Direct Suzuki–Miyaura Coupling of Phenol Derivatives via Mutual Activation

Significance: Herein, a direct Ni-catalyzed Suzuki coupling of in situ generated sodium phenolates with aryl boroxines 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 BEt₃ as additional activator leads to decreased product yields.

**Selected examples:**

- **80% yield**: 
  ![80% yield](image1.png)

- **43% yield**: 
  ![43% yield](image2.png)

- **82% yield**: 
  ![82% yield](image3.png)

- **62% yield**: 
  ![62% yield](image4.png)

- **63% yield**: 
  ![63% yield](image5.png)

- **18% yield**: 
  ![18% yield](image6.png)

**Concept of mutual activation:**

![Concept of mutual activation](image7.png)

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Synfacts 2011, 10, 1111-1111  Published online: 20.09.2011

DOI: 10.1055/s-0030-1261076; Reg-No.: P11411SF