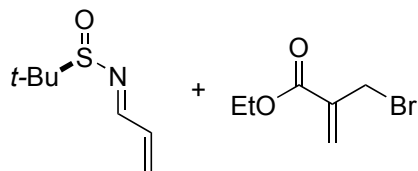
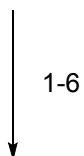
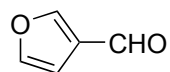


## Total Synthesis of (-)-Nakadomarin A

Simone Bonazzi, Bichu Cheng, Joseph S. Wzorek, and David A. Evans

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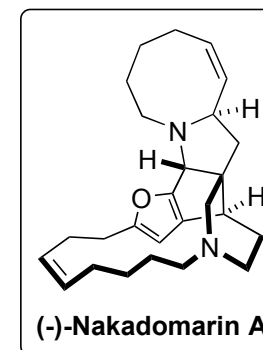
1. *n*-Buli, morpholine, then *s*-Buli, then I<sub>2</sub>
2. CH(OMe)<sub>3</sub>, TsOH
3. Pd(OAc)<sub>2</sub>, allyl alcohol
4. KHDMS, BocNH(CH<sub>2</sub>)<sub>5</sub>PPh<sub>3</sub>I, then HCl
5. CH<sub>3</sub>O<sub>2</sub>CCH<sub>2</sub>P(O)(OCH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>, 18-crown-6, KHDMS
6. NaOH, MeOH, H<sub>2</sub>O
7. TFA
8. HBTU, NEt<sub>3</sub>

9. Zn, LiCl, H<sub>2</sub>O

3. Name Reaction?

4. Provide a mechanism for this step

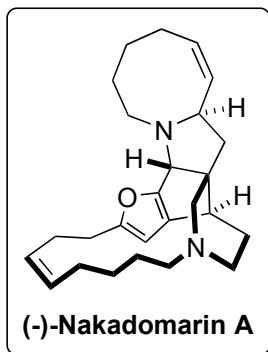
5. Name Reaction?



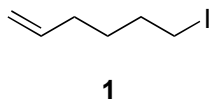
↓  
10-12



↓  
13-15



10. HCl, MeOH, then NaOH
11. NaH, **1**
12. Grubbs I



13. **A**, TBSOTf, *i*-Pr<sub>2</sub>NEt, then **C**
14. Me<sub>3</sub>OBf<sub>4</sub>, then NaBH<sub>4</sub>, MeOH
15. Tf<sub>2</sub>O, 2,6-di-*tert*-butyl-4-methylpyridine, then NaBH<sub>3</sub>CN, MeOH

13. Provide mechanism for this step