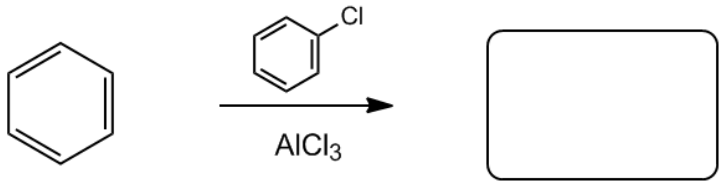
CONCEPT: LIMITATIONS OF FRIEDEL-CRAFTS ALKYLATION

Friedel-Crafts Alkylation has several limitations that render it *almost useless* in the lab.

1. It does not react with *vinyl or aryl halides*. Their carbocations are far too unstable.
    - Solution: Avoid vinyl or aryl halides

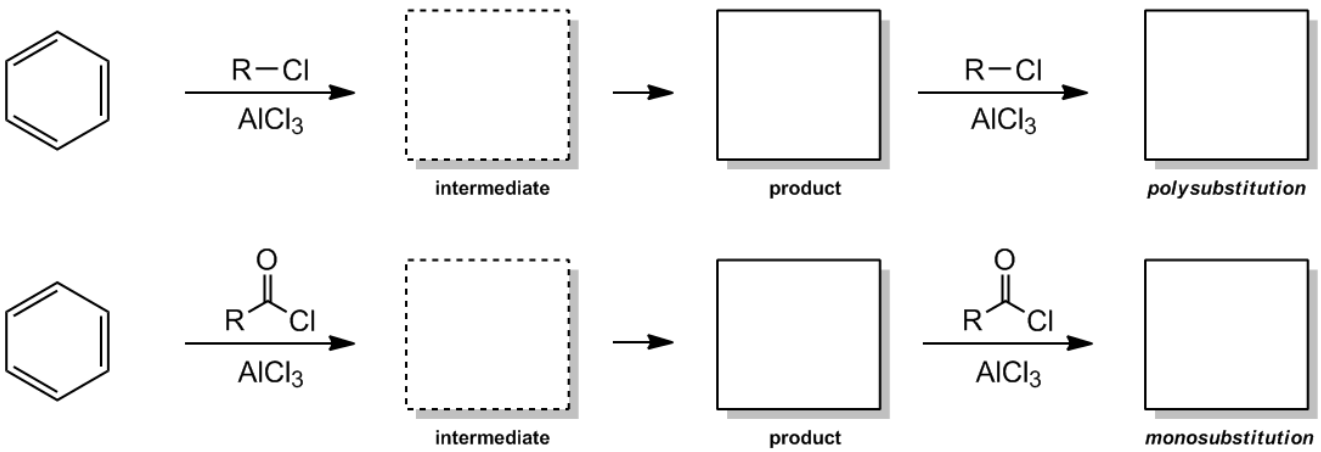


2. Aniline derivatives ruin the Lewis Acid Catalyst
    - Solution: Avoid aniline derivatives or protect (*reversibly acetylate*) the amino group.

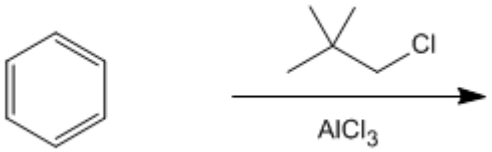
3. Alkylation reactions _____ the ring further reactions
    - Solution: Excess benzene or ***acylate instead***

4. Alkylation reactions are susceptible to carbocation rearrangements
    - Solution: ***Acylate instead***

EXAMPLE: FC Alkylation vs. FC Acylation of benzene



PRACTICE: Provide the major product and the correct mechanism for the following reaction.



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