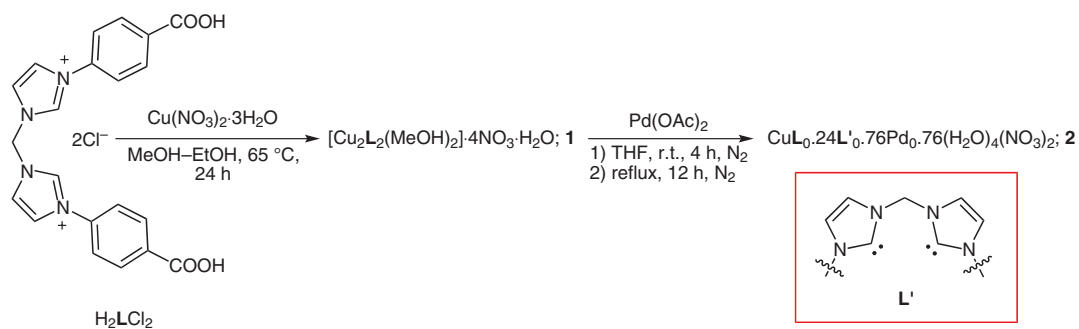
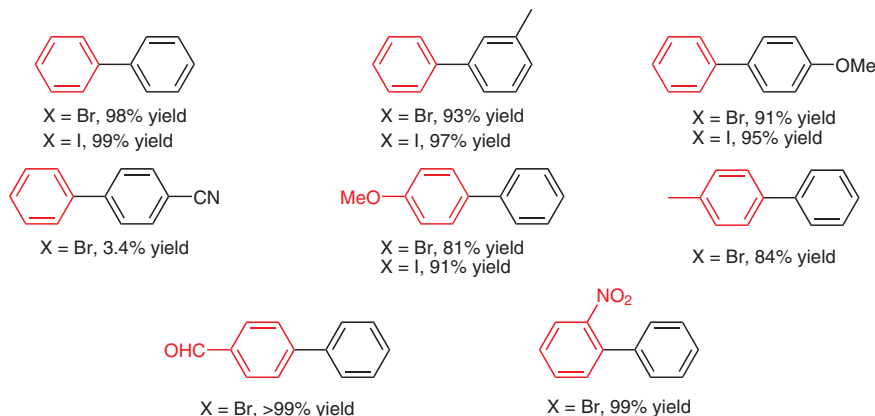
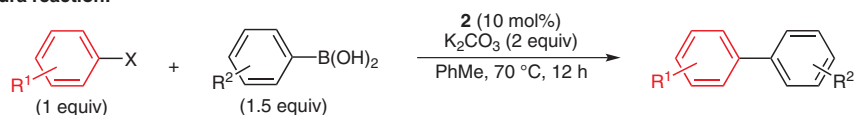


Suzuki–Miyaura Reaction with NHC–Cu–Pd MOF Catalysts

Preparation of NHC-based Pd catalyst:



Suzuki–Miyaura reaction:



Significance: A metal–organic framework (MOF) catalyst **2** was prepared from dicarboxylic acid H_2LCl_2 bearing two azolium components through the MOF formation with $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ followed by the modification with $\text{Pd}(\text{OAc})_2$. The Suzuki–Miyaura reaction of aryl halides and arylboronic acids was carried out with **2** (10 mol%) in toluene to give the corresponding biaryl products in 81–99% yield.

Comment: MOF catalyst **2** was recovered by filtration and reused five times without loss of catalytic activity. A catalyst prepared from H_2LCl_2 , CuCl_2 , and $\text{Pd}(\text{OAc})_2$, which has a different MOF structure, exhibited much lower catalytic activity (4-methoxybiphenyl: 43%) than **2**, highlighting the important roles of the framework structures in determining the catalytic performance.