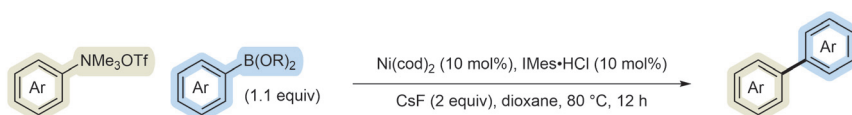


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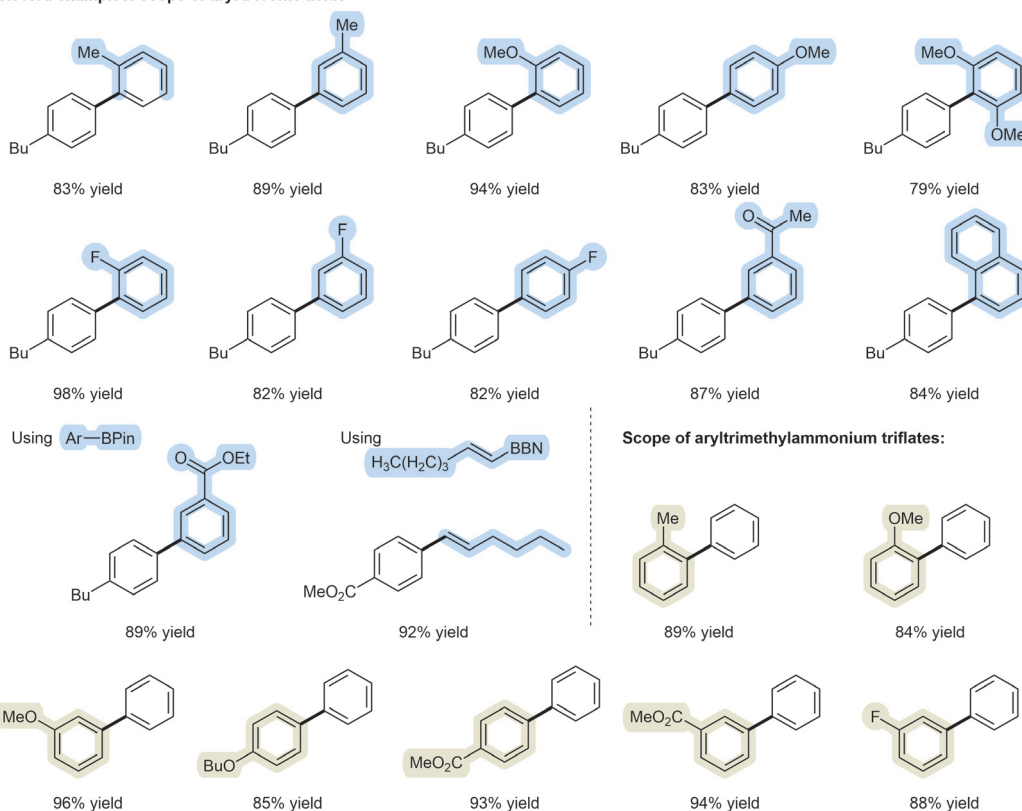
The First Suzuki Cross-Couplings of Aryltrimethylammonium Salts
J. Am. Chem. Soc. **2003**, *125*, 6046–6047, DOI: 10.1021/ja034908b.

The First Use of Aryltrimethylammonium Salts in Nickel-Catalyzed Suzuki Cross-Couplings



first use of trialkylammonium triflates in Suzuki cross-coupling, 22 examples, up to 98% yield

Selected examples: scope of aryl boronic acids



Significance: Transition-metal-catalyzed cross-coupling reactions continue to represent a route for C–C bond formation. In 2003, MacMillan and Blakey reported the Suzuki cross-coupling reaction of aryltrimethylammonium triflates. During their investigations, authors found that while palladium catalysts were unsuccessful for the coupling, the use of an NHC–Ni(0) complex successfully catalyzed the transformation. This report represented the first catalyst system that was efficient in activating aryl-ammonium bonds.

Comment: The reaction generated products with yields ranging from 82–98%. The authors included examples using electron-rich ammonium salts, typically less susceptible to oxidative addition, and various electronically and sterically different arylboronic acids and esters. The use of trialkylammonium triflates continue serve as valuable coupling partners in many cross-coupling reactions.

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