

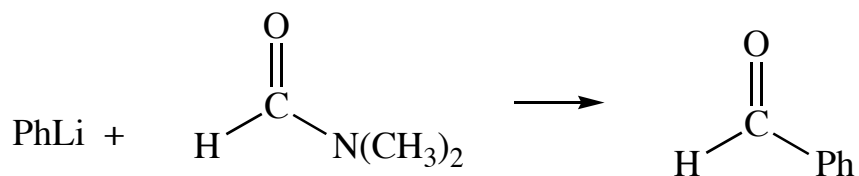
## Exercise 105 - NAS

### Question

Why do carboxylic acid derivatives undergo substitution reactions while aldehydes and ketones undergo addition?

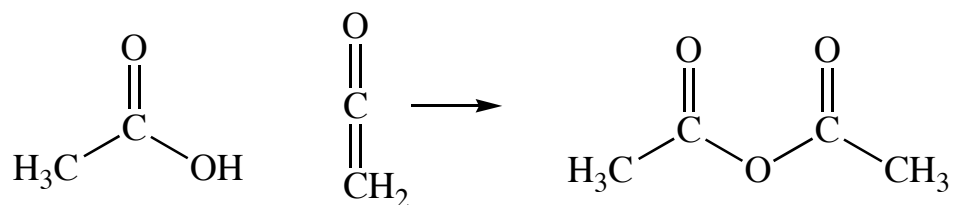
### Question Five

The following is a very useful reaction for the preparation of aldehydes. Classify the reaction mechanistically. What FGI does this now make available (Hint: what is the starting material for the prepn of alkyllithiums)?



### Question Two

Acetic anhydride can be prepared by the addition of acetic acid to ketene. Propose a mechanism.



### Question Three

Offer a mechanism for the following reaction.

