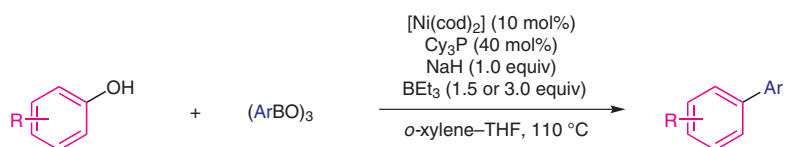


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Mutual Activation: Suzuki–Miyaura Coupling through Direct Cleavage of the  $sp^2$  C–O Bond of Naphtholate  
*Angew. Chem. Int. Ed.* **2011**, *50*, 7097–7100.

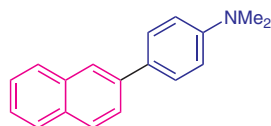
# Direct Suzuki–Miyaura Coupling of Phenol Derivatives via Mutual Activation



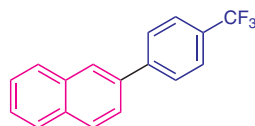
R = Ar, OMe, CO<sub>2</sub>Me- and *O*-*t*-Bu-substituted aryls  
Ar = *n*-Bu-, Me-, NMe<sub>2</sub>-, OMe-, CF<sub>3</sub>- and F-substituted aromatics

up to 90% yield

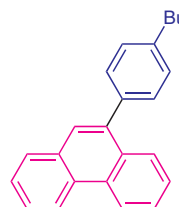
## Selected examples:



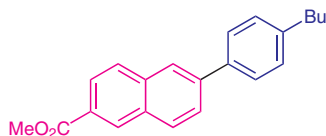
80% yield



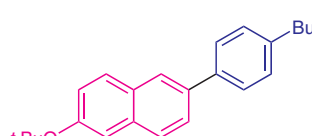
43% yield



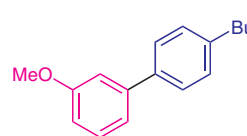
82% yield



62% yield

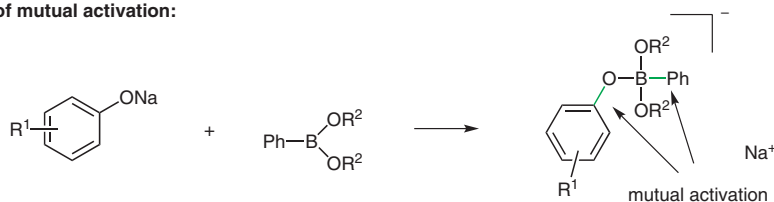


63% yield



18% yield

## Concept of mutual activation:



**Significance:** Herein, a direct Ni-catalyzed Suzuki coupling of in situ generated sodium phenolates with aryl boronoxines is reported. Key step is the formation of an aryl borate which simultaneously activates the two coupling partners.

**Comment:** Traditional preactivation of phenols and boronic acids is not necessary since the in situ generated borate mutually activates both the aryl C–O and the aryl C–B bonds. Nevertheless, it is shown that lack of the Lewis acid BEt<sub>3</sub> as additional activator leads to decreased product yields.

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Category

Metal-Mediated  
Synthesis

Key words

nickel

Suzuki coupling

C–O activation

phenols

**SYNFACTS**  
*of the month*