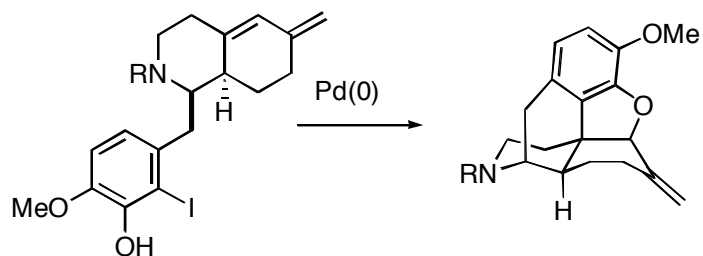
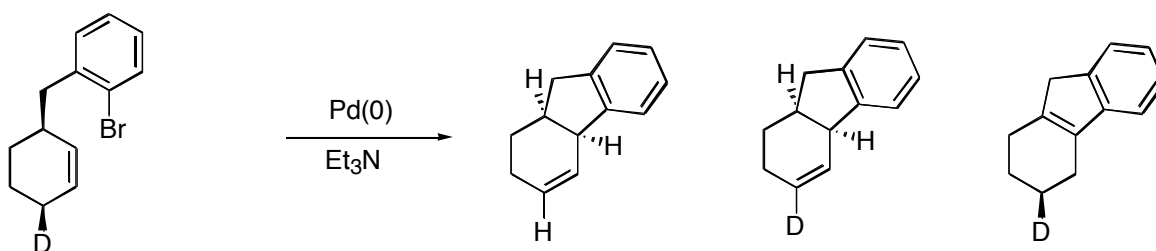


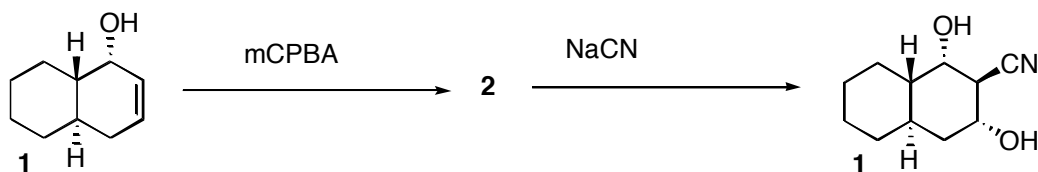
1 Provide a mechanism



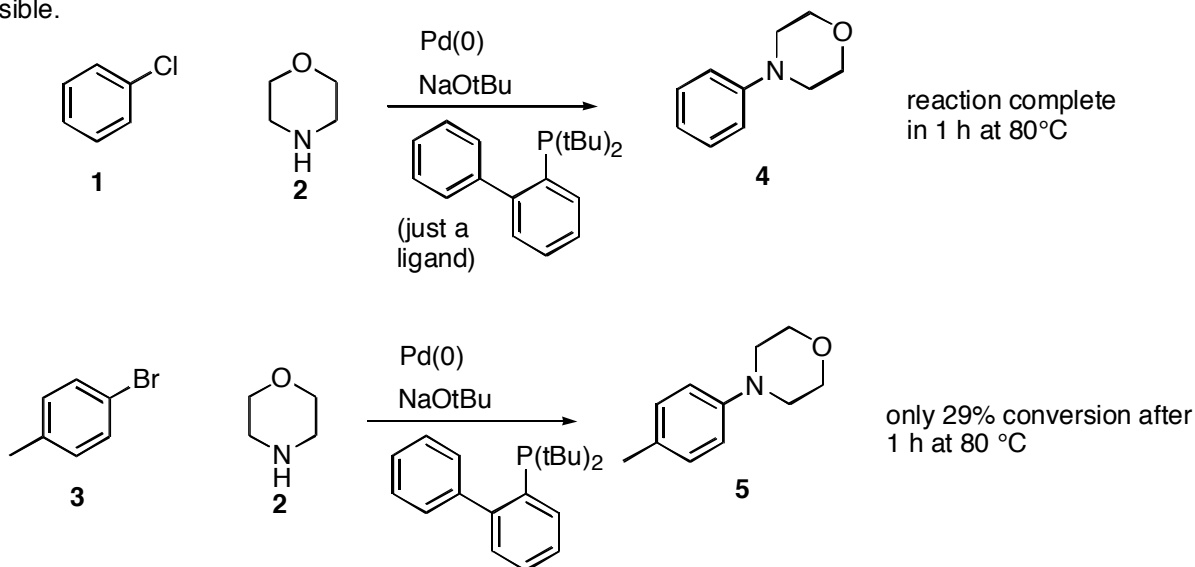
2. Predict the product. Explain your choice



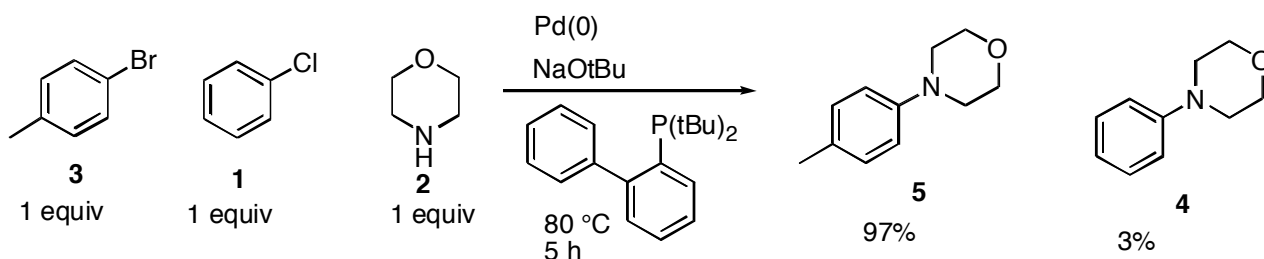
3. Reaction of **1** with mCPBA gives intermediate **2**. Subsequent reaction with NaCN gives **3**. What is the structure of **2**. Explain your reasoning based on what you know about epoxide opening reactions.



4. The amination reaction of chloride **1** with amine **2** is faster than the corresponding reaction with bromide **3**. However, when equimolar amounts of **1**, **2** and **3** are combined, adduct **5** is the major product. Explain how this is possible.



but



#### 5. Reading assignment from the Primary Literature

provide a brief synopsis (hand drawn structures) of a paper from the primary chemical literature. ~ Organic Letters and Tetrahedron Letters are the most appropriate sources for papers. Select an article that describes a new type of synthetic methodology. In addition to outlining the main idea of the paper, I ask that you make a list at the bottom of "reactions/concepts learned by reading this paper".

6. Use Beilstein commander to search the following structure:

