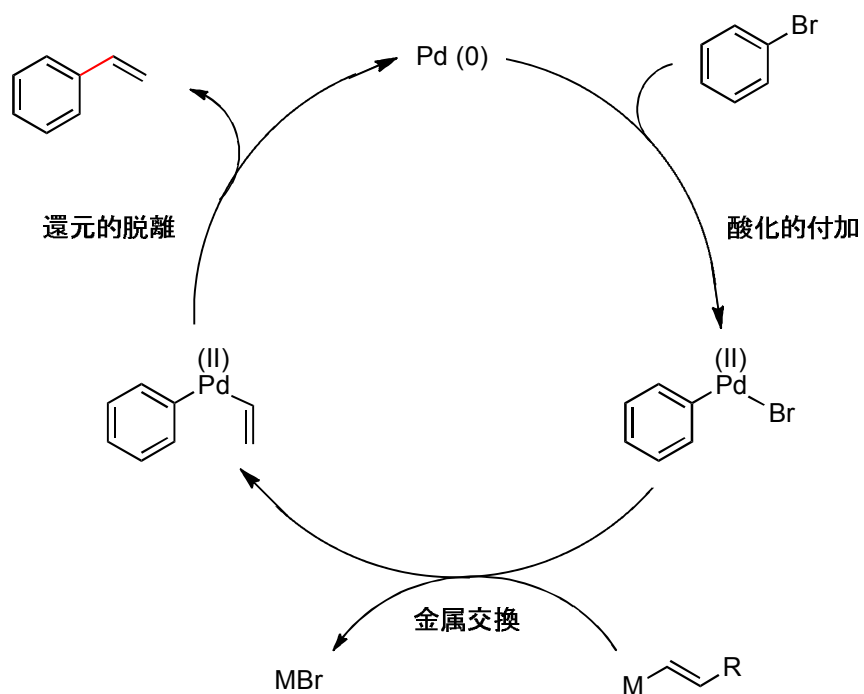


4. Cross-Coupling Reactions



基本的な触媒サイクル



M = MgX: Tamao-Kumada-Corriu coupling (Ni cat.)

M = ZnX: Negishi coupling

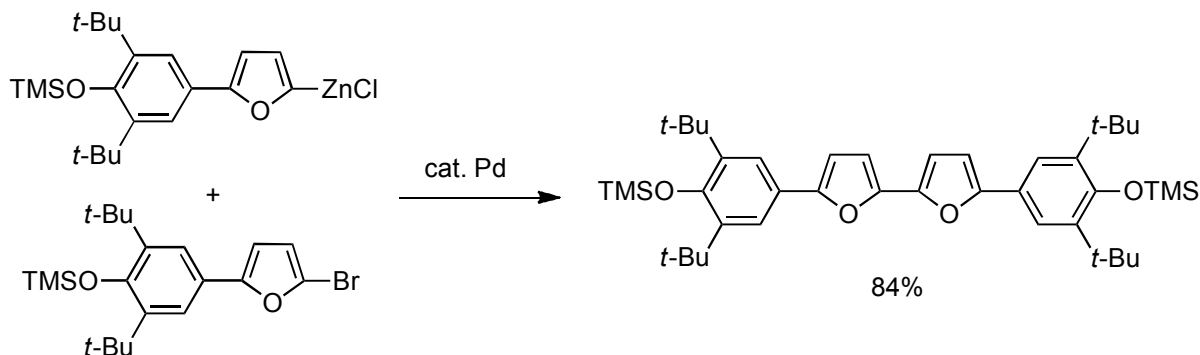
M = B(OH)₂: Suzuki-Miyaura coupling

M = SnR'₃: Stille coupling

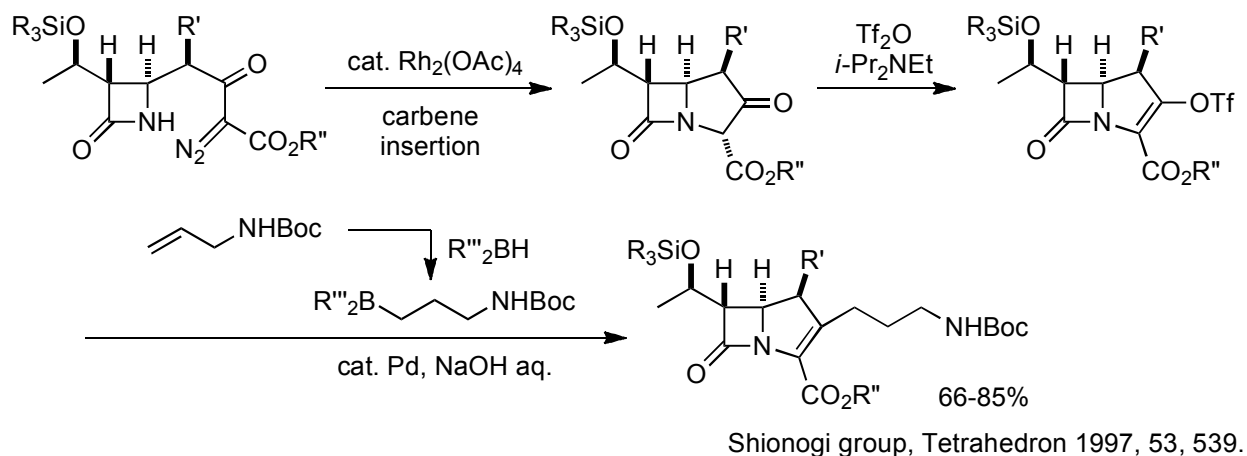
M = SiX₄: Hiyama coupling

M = Cu: Sonogashira coupling (alkyne)

4-1. 非線形光学材料合成への応用 (Negishi coupling)

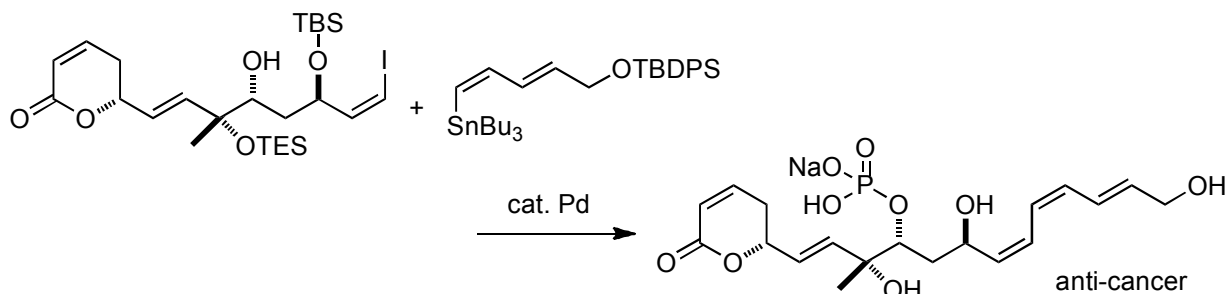


4-2. Carbapenem analog synthesis (Suzuki-Miyaura coupling)



Shionogi group, Tetrahedron 1997, 53, 539.

4-3. Fostriecin synthesis (Stille coupling)



anti-cancer

Our group, JACS 2005, 127, 17111.

4-4. Ene-diyne natural product synthesis (Sonogashira coupling)

