

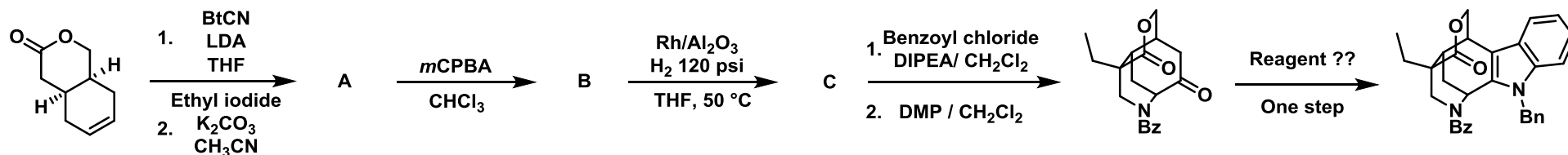
Access to (+)-scholarisine A.

In 2012, Amos B, Smith and coworkers reported the first total synthesis of (+)-scholarisine A.

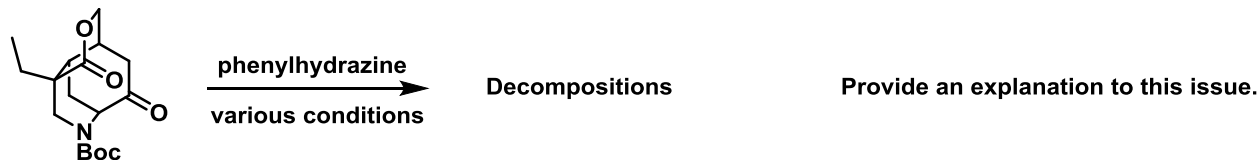
J. Am. Chem. Soc. **2013**, *135*, 519-528.

Part I:

Write mechanism of the following transformations

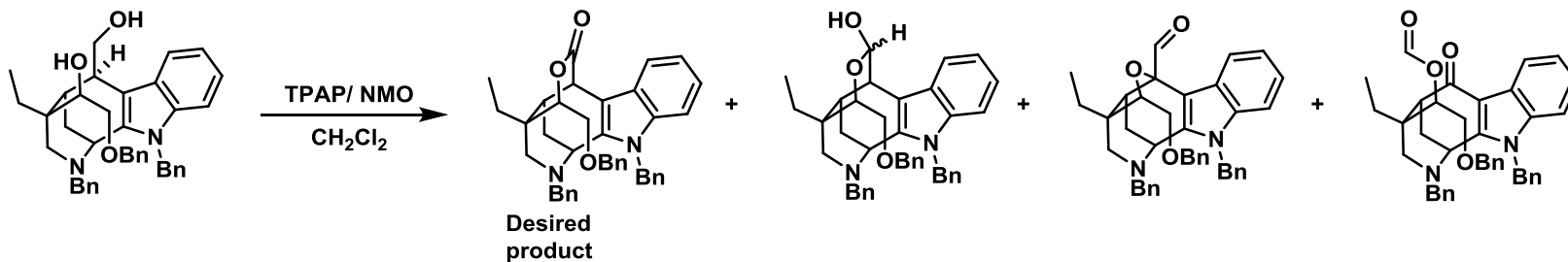


The last step of this sequence was first performed using Boc as protecting group and phenylhydrazine leading to decomposition.

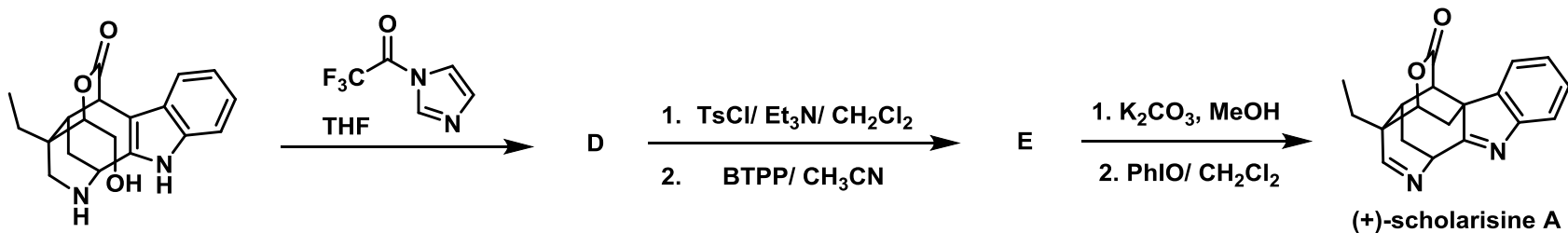


Part II:

Provide a possible mechanism for the generation of those by-product



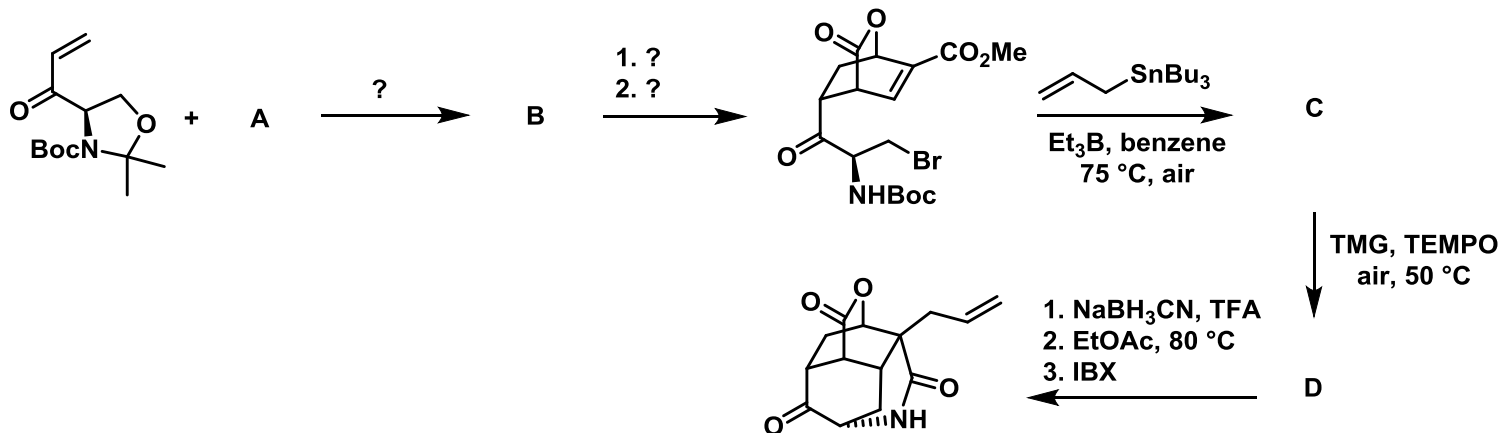
Provide mechanism of the following transformations



In 2013, Scott A. Snyder and coworkers reported the second total synthesis of (+)-scholarisine A.
J. Am. Chem. Soc. **2013**, *135*, 12964-12967.

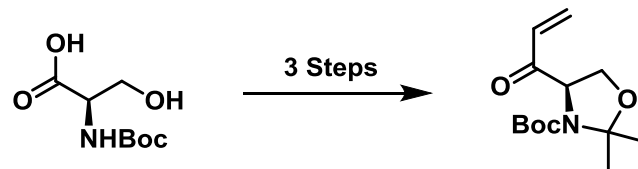
Part I:

Fill the blanks and provide mechanism of the following transformations



Part II:

Propose a 3 steps synthesis of SM starting from *N*-Boc-D-serine



Part III:

Fill the blanks and provide mechanism of the following transformations

