

General Information

- All aryl chlorides (Aldrich), arylboronic acids (Aldrich), triethylamine, (J. T. Baker) Na_2CO_3 (EM Science), KOAc (EM Science), K_2CO_3 (EM Science), CsF (Aldrich), Cs_2CO_3 (Aldrich), and $\text{Pd}_2(\text{dba})_3$ (Strem) were used as received. 1,4-Dioxane was distilled from Na/benzophenone ketyl. Flash chromatography was performed on silica gel 60 (230-400 mesh) (Natland International corporation).
- 1,3-Bis(2,4,6-trimethylphenyl)imidazolium chloride (**2**) and 1,3-bis(2,4,6-trimethylphenyl)imidazol-2-ylidene (**1**) were prepared according to reported procedures: (a) Arduengo, A. J. III. US patent **5 077 414**, 1991; (b) Arduengo, A. J. III., Dias, H. V. R.; Harlow, R. L. and Kline, M. *J. Am. Chem. Soc.* **1992**, *114*, 5530-5534.
- ^1H and ^{13}C nuclear magnetic resonance spectra were recorded on a Varian-300 MHz or Varian-400 MHz NMR spectrometer at ambient temperature in CDCl_3 (Cambridge Isotope Laboratories, Inc.).
- All reactions were carried out under an atmosphere of argon in oven-dried-glassware with magnetic stirring, unless otherwise indicated.
- All yields reported in Table 1 and Table 2 are isolated yields and are the average of two runs.

Suzuki Cross-Coupling Reaction of Aryl Chlorides and Arylboronic Acids.

General procedure: Under an atmosphere of argon 1,4,-dioxane (3 mL), aryl chloride (1.0 mmol), arylboronic acid (1.5 mmol) were added in turn to a Schlenk tube charged with $\text{Pd}_2(\text{dba})_3$ (14 mg, 0.015 mmol), **2** (10 mg, 0.03 mmol), Cs_2CO_3 (652 mg, 2.00 mmol), and a magnetic stirring bar. The Schlenk tube was placed in a 80 °C oil bath and stirred for 1.5-2.0 h. The mixture was then allowed to cool to room temperature. The mixture was purified either directly by flash chromatography, or filtered through a pad of celite, concentrated, and then purified by flash chromatography. All coupling products were found to be identical by ^1H NMR with literature data.
