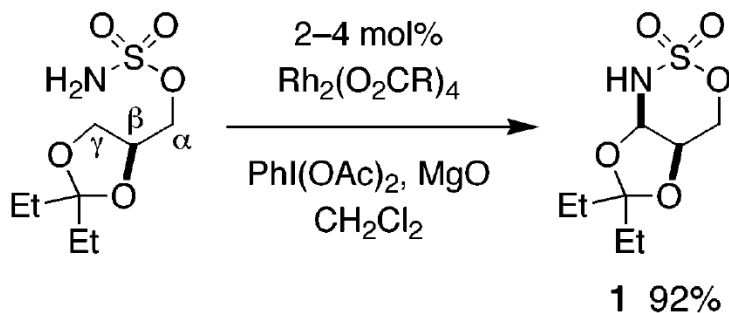
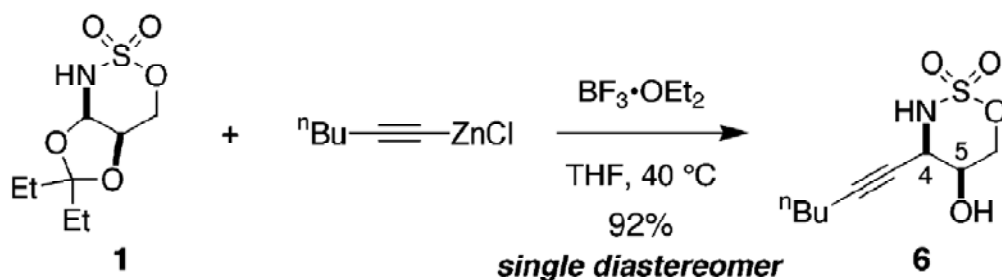


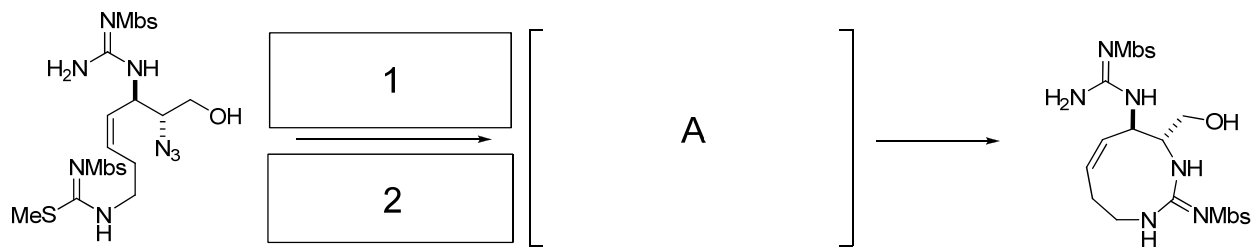
1. Provide a plausible mechanism for the given transformation. R = CH<sub>3</sub>



2. Provide a plausible explanation for the diastereoselectivity.



3. Provide the reagents for the two-step sequence that ultimately leads to the indicated product through intermediate A. Mbs = *p*-MeOC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>



4. Provide a plausible mechanism that gives rise to the transient intermediate and propose a final product.

