## **Total Synthesis of Tagetitoxin**

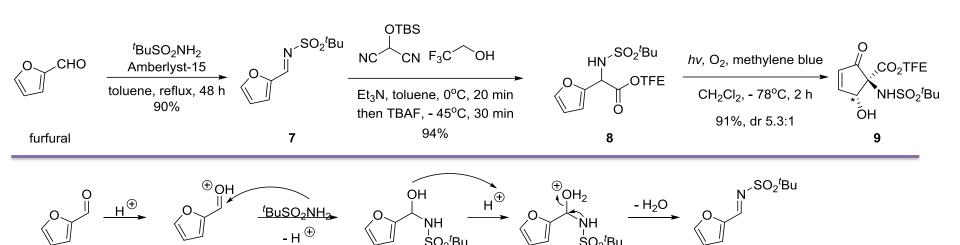
J. Am. Chem. Soc. **2020**, 142, 13683–13688. Chi He, Hang Chu, Thomas P. Stratton, David Kossler, Kelly J. Eberle, Dillon T. Flood, and Phil S. Baran

- Tagetitoxin was first discovered in 1937 in the horticulture community as an enigmatic plant pathogen. Its unprecedented inhibitory effects on RNA polymerase was revealed in 1990.
- The detailed structure was not elucidated until 2016 by Aliev and coworkers, though the absolute configuration nor the optical rotation has been disclosed.
- The fully oxidized cyclopentane core, multiple polar functional groups and containing more heteroatoms than carbon atoms make its synthesis more challenging.





## **Retro-synthetic Analysis**



19a-1

KOTMS 
$$O$$
 KOTMS  $O$  KOTMS  $O$  COTMS  $O$  COTMS