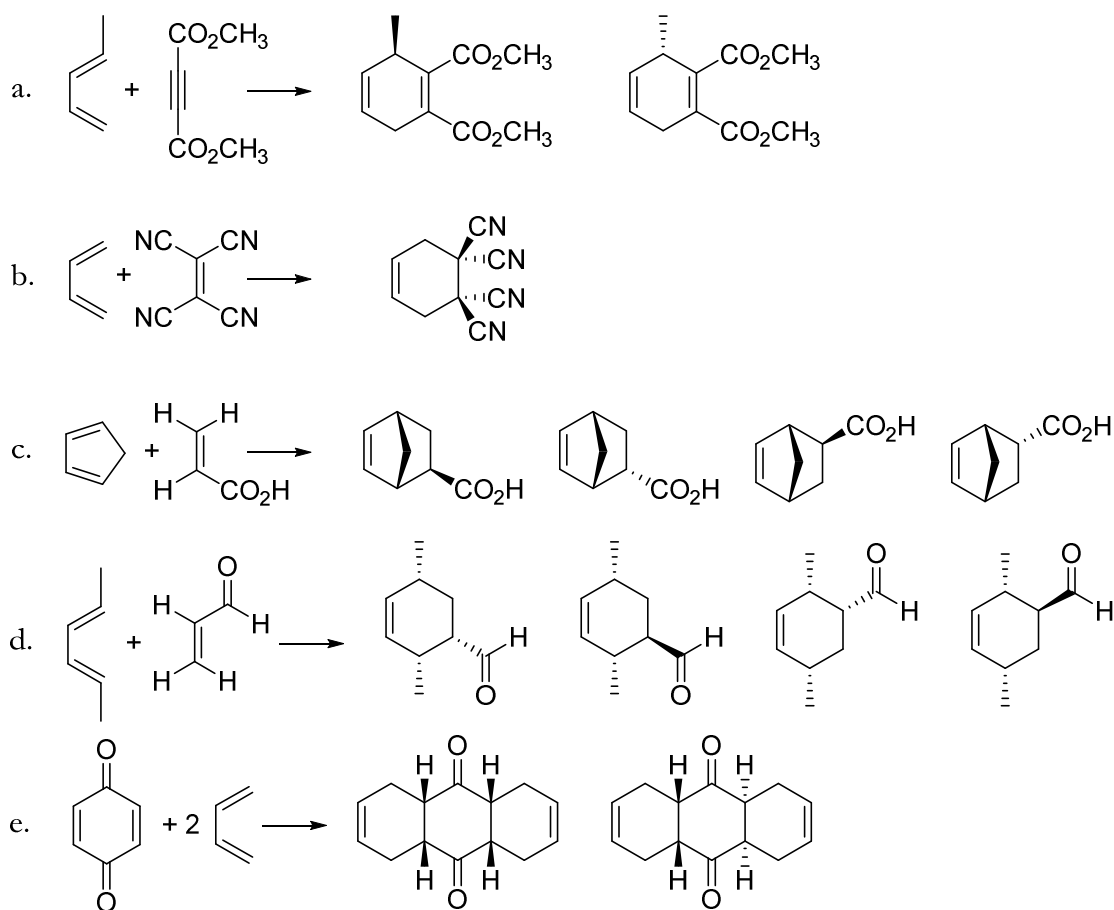
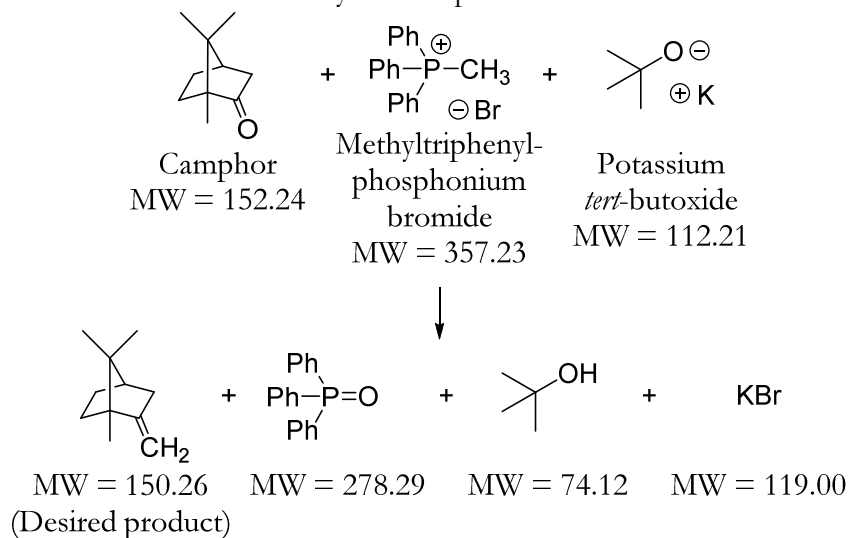


Experiment 15: Diels-Alder Reaction

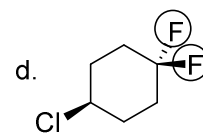
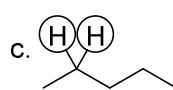
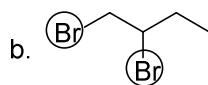
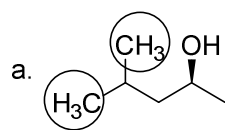


- 3) The reaction shown below is an example of the *Wittig reaction*, which you will learn about in Chapter 19 of Loudon. What is the atom economy for this particular reaction?



If a chemist performs this reaction using 0.152 g of camphor, 0.536 g of methyltriphenylphosphonium bromide, and 0.168 g of potassium *tert*-butoxide, and isolates 0.138 g of product, what is the percent yield? **Answer:** The atom economy is 24.17%, and the yield is 92.0%.

- 4) Describe each of the following pairs of groups as homotopic, enantiotopic, diastereotopic, or chemically inequivalent.



Answer: a. Diastereotopic, b. Chemically inequivalent, c. Enantiotopic, d. Diastereotopic