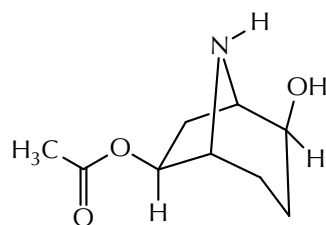
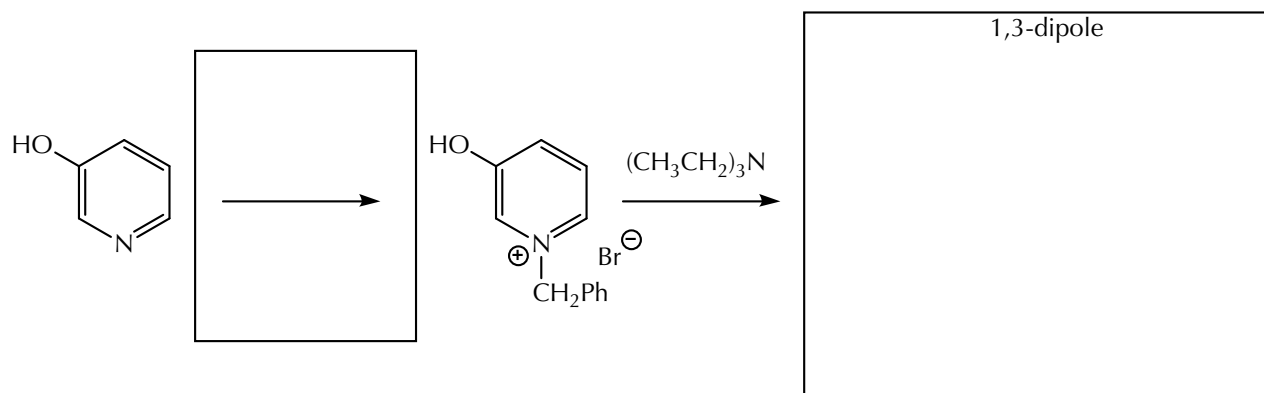


20.41 Bao Gong Teng A is an alkaloid isolated from an herb used in traditional Chinese medicine (TCM) to treat fever.

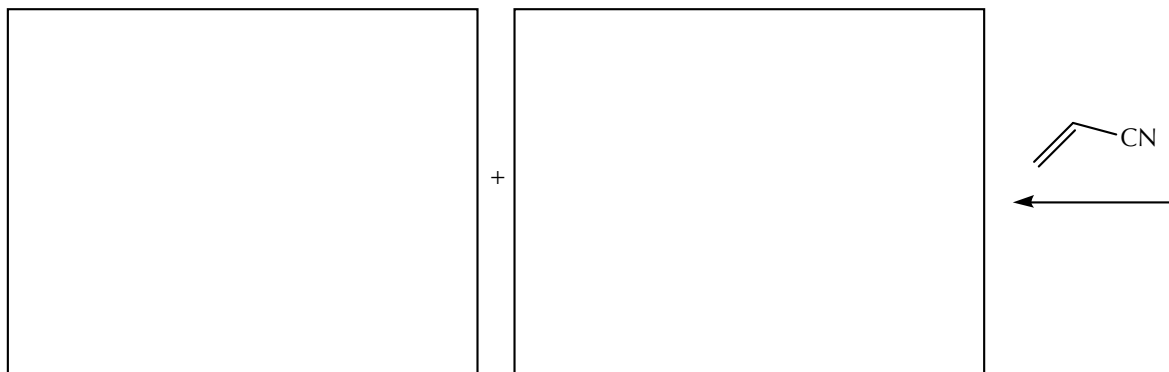
The compound has been found to have fewer side effects than many standard medications used to treat glaucoma. The herb is scarce, however, and so a synthesis was needed to provide material for its medical studies. A critical step in one of its syntheses is a 1,3-dipolar cycloaddition reaction. Complete the chemical reaction, as directed.



Bao Gong Teng A



Diastereomeric cycloaddition products. Use the structure of Bao Gong Teng A to guide your decision about both the structure of the 1,3-dipole and the regioselectivity of the cycloaddition reaction.



20.42 The seaweed pheromone, dictyopterene C', was synthesized using a Cope rearrangement. What is the structure of the starting material, including all stereochemical information? Draw the **boat**-like conformation for the Cope rearrangement that shows that the stereochemical relationships are correct in your answer.

