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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


**Nickel-Catalyzed Suzuki–Miyaura Cross-Coupling**

![Chemical Reaction](image)

**Selected examples:**

- ![Chemical Structure](image) 76% yield
- ![Chemical Structure](image) 81% yield
- ![Chemical Structure](image) 76% yield
- ![Chemical Structure](image) 65% yield
- ![Chemical Structure](image) 80% yield
- ![Chemical Structure](image) 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$_3$P, heteroaryl ethers were coupled in good yields (up to 96%), while the same reaction with Cy$_3$P led to no product.