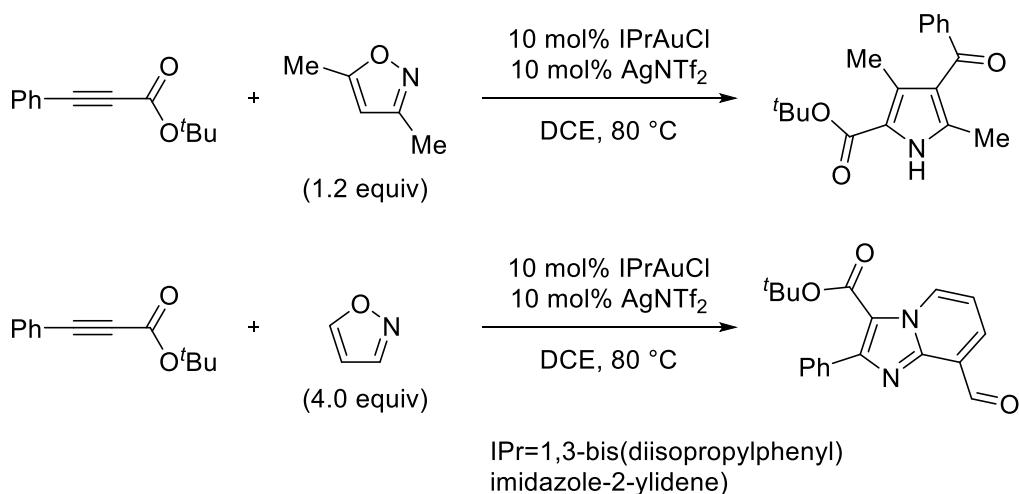
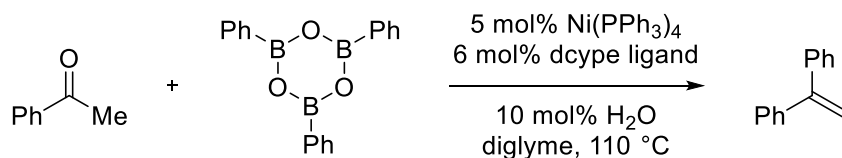


LSPN Group Seminar - Exercise 26

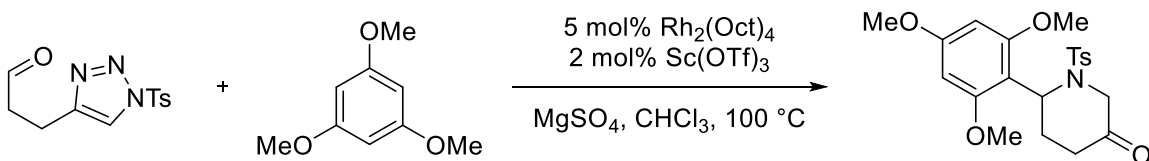
1. The gold-catalyzed annulation between propiolate and substituted isoxazole yielded pyrrole as product while the reaction with unsubstituted isoxazole gave imidazopyridine. Propose two possible mechanisms for the formations of the both products. (*Angew. Chem. Int. Ed.* **2017**, 56, 1026–1030.)



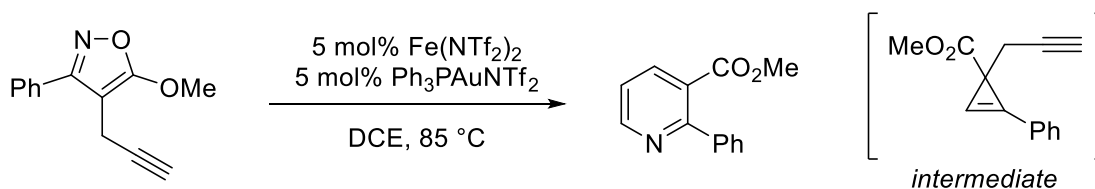
2. 1,1-Diphenylethylene was obtained from the nickel-catalyzed reaction between acetophenone and triphenylboroxine. Propose possible mechanism for this reaction. (*J. Am. Chem. Soc.* **2017**, 139, 6086–6089.)



3. The preparation of 6-substituted piperidinone through the Rh(II)-catalyzed transannulation of aldehyde-tethered *N*-sulfonyl triazole with electron-rich aromatic nucleophile was reported. Propose mechanistic pathway for this transformation. (*Org. Lett.*, Article ASAP. DOI: 10.1021/acs.orglett.7b01180)



4. The isomerization of propargylisoxazole to pyridine under Fe(II)/Au(I) relay catalysis was reported. Propose the catalytic cycle for this reaction.
(*J. Org. Chem.* **2017**, *82*, 5367–5379.)



5. The enantioselective cyclohexyl β-lactone synthesis was achieved by the NHC catalysis. Propose the mechanism for this transformation.
(*Angew. Chem. Int. Ed.* **2016**, *55*, 16136–16140.)

