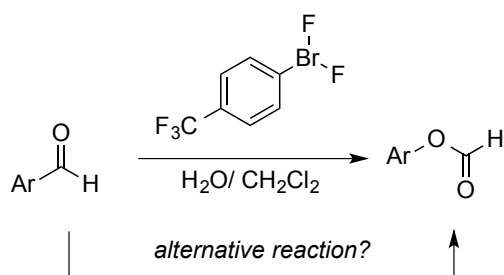


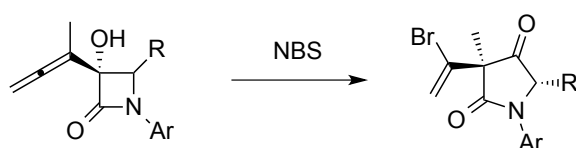
## EAA Group Problems 11/3/14

1. Provide a mechanism with an explanation for each of the following reactions.

a.



b.



2.

a. State and explain that which form of each of the piperidines shown below is more basic.

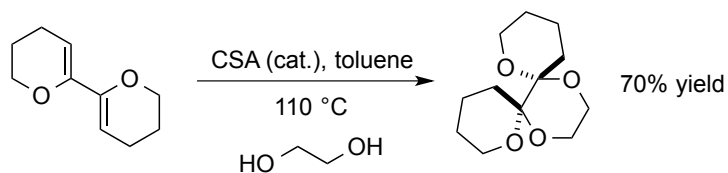
i



ii

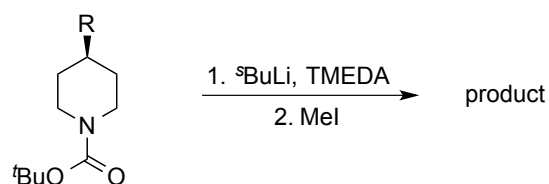


b. Draw the conformation of the product and explain why this reaction is so selective.

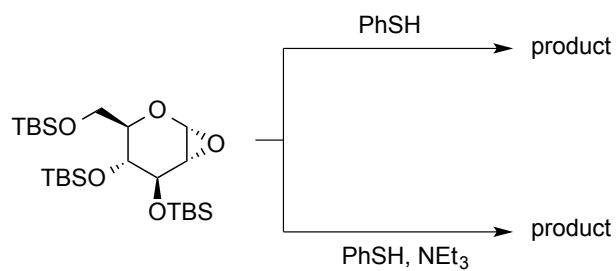


3. Give a mechanism and the structure with stereochemistry of the product formed in each of the following reactions.

a.



b.



4. When **1** is hydrolysed, just only kinetic product **3** is observed at the initial stage of the reaction. However, if the reaction is left long enough, the kinetic product **3** will be converted to the thermodynamic product **4**. Specify a plausible reason why **3** is formed first. Draw a reasonable conformation of the intermediate **2** formed during the formation of **4**.

