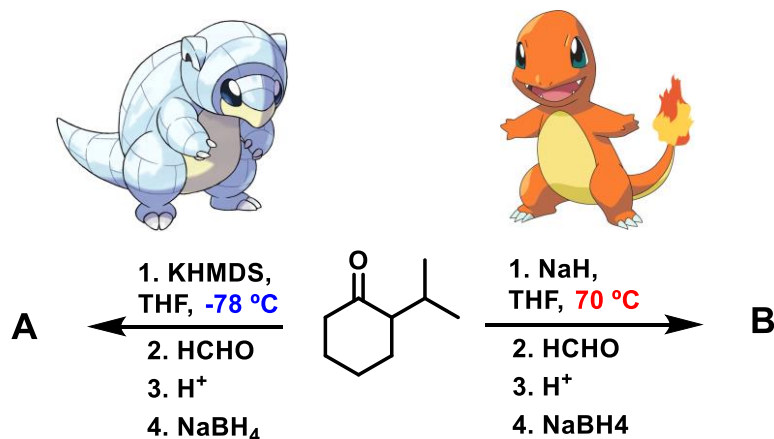


Problem set 17/03/22: Hot and Cold reaction conditions

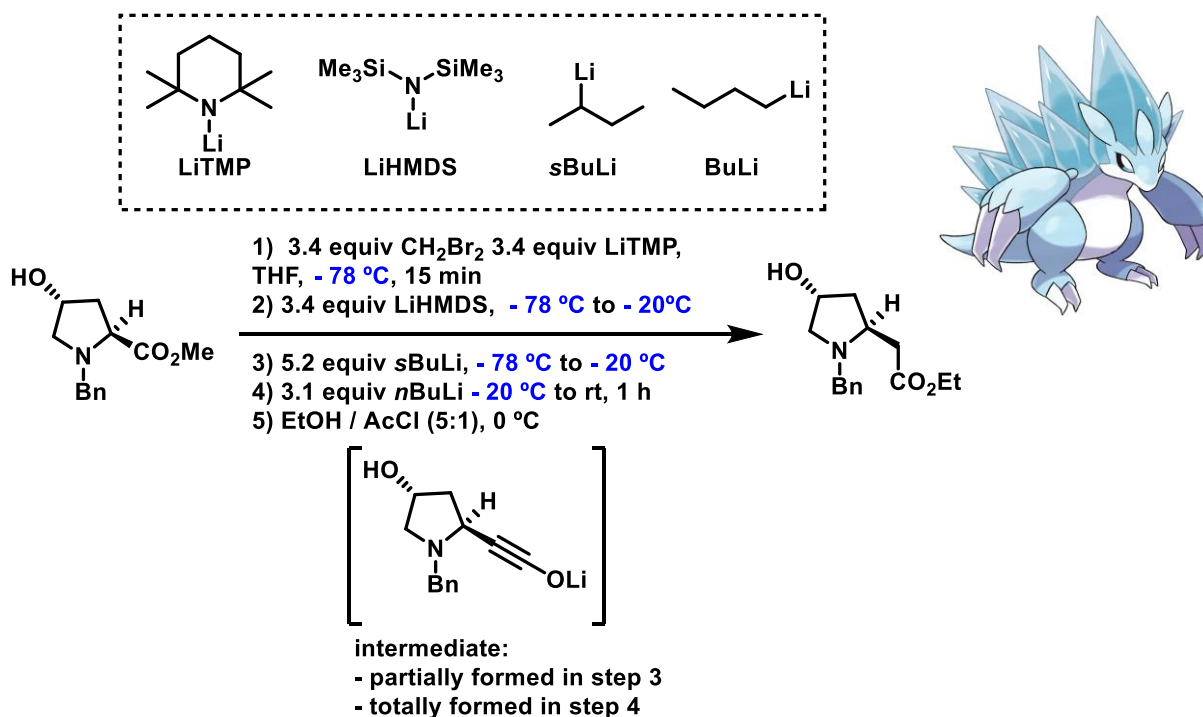
1. Using same Starting materials for these two reactions:



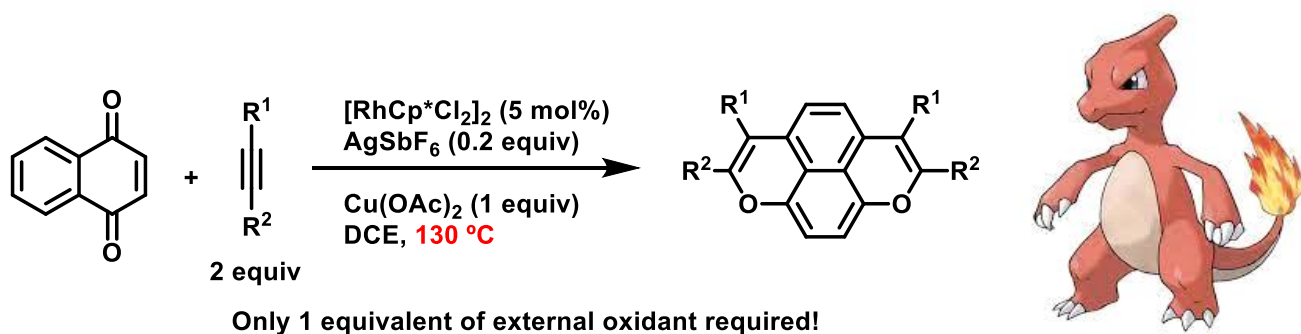
- a) Propose structures for products **A** and **B**. Explain why these products are formed.
- b) Draw the more stable structure for these products.

2.

- a) Propose a plausible mechanism for this homologation reaction.
- b) For this reaction, four different lithium species are used, and the order of addition is crucial for the mechanism of the reaction. Why not use BuLi in steps 2, 3 and 4?

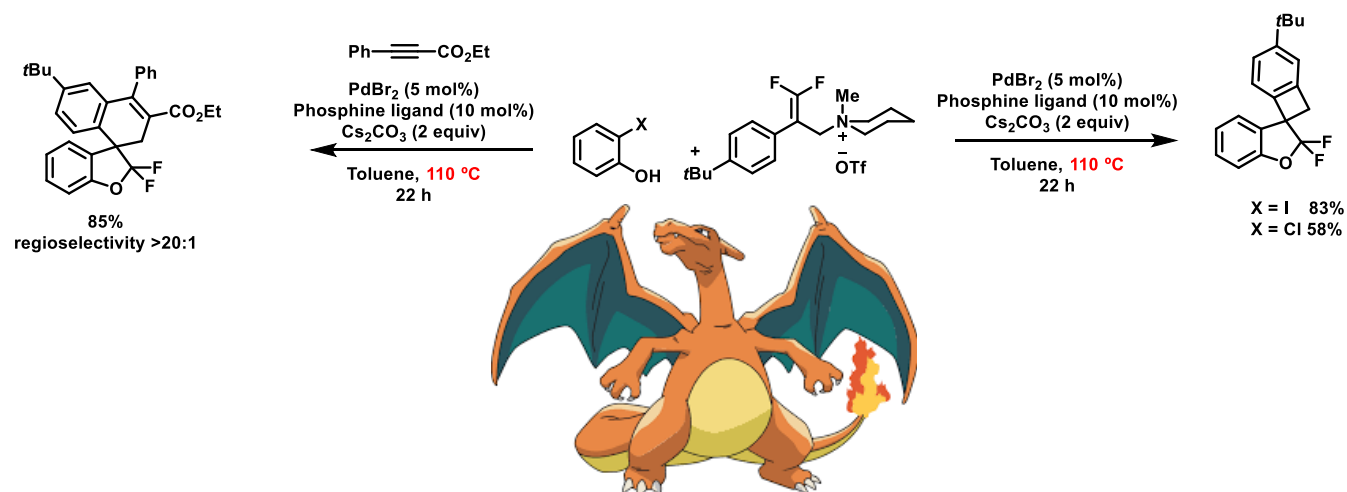


3. Propose a plausible mechanism for the following reaction.



4.

- Propose a plausible mechanism for these transformations.
- Can you explain the differences of reactivity between I and Cl starting materials?
- Can you explain the regioselectivity observed in the reaction involved an alkyne?



5.

- Propose structure for product A
- Propose a mechanism for the reaction in the left

