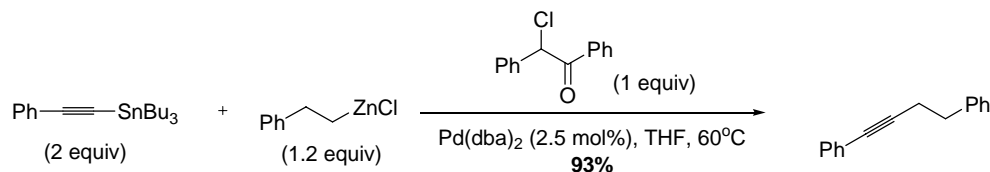




**Problem 2: Zinc and Carbon-Carbon Bond Formation**

A. The following reaction does not proceed in the absence of 2-chloro-2-phenylacetophenone (desyl chloride). Propose a mechanism.



- There are two other commonly observed products. The relative amounts of these products increase under different conditions, what are they?
- Is this a dumb way to make these products?

B. Propose a mechanism, discuss the selectivity.



**Problem 3: Zinc and Diiodomethane**

A. Give the intermediates, propose a detailed mechanism for **A** to **B** and rationalize the selectivity.



B. Fill in the synthesis and propose a detailed mechanism for the last transformation (the zinc step).

