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Mutual Activation: Suzuki–Miyaura Coupling through Direct Cleavage of the sp² C–O Bond of Naphtholate

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
- 43% yield
- 82% yield
- 63% yield
- 18% yield

**Concept of mutual activation:**

\[
\text{R}^{1} \text{ONa} + \text{Ph} \rightarrow \text{R}^{1} \text{OR}^{2} \text{OR}^{2} \rightarrow \text{mutual activation}
\]