<u>Alkynes</u>

Reaction	Reagent(s)
Elimination	excess NaNH ₂ , NH ₃ , heat (Δ)
H X	
Anti-Markovnikov Halogenation	HBr, H ₂ O ₂
$R-C \equiv CH \xrightarrow{HX} R-C = CH$	
Tautomerization (acidic)	HgSO ₄ , H ₂ O, H ₂ SO ₄
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Tautomerization (basic)	BH ₃ (9-BBN), NaOH 120°
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	tesale.
Reduction of alkyne	Pd/Sor Pt, high pressure
H3C TO W 1 PC 1963	
Hydrogenation (cis)	H ₂ , Lindlar's catalyst
$H_3C - CH_3 \xrightarrow{\text{"Lindlar's catalyst"}} H_3C \xrightarrow{\text{CH}_3}$	
Hydrogenation (trans)	Na(s), NH ₃
$H_3C \longrightarrow CH_3 \longrightarrow H_3C \longrightarrow H$	
Ozonolysis	O ₃ , H ₂ O
1) O ₃ 2) H ₂ O OH HO	