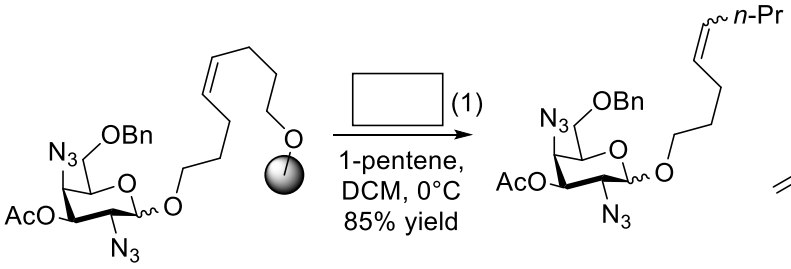
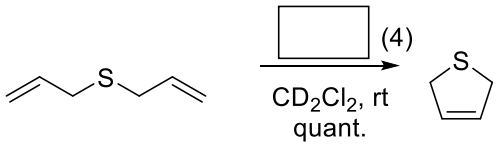
Ex 1: *Fill the blank space above each arrow with the appropriate catalyst (every catalysts have to be used):*

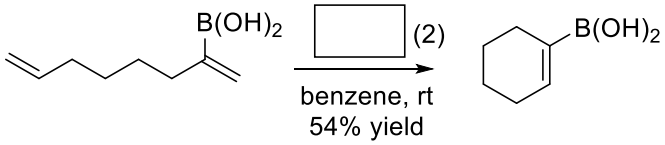
Schrock / G-I / G-II / G-III / HG-II / P-II



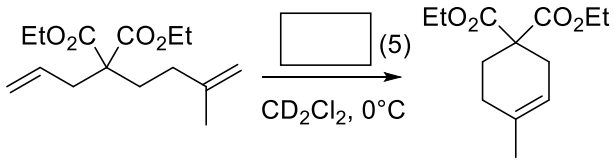
Org. Lett. **2003**, *5*, 4541-4544



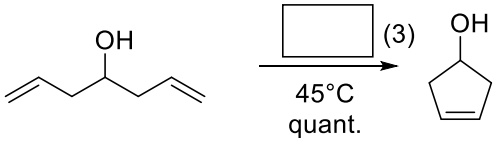
Chem. Comm. **2015**, 5*1*, 515-518



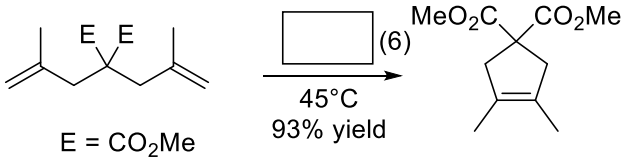
JACS **1998**, *120*, 7995-7996



Inorg. Chim. Acta **2006**, *359,* 2658–2664

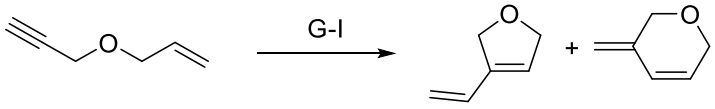


Org. Lett. **1999**, *1*, 953-956

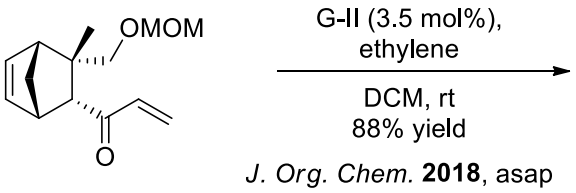


Org. Lett. **1999**, *1*, 953-956

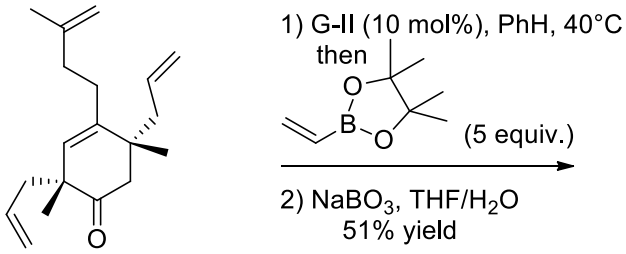
Ex 2: *Explicit the mechanism for the following RCEYM reaction:*



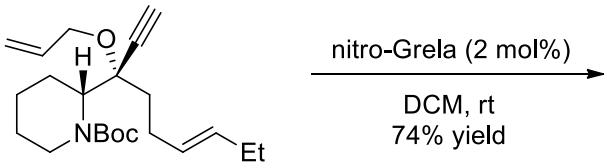
Ex 3: *Draw the structure of the product:*



J. Org. Chem. **2018**, asap

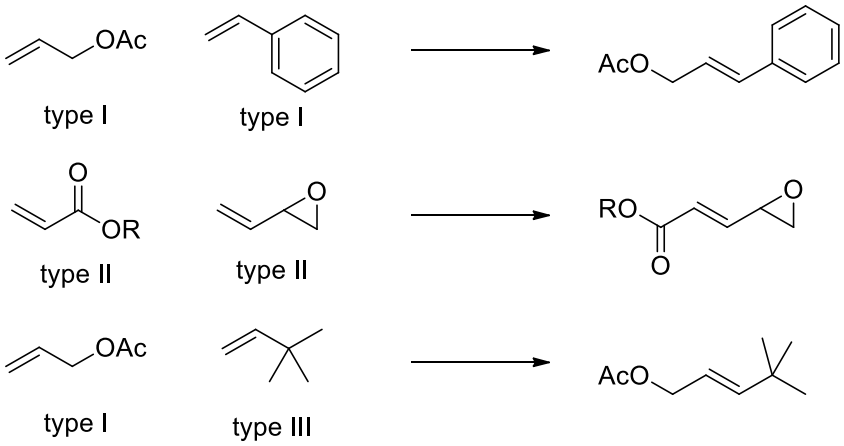


Nature **2008**, *453*, 1228-1231



Org. Lett. **2004**, *6*, 87-89

Ex 4: *What is the most difficult CM reaction to perform?*



	Type I	Type II	Type III	Type IV
homodimerization	rapid	slow	no	inert to metathesis
consumability of the homodimers	yes	sparingly	-	-

Bonus: *Could you propose an efficient catalyst for this transformation?*