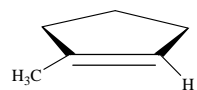


Reactions of Alkenes



$\text{H}_2 + \text{Pd or Pt/C}$ syn addition		Hydrogenation (7.7)
HX (X=Cl, Br, I or OSO_3H) Markovnikov addition		Ionic Addition of HX (6.8, 6.9)
$\text{HBr} + \text{ROOR}$ anti-Markovnikov addition		Radical Addition of HBr
(1) $\text{Hg}(\text{OAc})_2$, $\text{H}_2\text{O}/\text{THF}$ (2) NaBH_4 Markovnikov addition		Hydration by Oxymercuration (7.4)
X_2 (X=Cl, Br) Anti addition		Halogenation (7.2)
$\text{X}_2 + \text{H}_2\text{O}$ Anti addition, follows Markovnikov's rule		Halohydrin formation (7.3)
$\text{CHCl}_3 + \text{KOH}$ syn addition		Addition of Dichlorocarbene (7.6)
$\text{CH}_2\text{I}_2 + \text{Zn}(\text{Cu})$ ether		Simmons-Smith Reaction (7.6) (addition of CH_2 carbene)
dilute KMnO_4 , cold or (1) OsO_4 (2) NaHSO_3 syn addition		Syn Hydroxylation (7.8)
(1) KMnO_4 , OH^- , heat (2) H_3O^+		Oxidative Cleavage (7.8)
(1) O_3 (2) $\text{Zn}/\text{H}_3\text{O}^+$		Ozonolysis (7.8) (oxidative cleavage)
(1) BH_3 , THF (2) H_2O_2 , OH^-		Hydration by Hydroboration/Oxidation (7.5)

NOTES:

A wavy bond, eg. means either up or down ie. not stereospecific.

The numbers in parentheses refer to the chapter and section in McMurry.