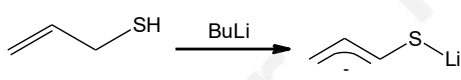
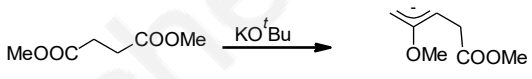
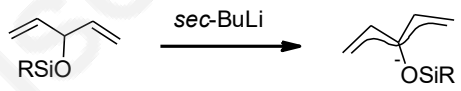
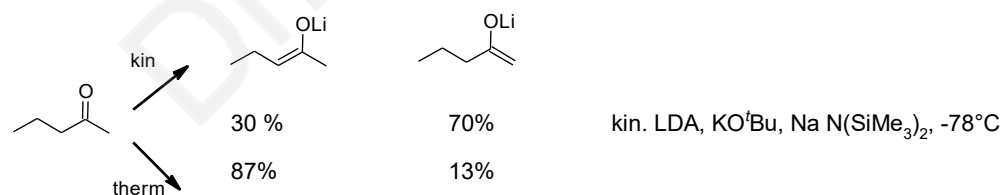


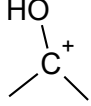
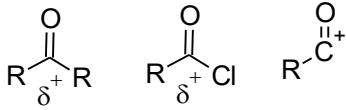
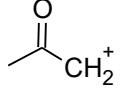
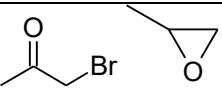
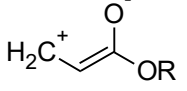
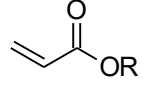
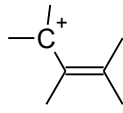
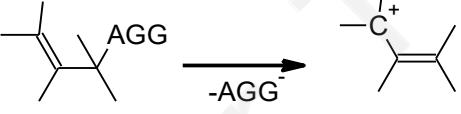
# Synthone

Synthon	Bsp.	Reagenz	Fkt. Gruppe
$d^0$	$\text{CH}_3\text{S}^-$	$\text{CH}_3\text{SH}$	$\text{R}_3\text{CS}-$
$d^1$	$\text{NC}^-$	$\text{KCN}$	$-\text{CN}$
$d^2$	$\text{H}_2\text{C}-\text{CHO}$	$\text{CH}_3\text{CHO}$	$-\text{CHO}$
	$\text{PhCH}_2^-$	$\text{PhCH}_2\text{Li}$	Tol-
	$\text{R}-\text{CH}^--\text{R}$	$\text{R}-\text{CH}-\text{R}$	$\text{R}=\text{CN},$ $\text{COOR} \dots$ Anm. 1
$d^3$	$^-\text{C}\equiv\text{C}-\text{CMe}_2\text{NMe}_2$	$\text{LiC}\equiv\text{C}-\text{CMe}_2\text{NMe}_2$	$-\text{C}\equiv\text{C}-\text{C}-\text{Me}_3$ $-\text{NMe}_2$
	$^-\text{CH}_2\text{CH}_2\text{CHS}$		
	$\text{MeOOC}-\text{CH}^--\text{COOMe}$		
	$\text{H}_2\text{C}^--\text{C}(=\text{O})-\text{CH}=\text{CH}_2$		
Alkyl d	$^-\text{CH}_3$	$\text{LiCH}_3$	---

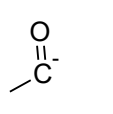
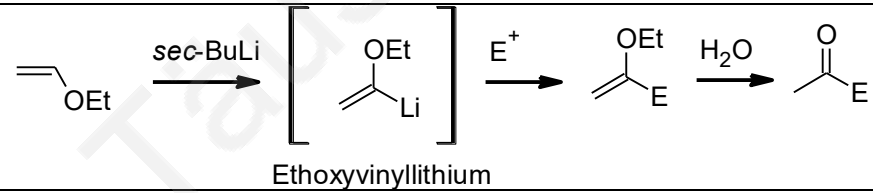
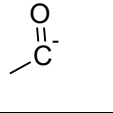

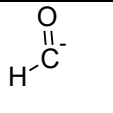
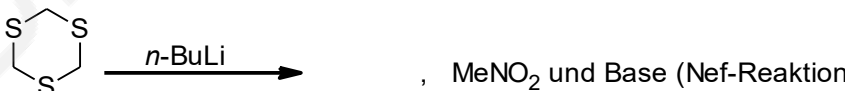
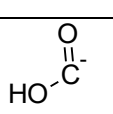
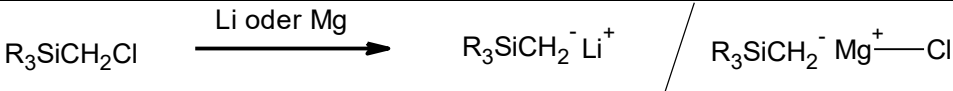
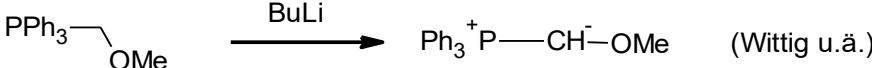
Anm. 1

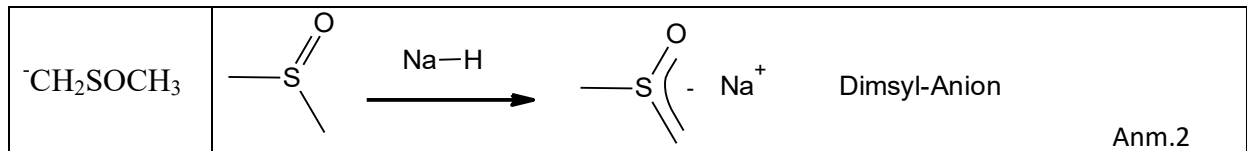


Synthon	Bsp.	Reagenz	Fkt. Gruppe
$a^0$	$^+\text{P}(\text{CH}_3)_2$	$\text{ClP}(\text{CH}_3)_2$	$\text{P}(\text{CH}_3)_2$
	$\text{R}^+$	$\text{Me}_3\text{O}^+\text{X}^-, \text{R}^+\text{AlCl}_4$	
$a^1$		Carbonyl + KCN	$-\text{CN}$

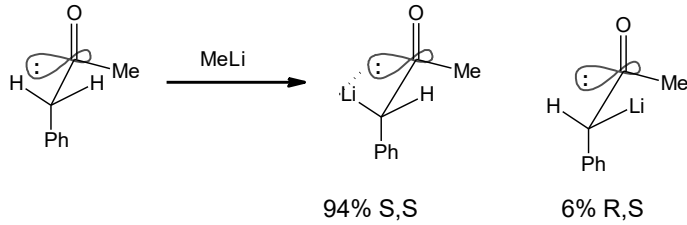
			
		<b>Friedel Crafts ....</b>	
<b>a<sup>2</sup></b>			<b>-CHO</b>
<b>a<sup>3</sup></b>			<b>-C≡C-C-Me<sub>3</sub>-NMe<sub>2</sub></b> <b>Michaelsystem</b>
			
<b>Alkyl a</b>	<b>CH<sub>3</sub><sup>+</sup></b>	<b>(CH<sub>3</sub>)<sub>3</sub>S<sup>+</sup> Br<sup>-</sup></b>	<b>---</b>

**Weitere, speziellere Synthese:**

	
	
	
	NaCN und Verseifung
<b>R<sub>3</sub>SiCH<sub>2</sub><sup>-</sup></b>	
<b>Ph<sub>3</sub>P=CHOMe</b>	

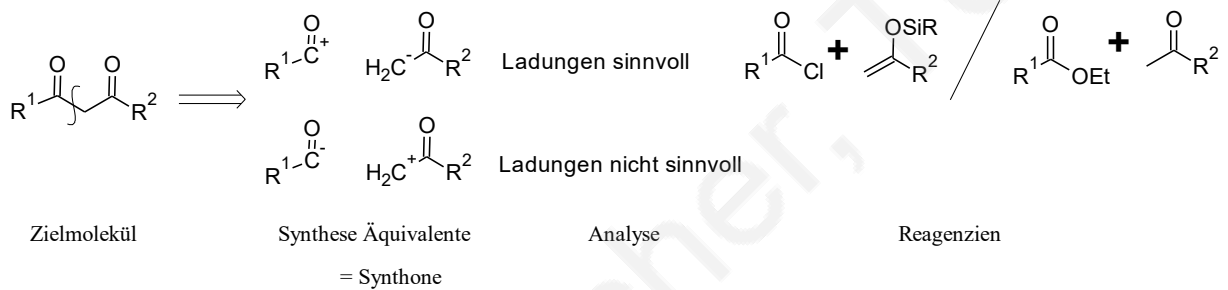


Anm.2:

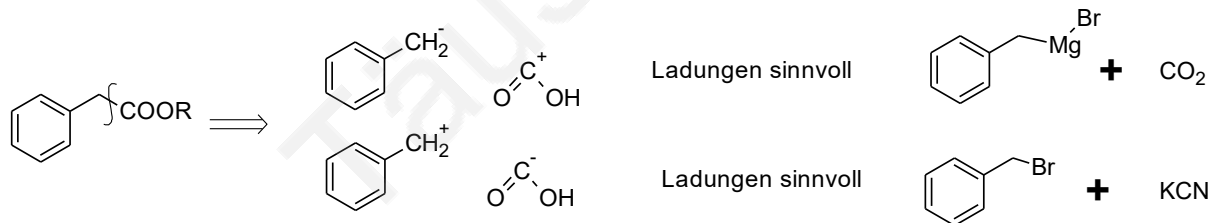


Man beachte die Chiralität von Schwefel!

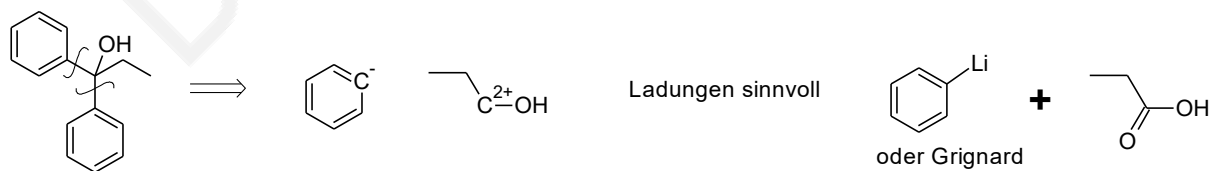
### Beispiele:



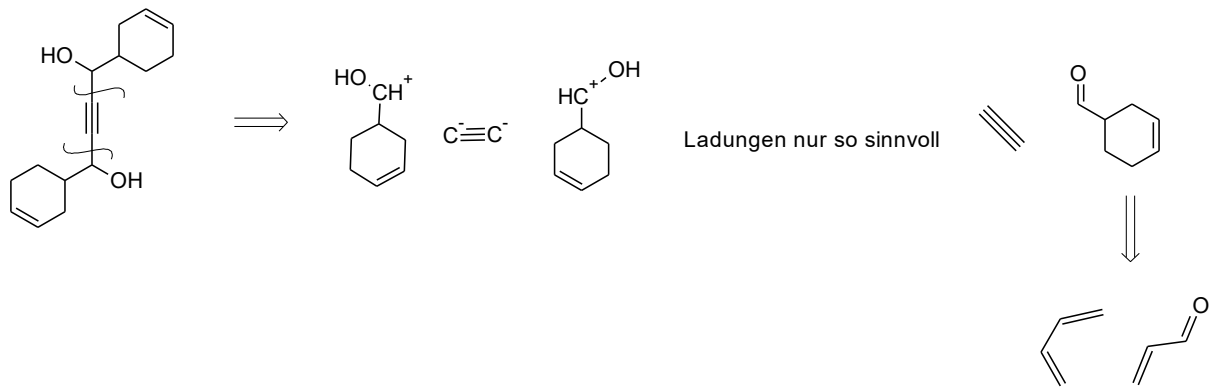
Nicht immer ist nur ein Synthone Paar plausibel:



Nicht nur ein "Syntheschnitt" kann sinnvoll sein:



Manchmal müssen auch die Edukte noch retrosynthetisch analysiert werden:

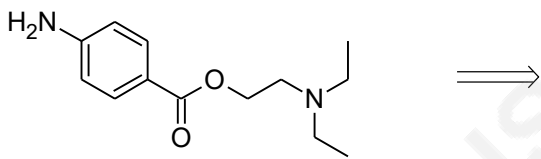
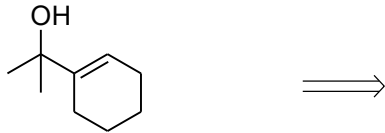
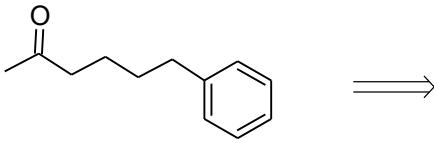
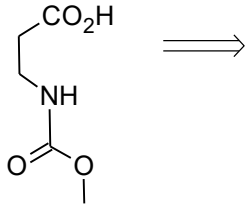
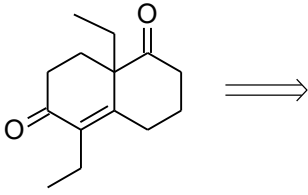


### Zum Beachten:

#### Allgemeine Regeln:

1. Wenig Schritte!
2. Wenig funktionelle Gruppen Umwandeln!
3. Möglichst gleichgroße Fragmente bauen!
4. Besser: (A+B) + (C+D) --> E als A --> B --> C --> D --> D --> E
5. Stereo Informationen beachten!
6. Schutzgruppen wenn nötig nutzen!
7. Umpolung im Hinterkopf behalten.

Übungen:



Lösung:

Dr. Täuscher, TU-I