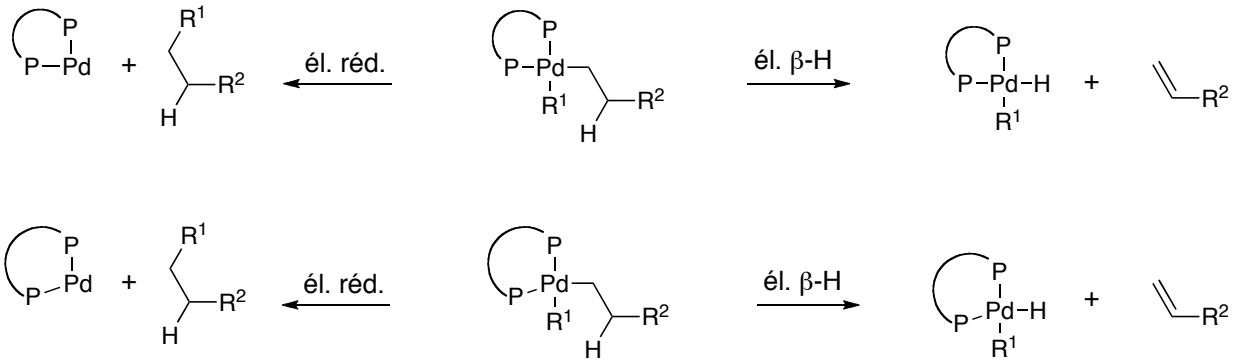
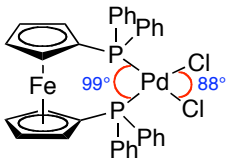
• Stéréochimie conservée au niveau des doubles liaisons

• Catalyseurs courants : $Pd(PPh_3)_4$ et $PdCl_2(dppf)$

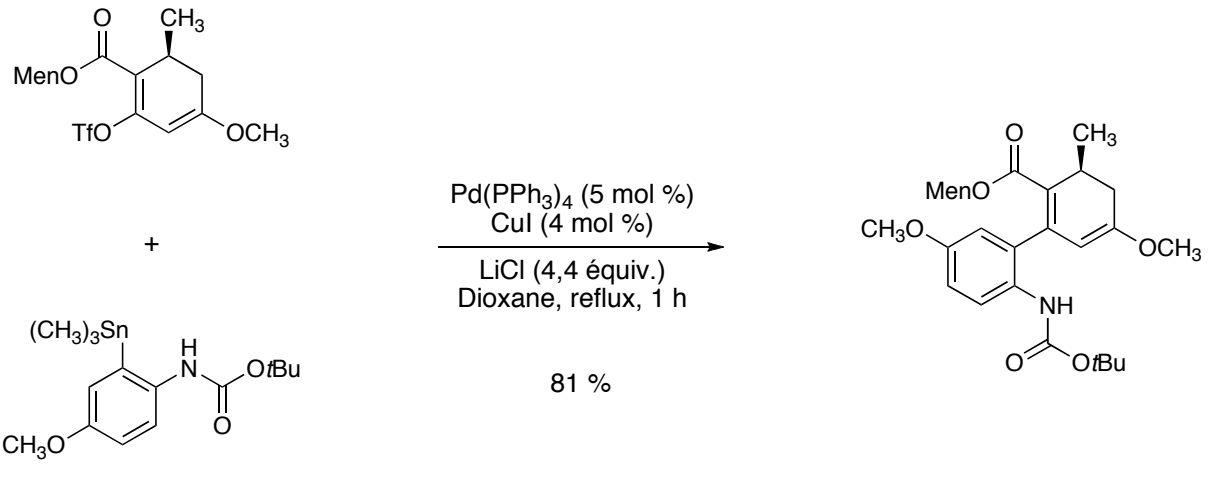


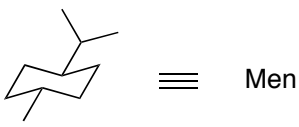
angle plus grand
-> él. réd. favorisée

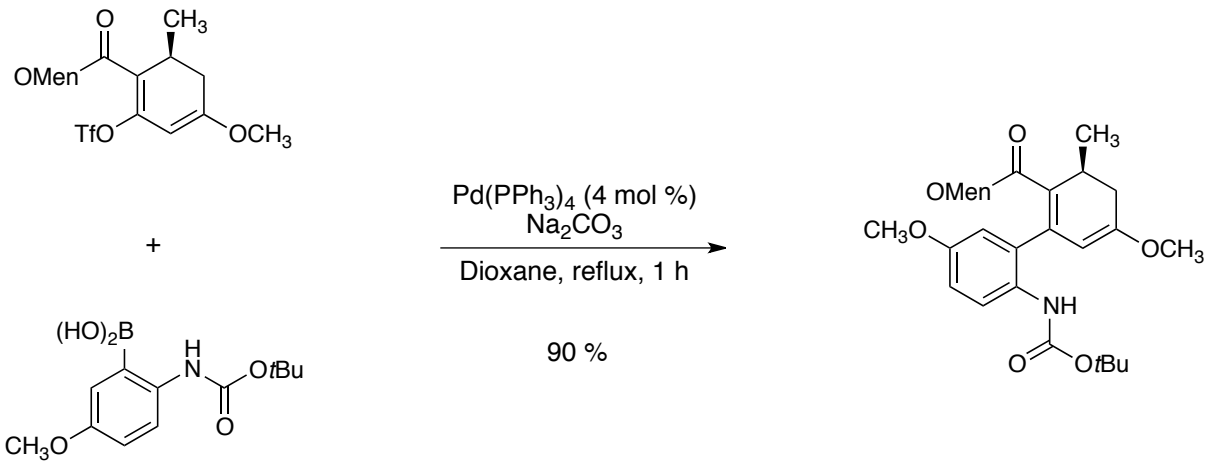
él. réd. favorisée avec $PdCl_2(dppf)$:



• Comparaison Stille/Suzuki : rendements souvent comparables

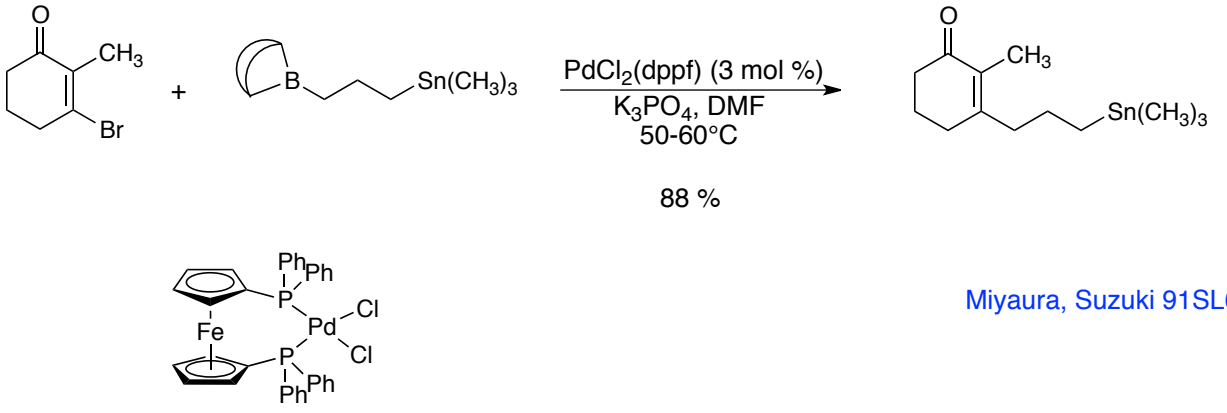






Suzuki = méthode préférée car R_3SnX plus chers et plus toxiques

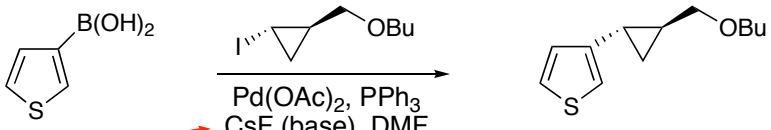
• Sélectivité B vs. Sn



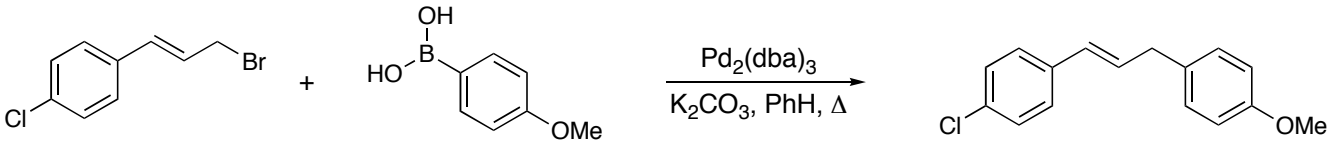
Miyaura, Suzuki 91SL687

-> couplage avec l'organoborane, pas avec l'organostannane

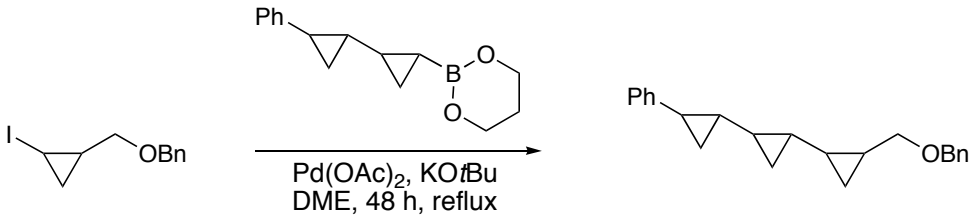
• Formation de liaison Csp^2-Csp^3



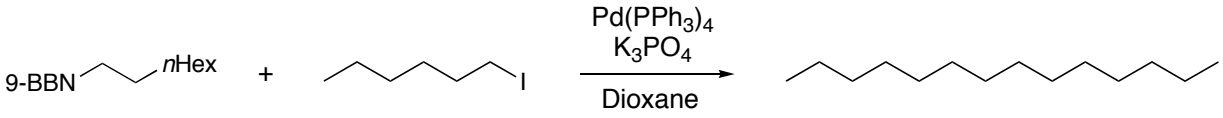
conditions très douces !



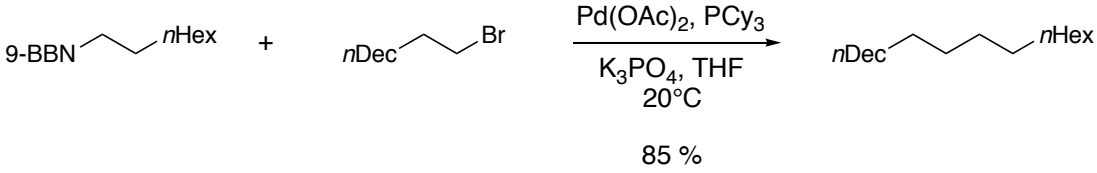
• Formation de liaison Csp^3-Csp^3 (grand défi synthétique !)



97TL2809

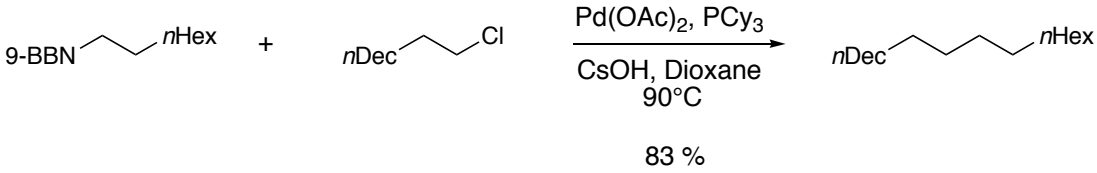


Suzuki, Miyaura 92CL691

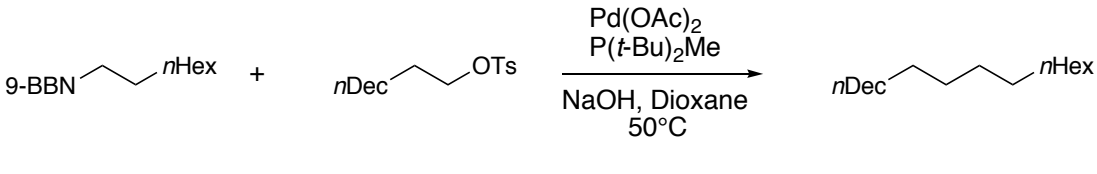


85 %

avec PPh_3 ou $P(tBu)_3$: rdt < 2 %



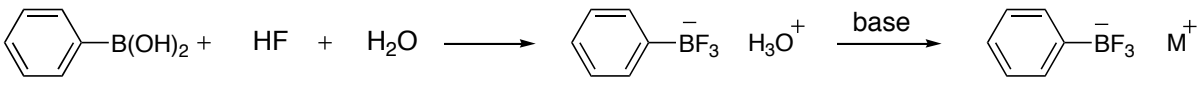
83 %



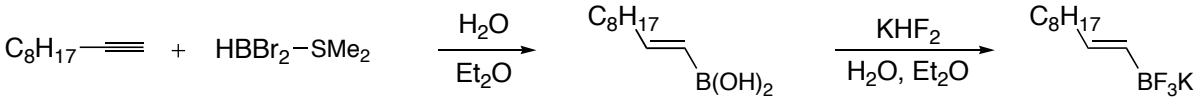
80 %

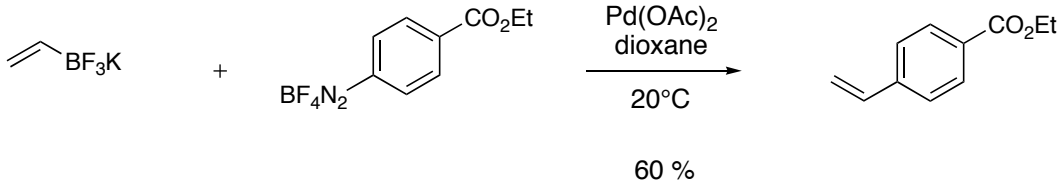
Fu 2001JACS10099
Fu 2002ACIEE1945
Fu 2002ACIEE3910

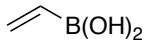
• Organotrifluoroborates : bons partenaires pour la réaction de Suzuki



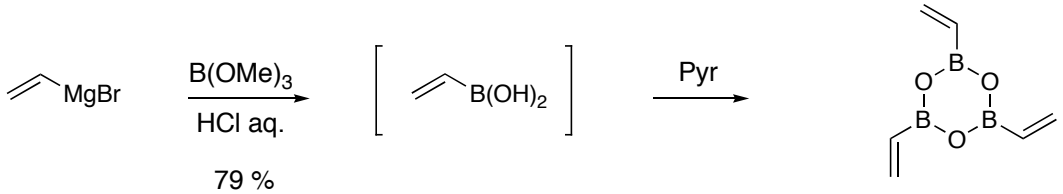
M= K, Cs, Bu_4N

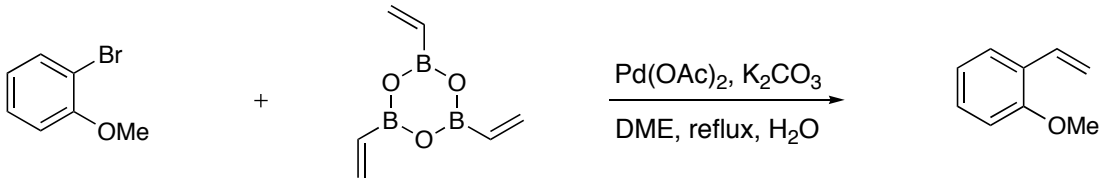




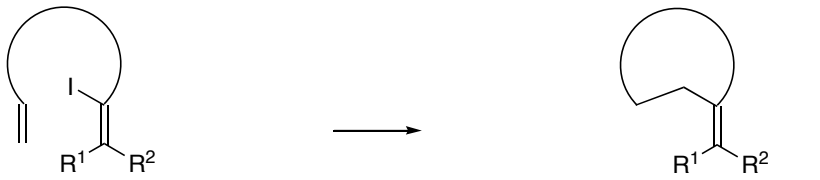


difficile à purifier (polymérisable)

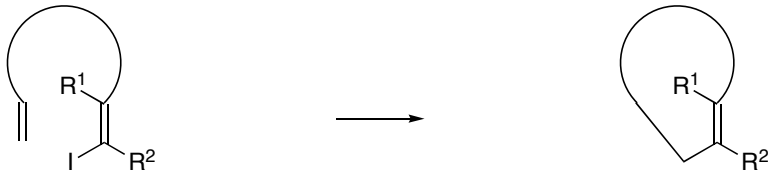




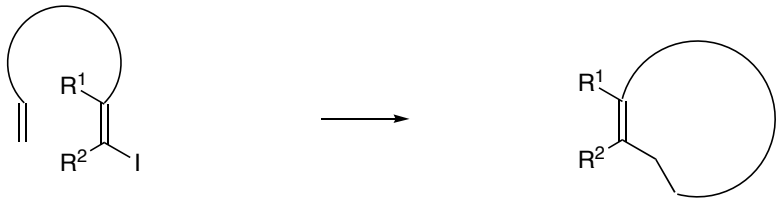
• Réaction de Suzuki avec alkylboranes - Régiosélectivité de fermeture de cycle



oléfine exocyclique



oléfine *E*

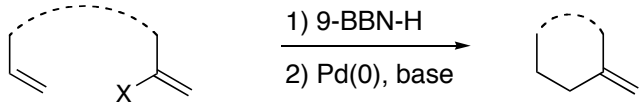


oléfine Z

Danishefsky 2001ACIEE4544

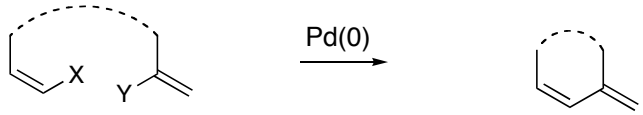
• Intérêt de la réaction de Suzuki

- Réaction de Suzuki-Hiyama sp^3-sp^2



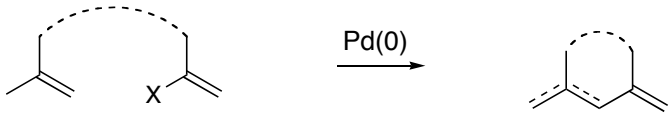
X = I, Br, Cl, OTf, $OP(O)OR_2$

- Réaction de Suzuki-Hiyama sp^2-sp^2 ou réaction de Stille



X = BR_2, SnR_3; Y = I, Br, Cl, OTf

- Réaction de Heck



X = I, Br, OTf

- Métathèse d'oléfines