

## TODAY'S TOPICS

- Canonical catalytic cycles
- Classical Name reactions
- Mechanisms
- History

## CHEMIST OF THE DAY



name?  
known for?

## QUOTE OF THE DAY

"Wheresoever you go, go with all your heart."

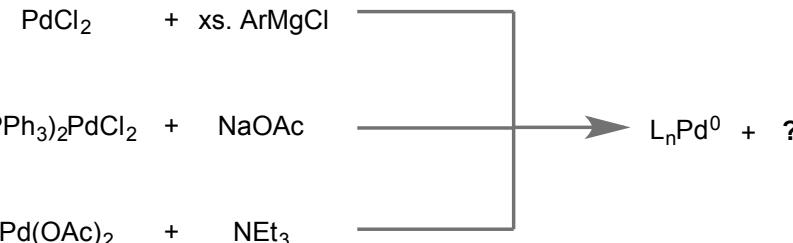
- Confucius

## READING

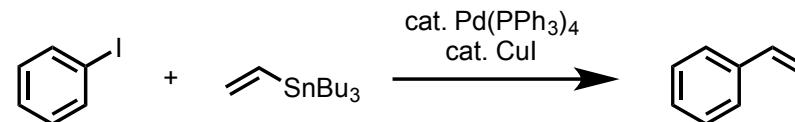
Hartwig: Ch. 19

## PROBLEMS OF THE DAY

**#1** Consider the following processes for active catalyst formation below and **provide the mechanism of generation of Pd(0)**.

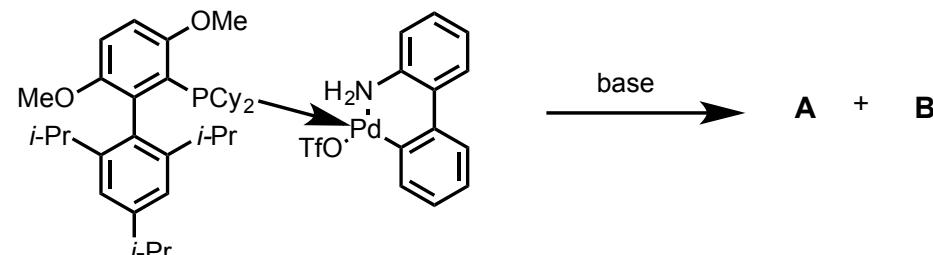


**#2** In many Stille couplings, copper additives are found to promote the rate and efficiency of desired C–C bond formation. **Provide an explanation of the roles of copper(I) iodide in the reaction below.**



**#3** Buchwald's biaryl phosphine ligands have played a significant role in advancing the field of cross-coupling.

**A. Provide the products of the reaction below and the overall electron count of A.**



**B. Rationalize how this series of ligands would accelerate key step(s) in a standard cross-coupling reaction.**