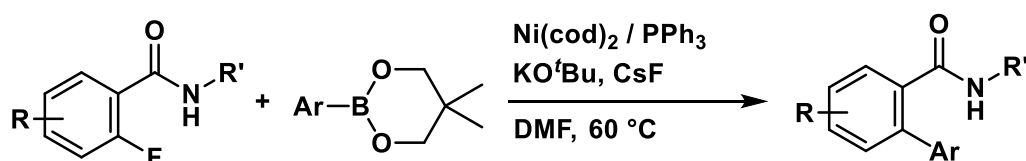


## Nickel-Catalyzed Suzuki-Miyaura Cross-Coupling Reaction Involving the Cleavage of the *ortho* C-F Bond in Aromatic Amide

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Over the past few decades, the Suzuki-Miyaura cross-coupling reaction with organoboron reagents has been recognized as one of the most powerful C-C bond forming reactions.<sup>1</sup> In 2006, Radius reported the first example of a Ni-catalyzed Suzuki-Miyaura cross-coupling reaction of per-fluorinated arenes, such as octafluorotoluene and perfluorobiphenyl.<sup>2</sup> Since then, several studies regarding this subject have appeared. In most cases, the reactions required a high temperature, over 100 °C. Our group recently reported the Ni-catalyzed reaction of *ortho*-fluoro-substituted aromatic amides with alkynes which results in C-F/N-H annulation to give 1(2H)-isoquinolinones.<sup>3</sup> The reaction proceeded under mild reaction conditions, in the 40-60 °C range and under ligand-free conditions. We herein report the Ni-catalyzed Suzuki-Miyaura cross-coupling reaction of aryl fluorides with aryl boronic esters in which an amide directing group is used even at lower reaction temperatures.



1) For reviews on Suzuki-Miyaura cross-coupling reactions, see: Han, F.-S. *Chem. Soc. Rev.* **2013**, *42*, 5270-5298.

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