



**1. Formální mechanismus a přesun elektronů (“arrow pushing”)**

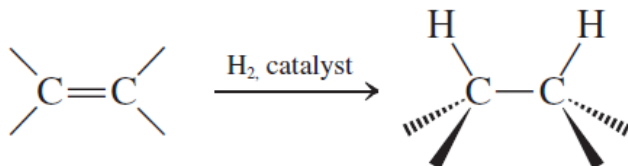
**2. Interpretace reaktivity**

**3. Predikce hlavního produktu reakce**

**4. Návrh syntetické sekvence**

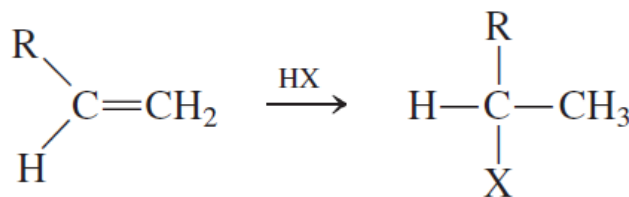
# Typické reakce alkenů - shrnutí

## 1) Katalytická hydrogenace



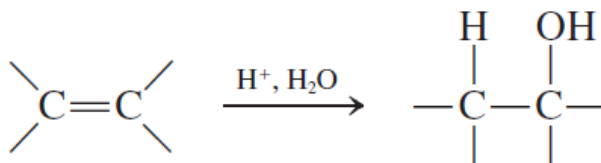
*syn*-adice

## 2) Hydrohalogenace



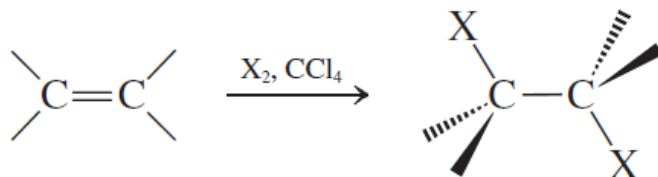
regioselektivita  
Markovnikovovo pravidlo  
stabilita karbocationtu !

## 3) Hydratace



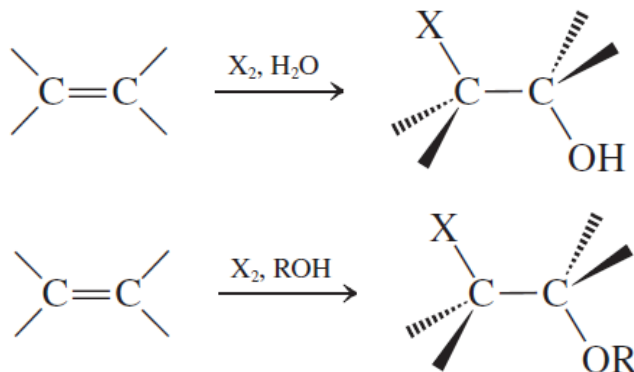
regioselektivita  
stabilita karbocationtu !

## 4) Halogenace (Cl<sub>2</sub>, Br<sub>2</sub>, ne I<sub>2</sub>)



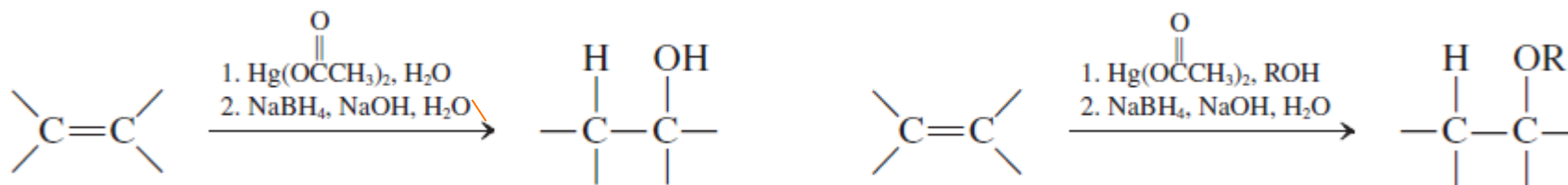
stereospecifická (*anti*)

## 5) Halogenhydriny a halogenethery



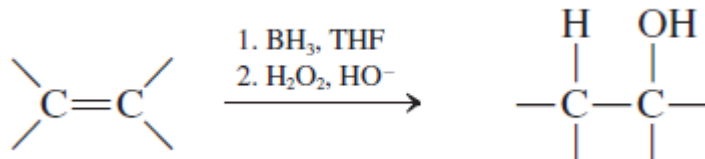
*anti*-adice  
bromoniový intermediát!

## 6) Oxymerkurace - demerkurace



regioselektivita stejná jako  
u kyselě katalyzované  
adice vody

## 7) Hydroborace

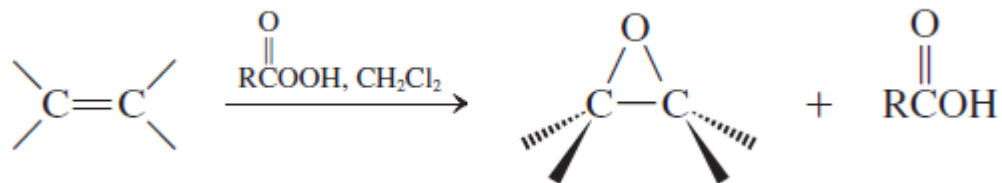


stereospecifická (*syn*)  
regioselektivní anti-  
Markovnikovova adice

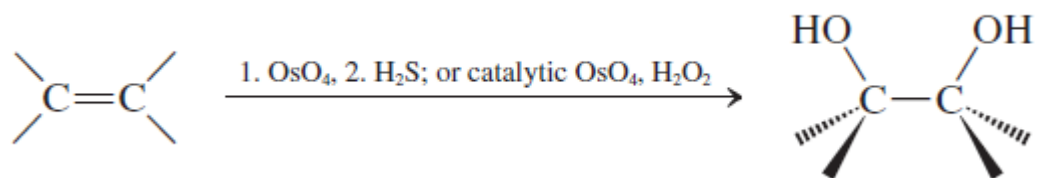


## 8) Oxidace

a) vznik oxacyklopropanového kruhu

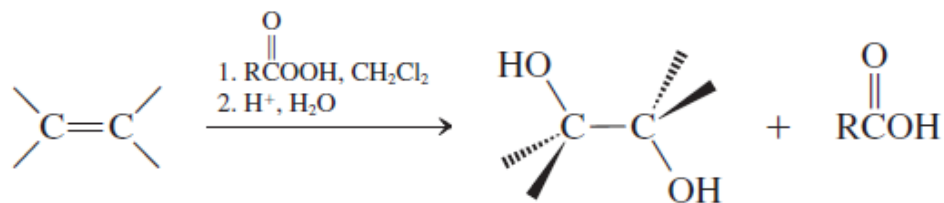


b) vicinální *syn*-dihydroxylace

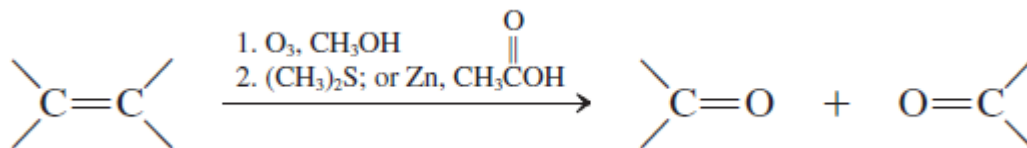


stereospecifická  
*syn*-adice

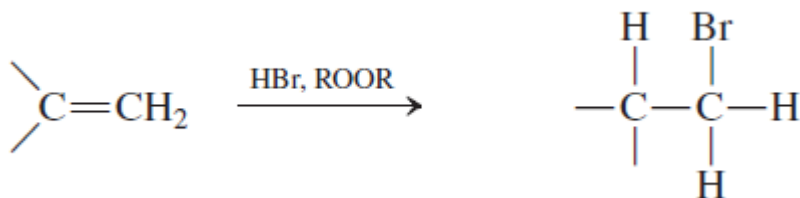
c) vicinální *anti*-dihydroxylace



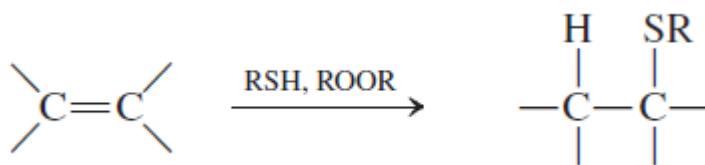
## 9) Ozonolýza



## 10) Radikálové adice

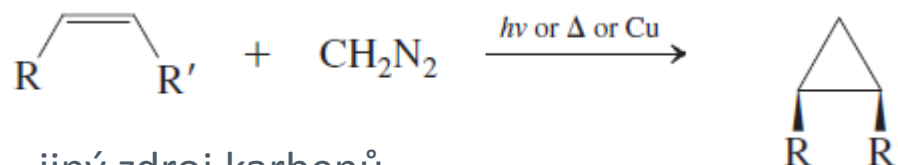


anti-Markovnikovův produkt



anti-Markovnikovův produkt

## 11) Adice karbenů

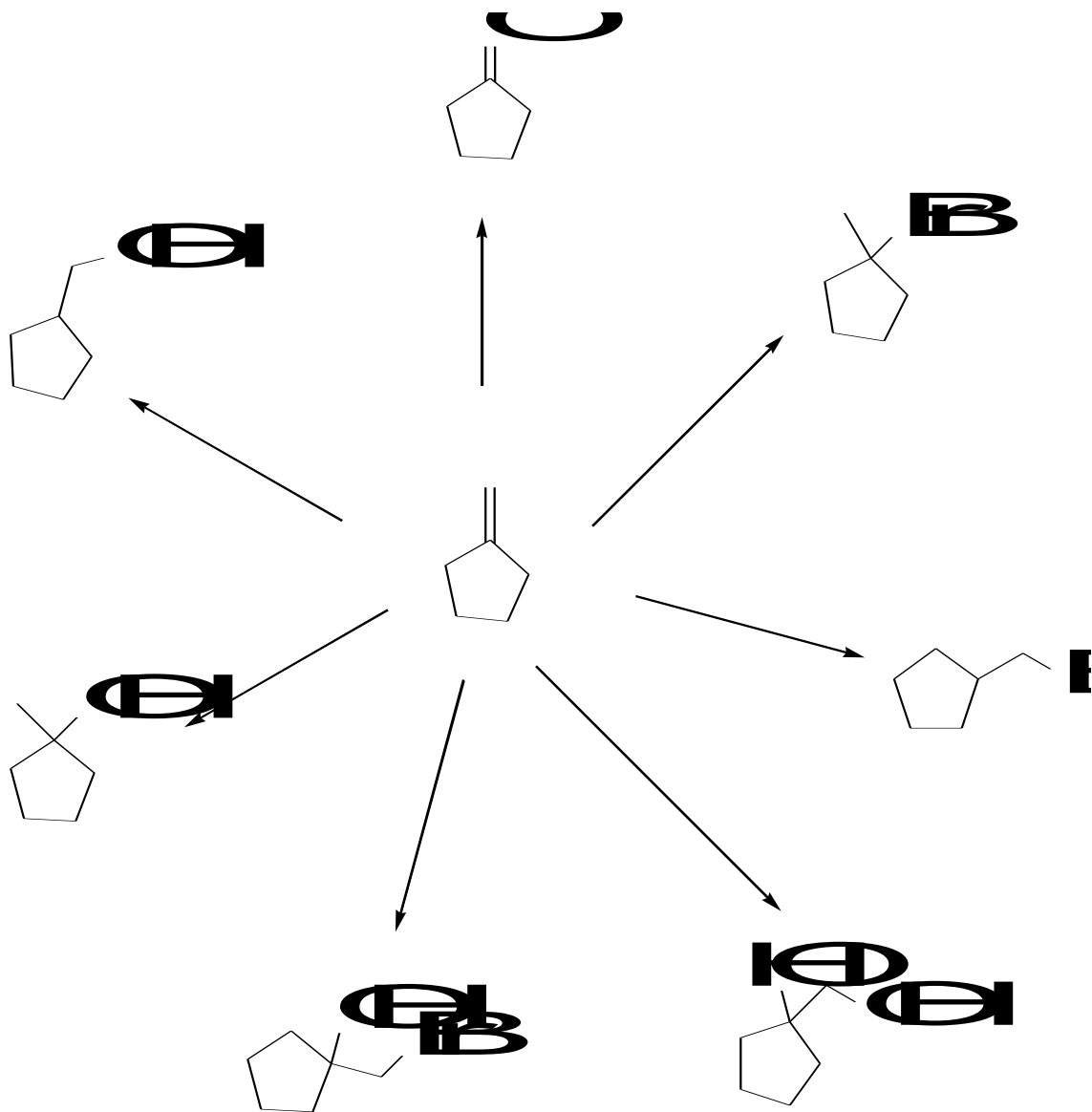


stereospecifická !!

jiný zdroj karbenů

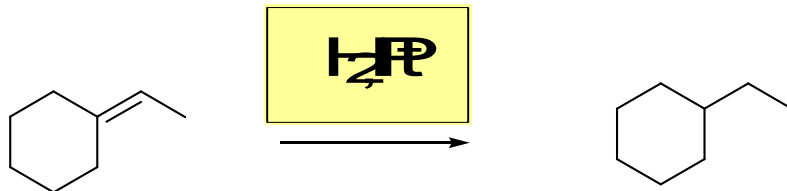
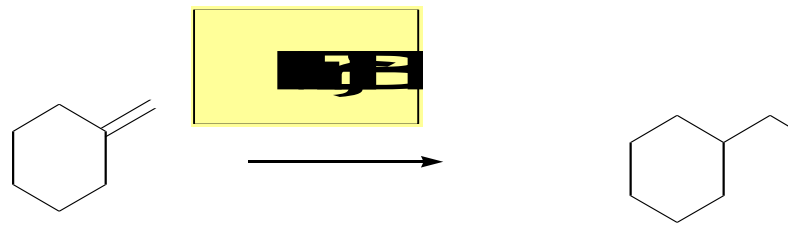
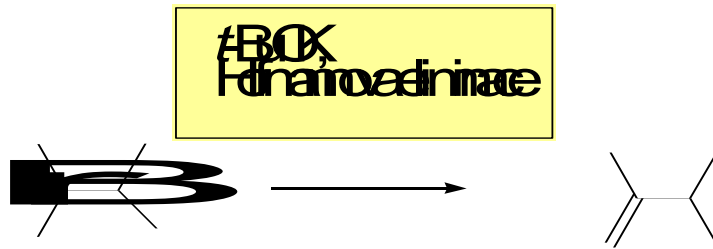
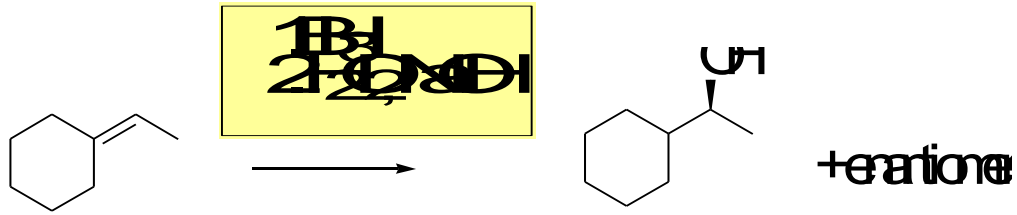


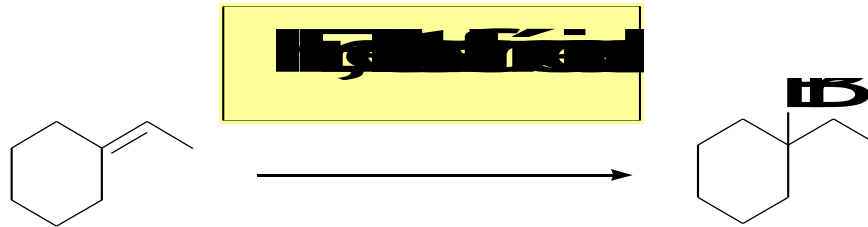
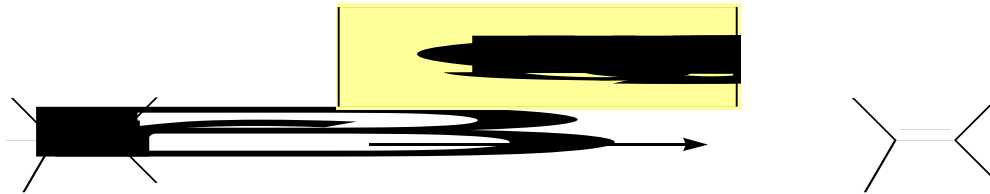
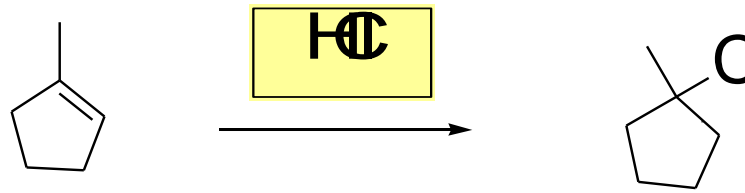
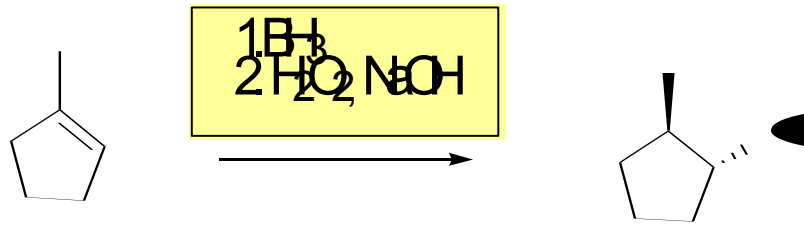
# Navrhněte vhodná činidla pro následující přeměny



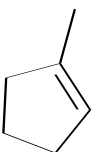
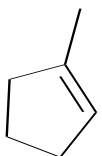
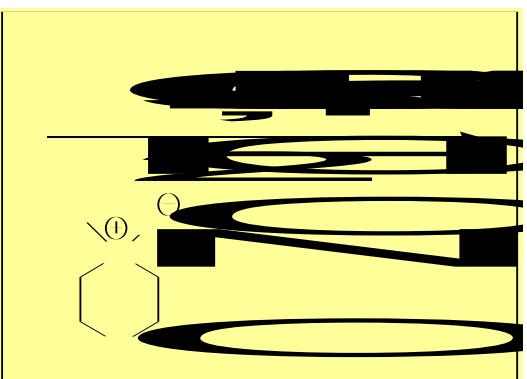
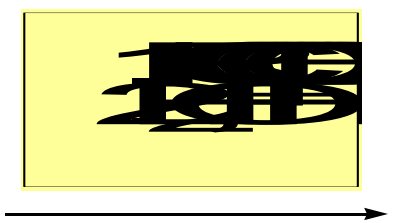
# Strategie chemické syntézy

Jakými činidly byste uskutečnili následující přeměny









# Jak uskutečnit následující přeměnu? Navržený koncept nefunguje, proč?

