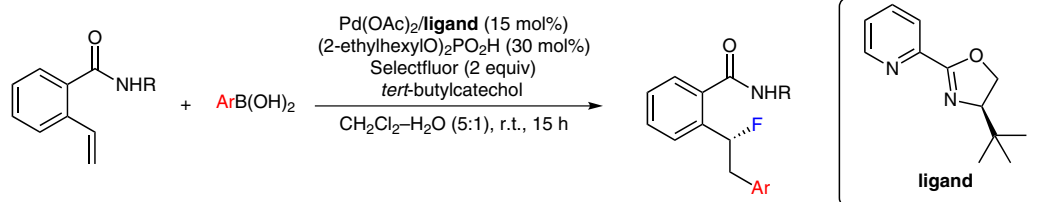


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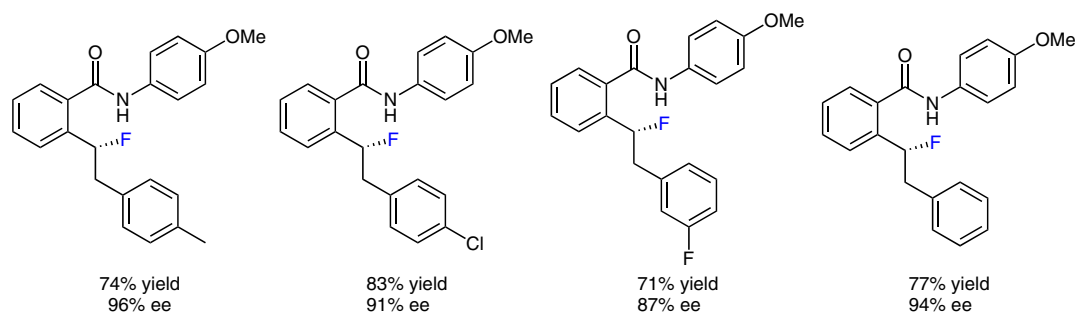
Asymmetric Palladium-Catalyzed Directed Intermolecular Fluoroarylation of Styrenes

*J. Am. Chem. Soc.* **2014**, *136*, 4101–4104.

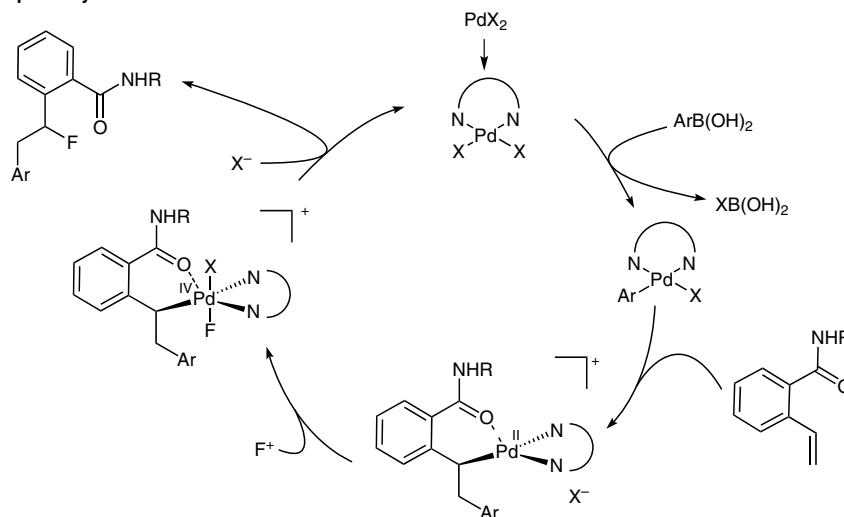
# Enantioselective Fluoroarylation Catalyzed by Palladium



Selected examples:



Possible reaction pathway:



**Significance:** The authors developed a highly enantioselective palladium-catalyzed fluoroarylation of styrenes bearing an amide-based directing group. The proposed reaction mechanism involves a palladium(IV) intermediate as shown above.

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**Comment:** In this reaction, N,N-ligands play a crucial role to afford the fluoroarylated products. Without these ligands only Heck products were obtained. Organic phosphate was added as phase-transfer catalyst to increase the chemical yield.