

6. SYNTHESIS OF MULTIPLE BONDS

1. On the basis of the reference *Org. Synth.* **1969**, 49, 39 discuss Hofmann elimination.

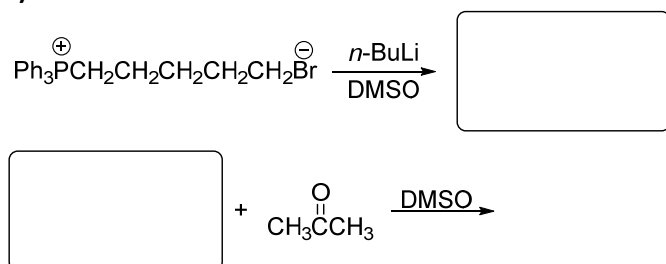
2. Find example(s) of Chugayev elimination in reference *Org. Lett.* **2008**, 10, 1437.

3. Present various uses of the Burgess reagent on the basis of the reference *J. Org. Chem.* **2017**, 82, 1046.

4. Write reactions from *Org. Synth.* **1959**, 39, 40 and compare Hofmann and Cope eliminations on the basis of *Discussion* presented in this paper.

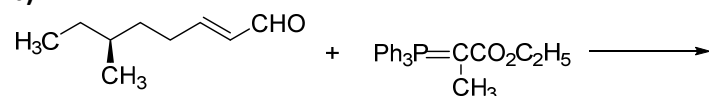
5. Predict products of the following reactions (CS2). Compare structures of substrates in Wittig, Horner-Wittig and Wadsworth-Emmons olefinations.

a)



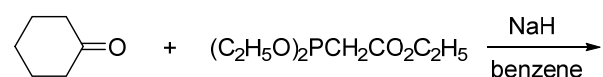
U. T. Bhalerao and H. Rapoport, *J. Am. Chem. Soc.*, **1971**, 93, 4835.

b)



A. G. M. Barrett, M. Pena, and J. A. Willardsen, *J. Org. Chem.*, **1996**, 61, 1082.

c)



W. S. Wadsworth, Jr., and W. D. Emmons, *Org. Synth.* **1965**, 45, 44.

6. Find all examples of McMurry coupling in *J. Med. Chem.* **1999**, 42, 4861.

7. Write the reaction for pinacol coupling from the total synthesis of (+)-4,5-deoxyneodolabelline (*J. Am. Soc. Chem.* **2003**, 125, 1843).

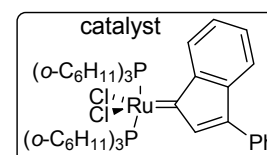
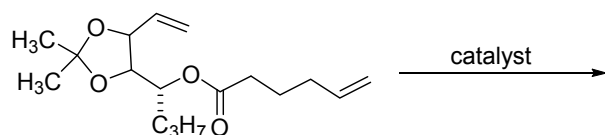
8. Find an example of Corey-Fuchs olefination in reference *J. Am. Chem. Soc.* **2005**, 127, 5596.

9. Fill in the table below (CS8, MS).

Catalyst	Structure	Properties/applications
Schrock catalyst		
1st generation Grubbs catalyst		
2nd generation Grubbs catalyst		

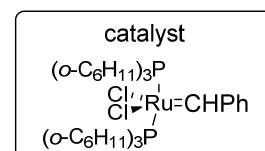
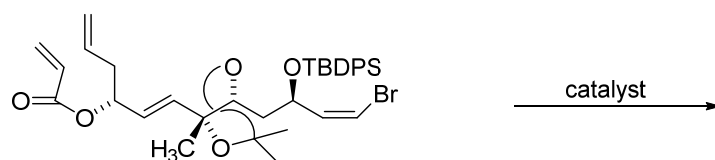
10. Predict products of the reactions (CS8).

a)



J. Am. Chem. Soc. **2002**, 124, 7061.

b)



Org. Lett. **2002**, 4, 969.