

ORGANIC CHEMISTRY 2 LECTURE GUIDE 2019

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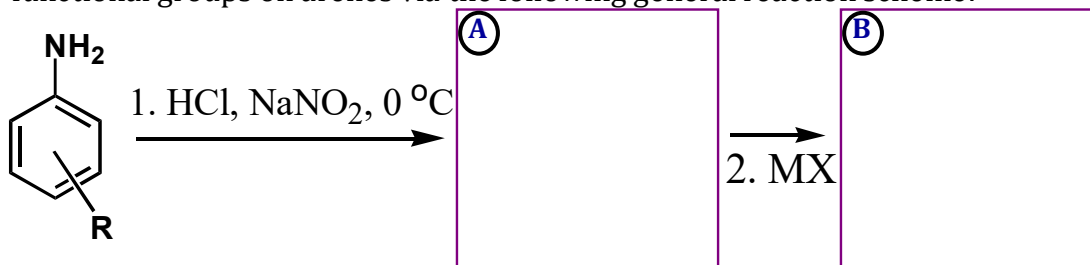
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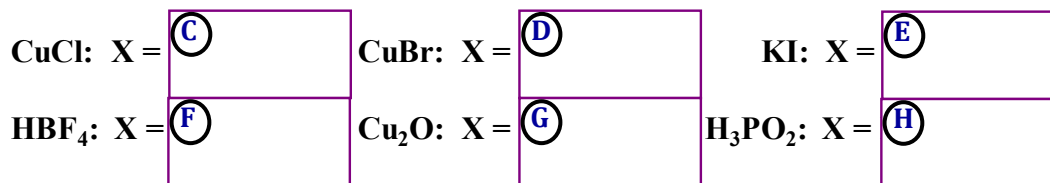
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Lesson IV.17. Formation and Reaction of Diazonium Salts*Converting an amine to other functional groups*

Diazonium salts ($R-N_2^+$) are good precursors for transformation into other functional groups on arenes via the following general reaction scheme:



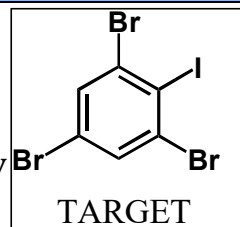
The identity of the group that ends up on the ring depends on what compound MX is added in the second step:



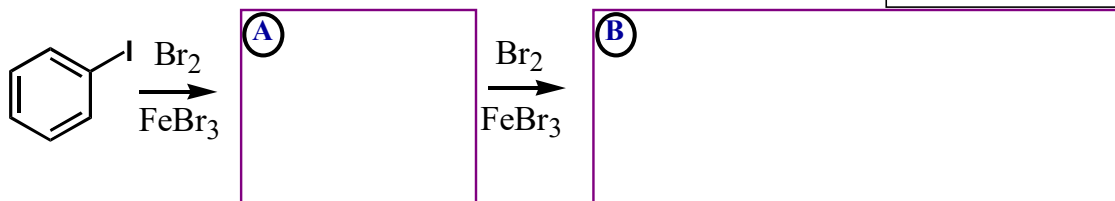
Notes

Lesson IV.17. Formation and Reaction of Diazonium Salts*Diazotization application*

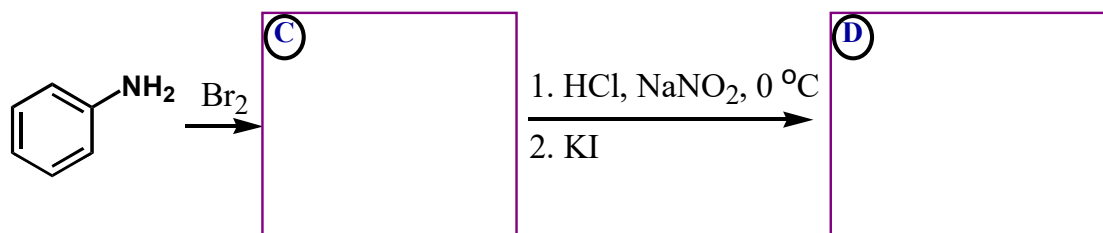
To illustrate just one case where the diazonium reaction proves very useful, consider an attempted synthesis of this target:



Attempts to synthesize this target using only EAS will quickly prove problematic:



Diazotization following EAS will readily give the target:



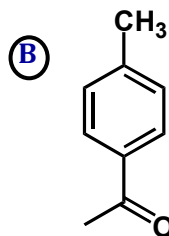
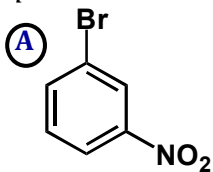
Notes

Summary for Part IV: Putting it all Together

Multistep synthesis

Give the best synthesis of the following targets from benzene in as many steps as necessary, using the reactions presented in the notes thus far.

I. Some simpler ones:

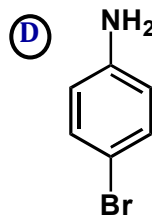
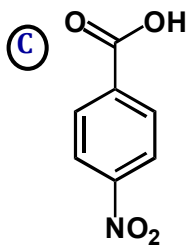


Notes

Summary for Part IV: Putting it all Together

Multistep synthesis

II. Some that require substitution followed by reaction of the functional groups:



Notes