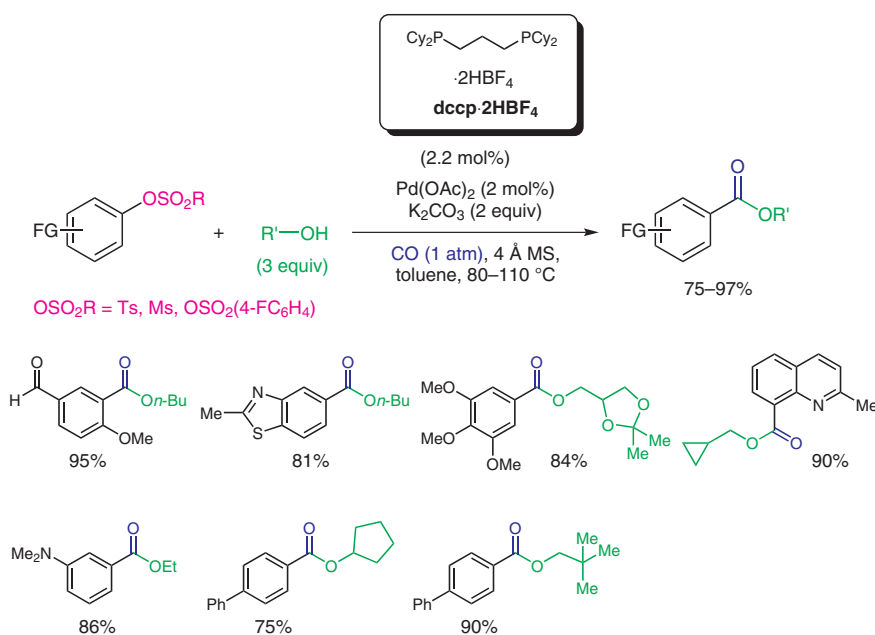


Carbonylation of Aryl Tosylates and Mesylates



Significance: A mild and general procedure for the Heck carbonylation of aryl tosylates and mesylates is reported. The reaction can be carried out at atmospheric pressure of carbon monoxide by the use of air-stable dccp·2HBF₄ as ligand. The reaction proceeds with a high functional group tolerance and can thus be applied to a wide spectrum of substrates. Both secondary and primary alcohols were successfully used in this reaction.

Comment: Aryl tosylates and mesylates are easily accessible by the reaction of the corresponding phenols with tosyl or mesyl chloride. The commercial and easy availability of a broad range of variously functionalized phenols and the low price of tosyl chloride make direct coupling reactions of aryl tosylates highly valuable tools for organic synthesis. The low pressure of carbon monoxide that is needed for the reaction to proceed also adds considerably to the potential usefulness of this reaction for industrial applications.