Category

Metal-Mediated Synthesis

Key words

nickel

Suzuki–Miyaura cross-coupling

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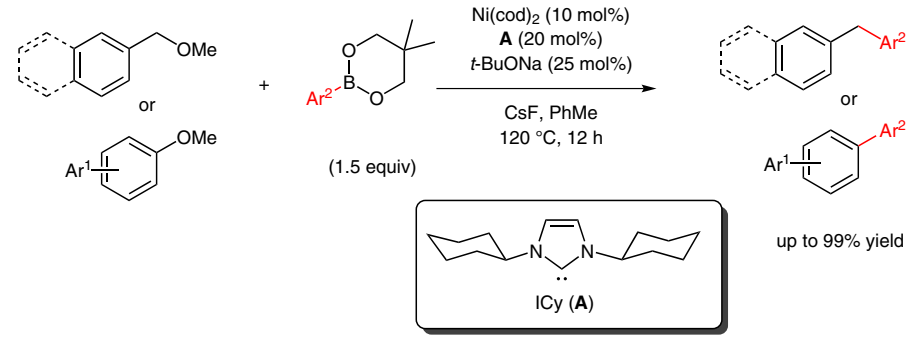
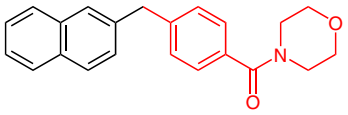
1,3-Dicyclohexylimidazole-2-ylidene as a Superior Ligand for the Nickel-Catalyzed Cross-Coupling of Aryl and Benzyl Methyl Ethers with Organoboron Reagents

Org. Lett. **2014**, *16*, 5572–5575.

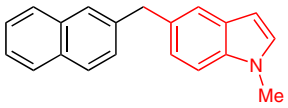
Nickel-Catalyzed Suzuki–Miyaura Cross-Coupling



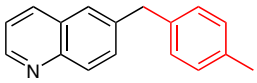
Selected examples:



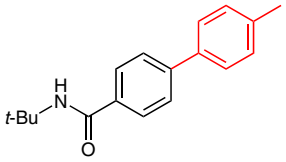
76% yield



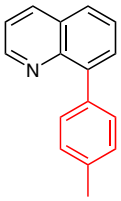
81% yield



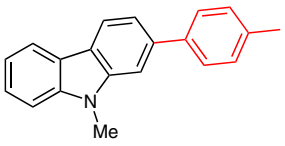
76% yield



65% yield



80% yield



74% yield

Significance: The authors developed a novel nickel-based catalyst for the cross-coupling of aryl and benzyl methyl ethers with organoboron reagents. The use of $Ni(cod)_2$ and 1,3-dicyclohexylimidazol-2-ylidene (**A**) gave the expected products in good yields while showing good functional group tolerance.

Comment: Notably, when using **A** instead of Cy_3P, heteroaryl ethers were coupled in good yields (up to 96%), while the same reaction with Cy_3P led to no product.

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