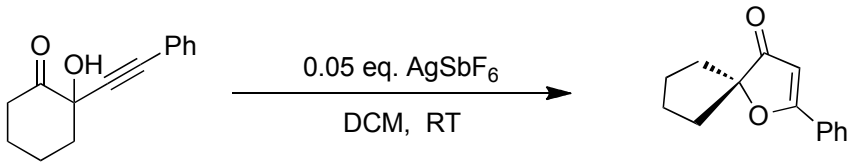
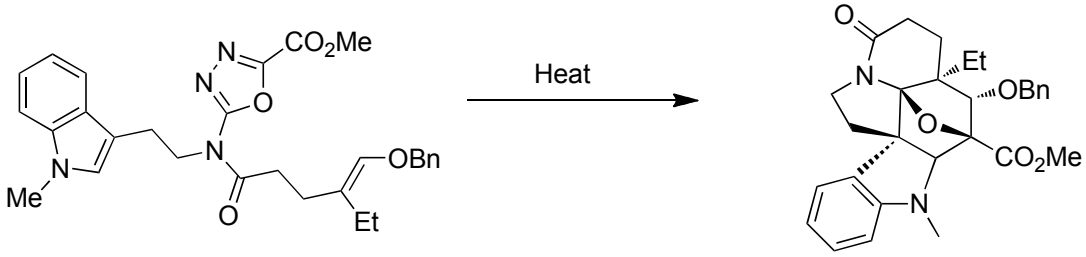
Give mechanistic reasoning for the following reactions, justifying any stereochemical outcomes.

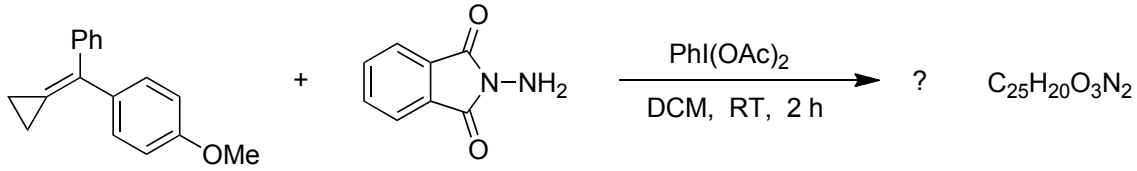
1.



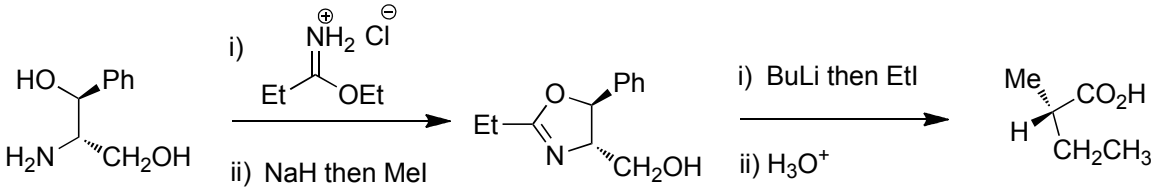
2.



3.



4.



5.