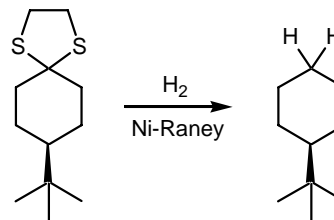
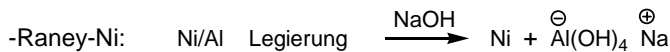
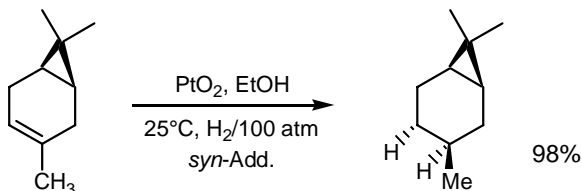
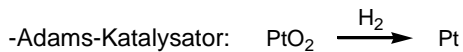


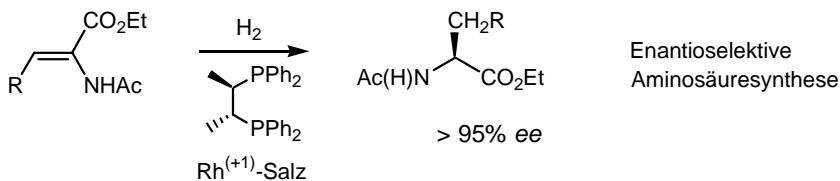
1) Reduktion

Reduktionsmittel

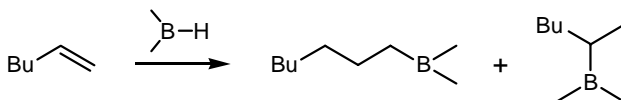
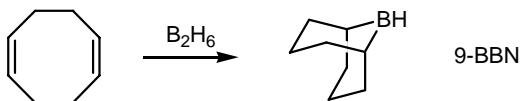
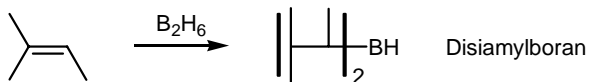
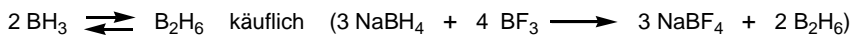
1.1. Katalytische Hydrierung



1.2. Homogene Hydrierung $\text{Cp}^*\text{Rh}(\text{PPh}_3)_3$ Wilkinson-Katalysator



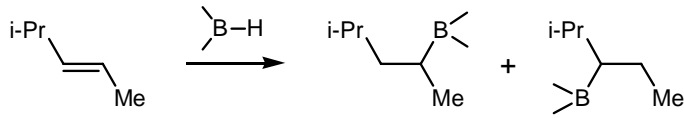
1.3. Reduktion mit Metallen, Metalhydriden



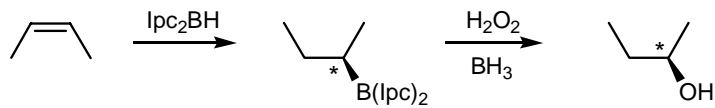
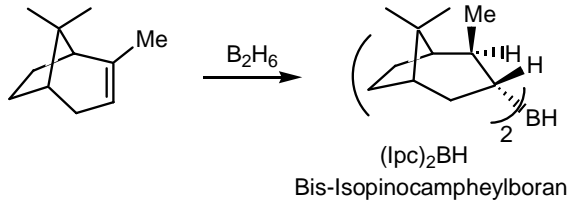
Diboran	94	:	6
Disiamylboran	99	:	1
9-BBN	99.9	:	0.1

6. Gruppe: Reduktions- und Oxidations-Reaktionen

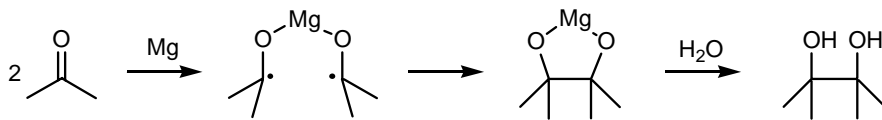
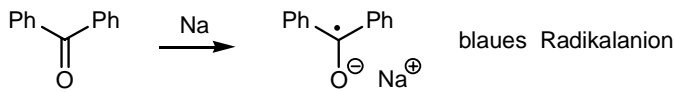
2



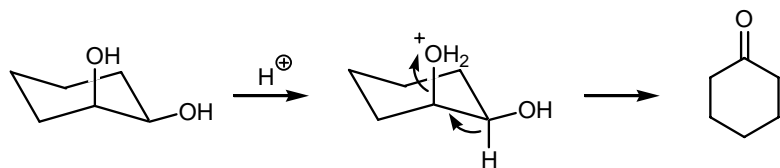
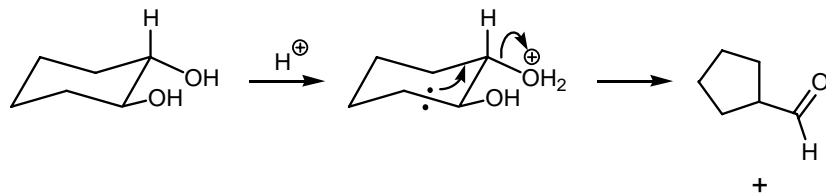
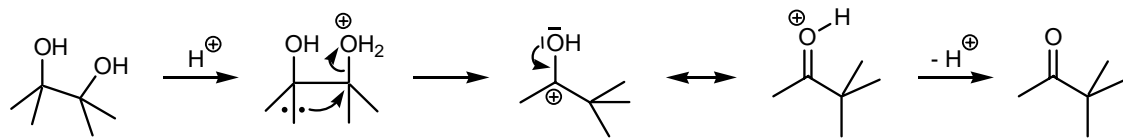
Diboran	57	43
Disiamylboran	97	3
9-BBN	99.8	0.2



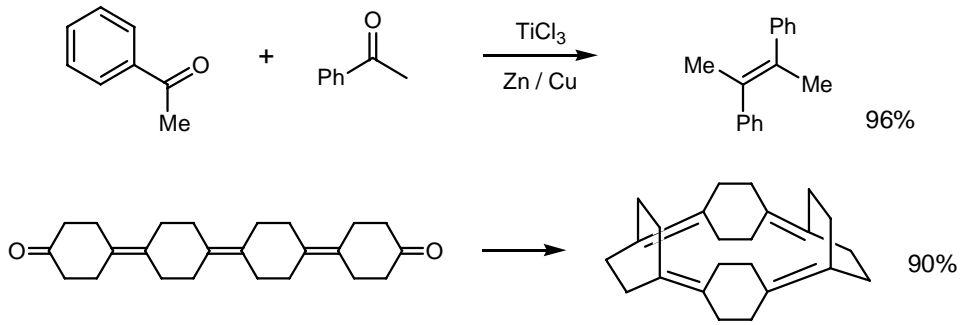
Reduktion mit Metallen



Pinakol-Umlagerung



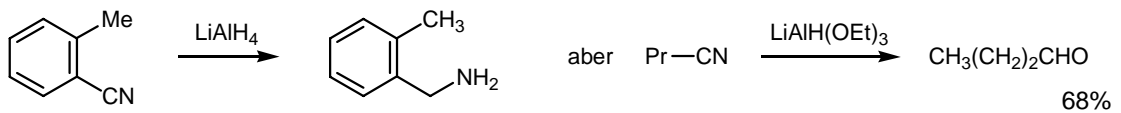
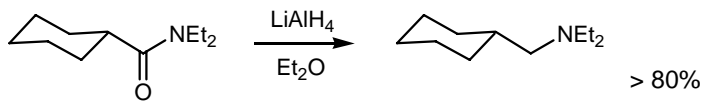
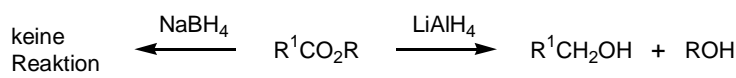
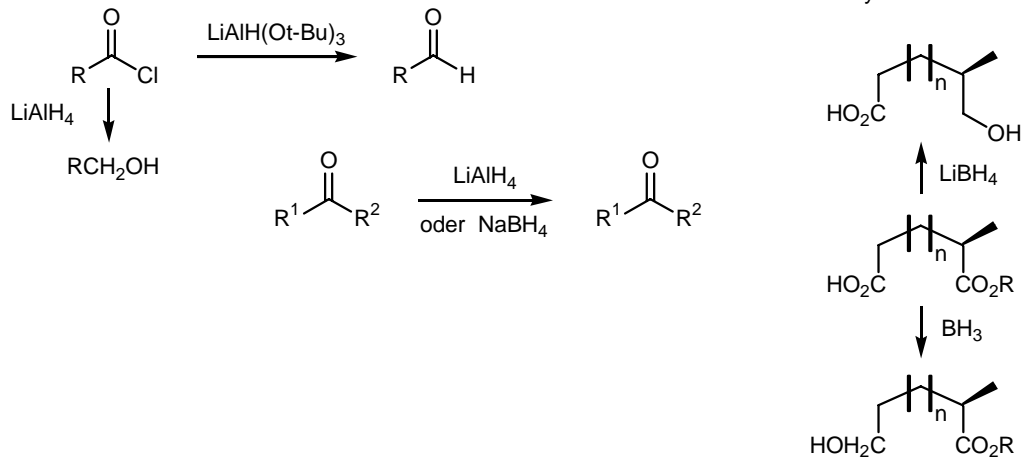
1.4. McMurry-Reaktion



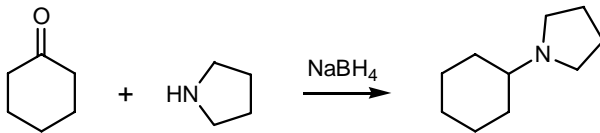
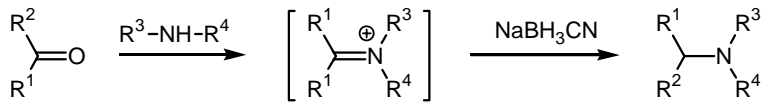
Reduktion mit LiAlH_4 und andere komplexe Hydride

milderes, selektives Reduktionsmittel: $\text{LiAlH}(\text{O}t\text{-Bu})_3$

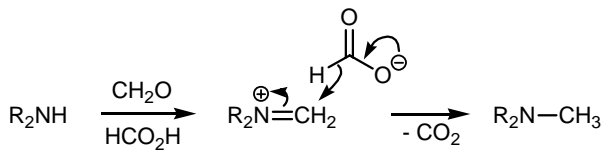
Tri-*tert*-butoxy-lithium-Aluminiumhydrid



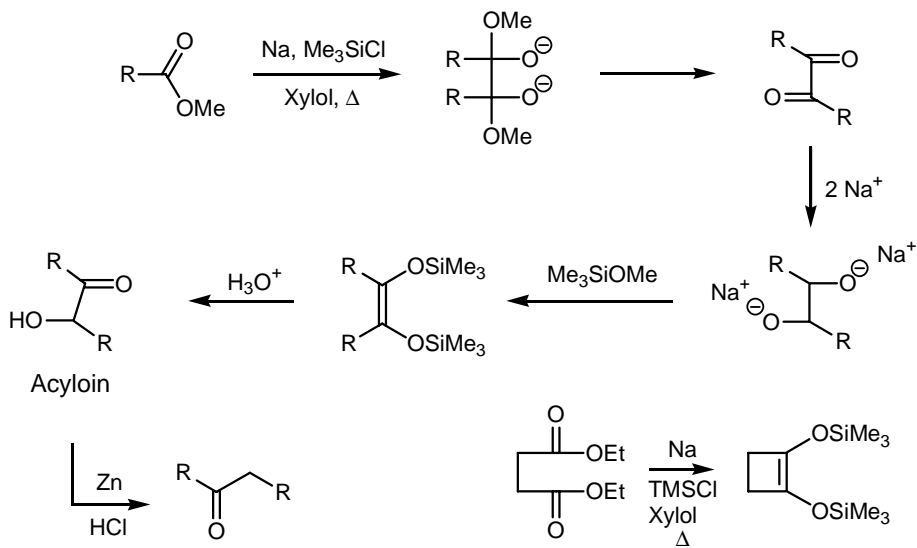
1.5. Reduktive Aminierung



Eschweiler-Clark N-Methylierung:



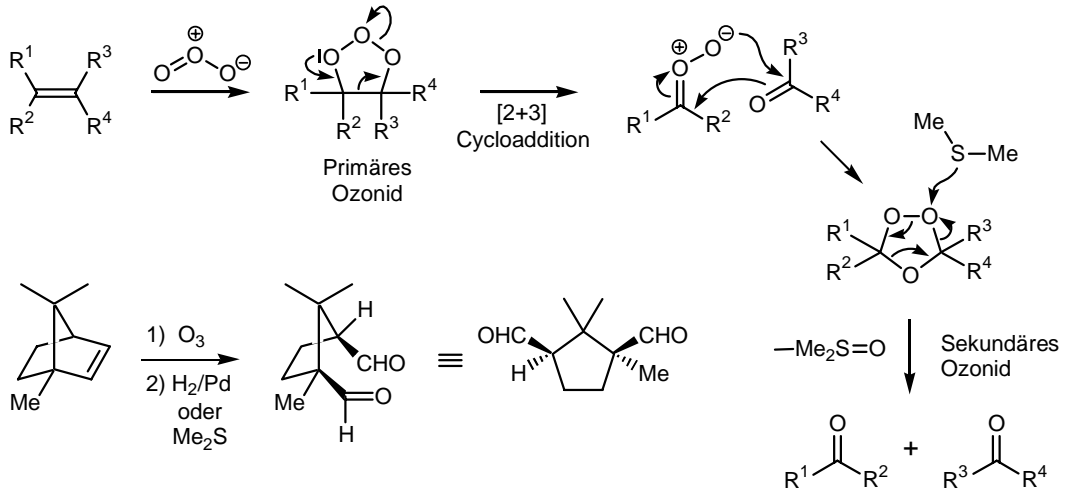
1.6. Acyloin-Kondensation



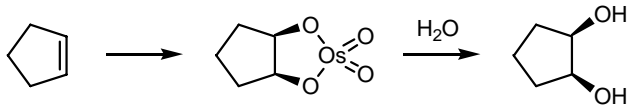
2) Oxidations-Reaktionen

2.1. Oxidation von Alkene

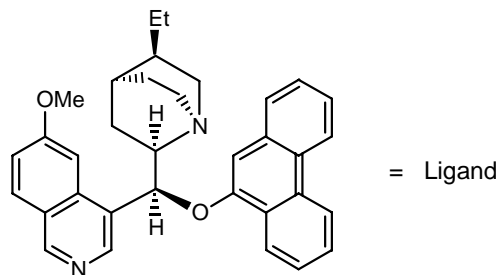
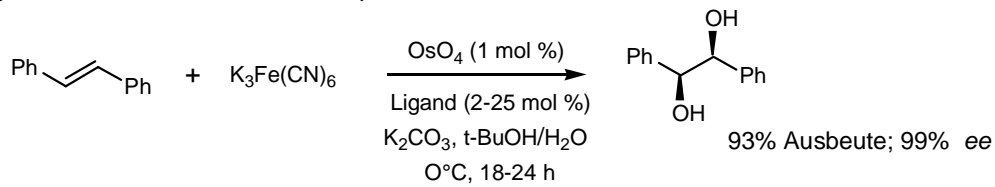
2.1.1. Ozonolyse



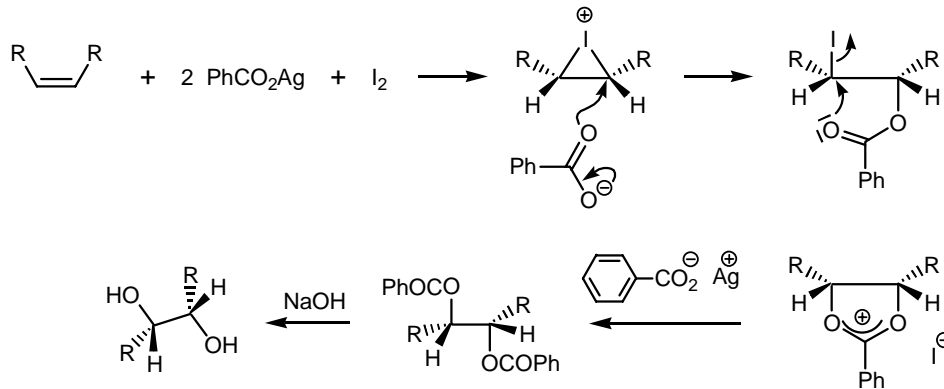
2.1.2. OsO₄-Oxidation



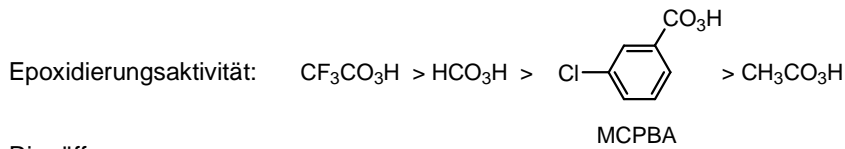
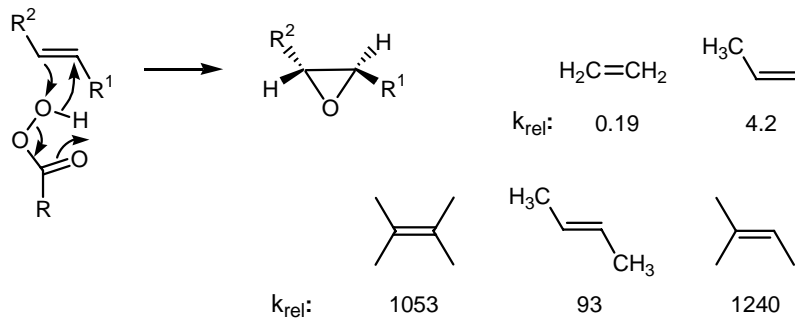
Asymmetrische Variante von Sharpless:



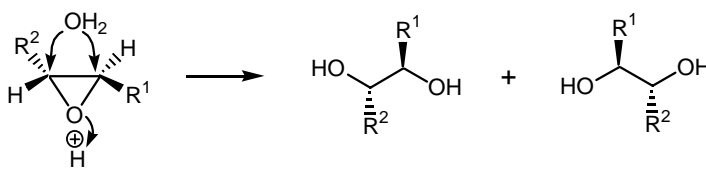
2.1.3. Prévost-Reaktion: trans-Hydroxylierung



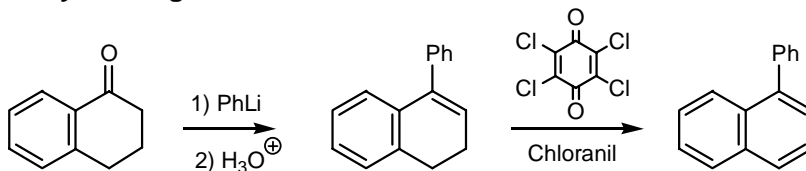
2.1.4. Epoxidation



Ringöffnung



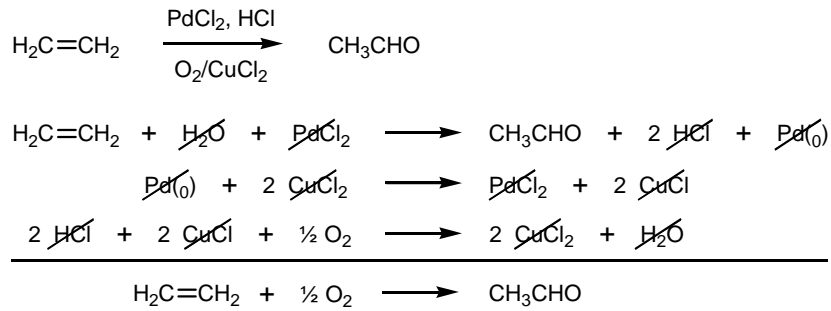
2.1.5. Dehydrierung mit Chloranil



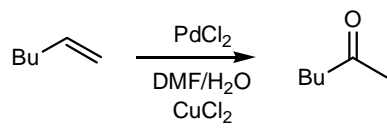
6. Gruppe: Reduktions- und Oxidations-Reaktionen

7

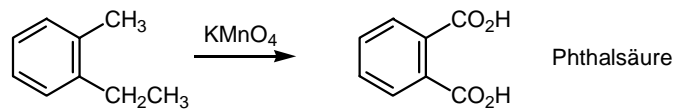
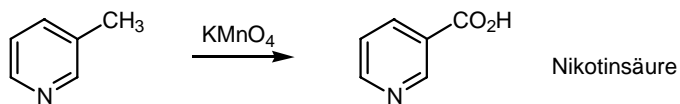
2.1.6. Wacker-Oxidation



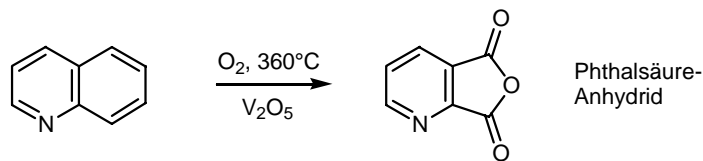
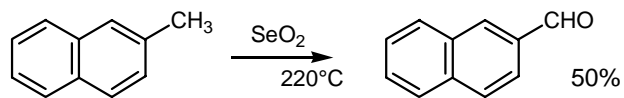
Synthese von Methylketonen



2.2. Oxidation von Aromaten

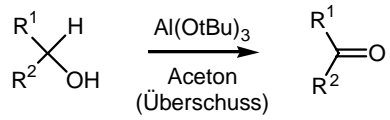


Selektivität
mit SeO_2

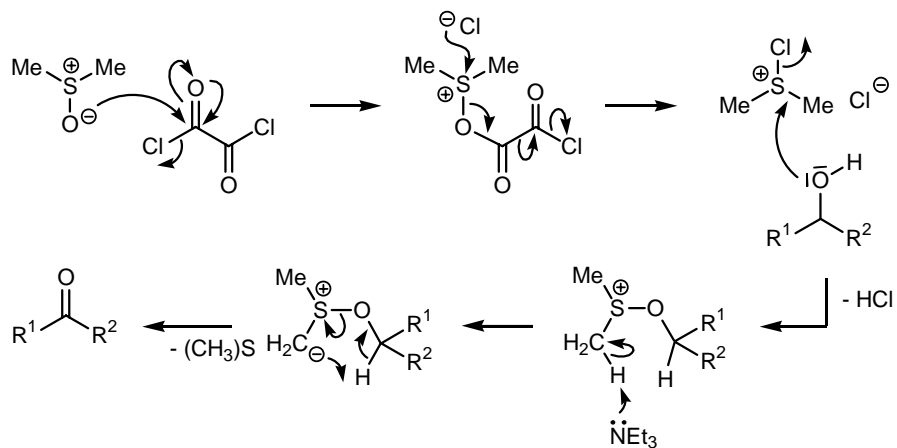
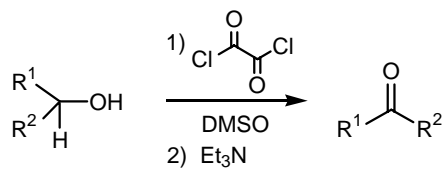


2.3. Oxidation von Alkohole

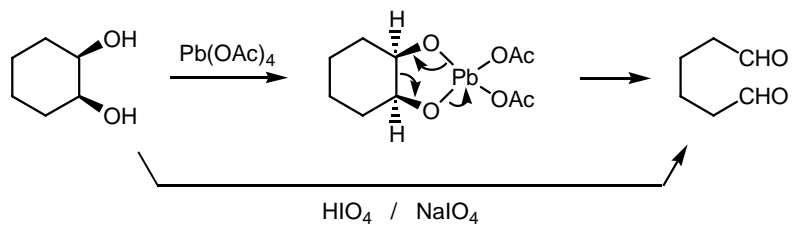
2.3.1. Oppenauer-Oxidation



2.3.2. Swern-Oxidation



2.3.3. Glykolspaltung



2.4. Oxidation von Carbonyl-Verbindungen**2.4.1. Die Baeyer-Villiger-Reaktion**

H > Aryl > Alkyl (tert.) > sek. > prim.

