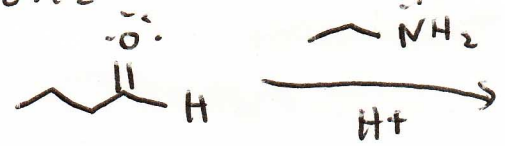
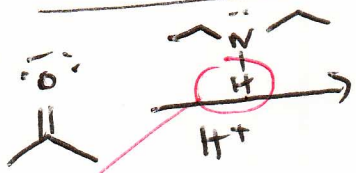
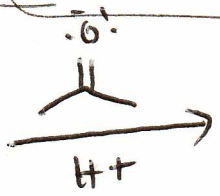
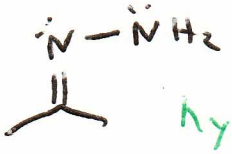




C=N bond broken
N-H bond formed
C-H bond broken
C=C bond formed
$\Delta H > 0$

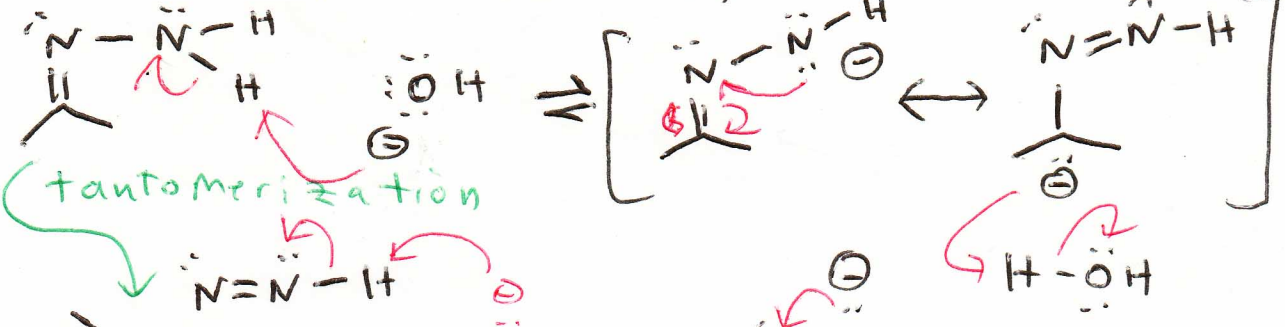
hydrazine H_2N-NH_2

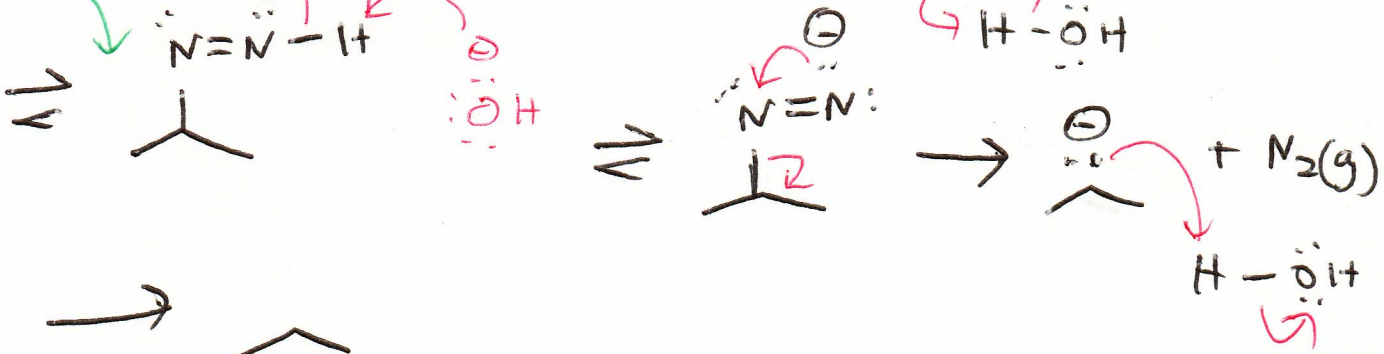




hydrazone

Wolff-Kisher Reduction

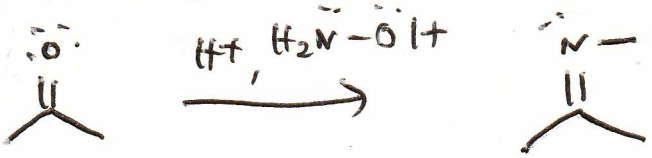




Synthetic utility: convert aldehydes + ketones to alkanes (reduction)

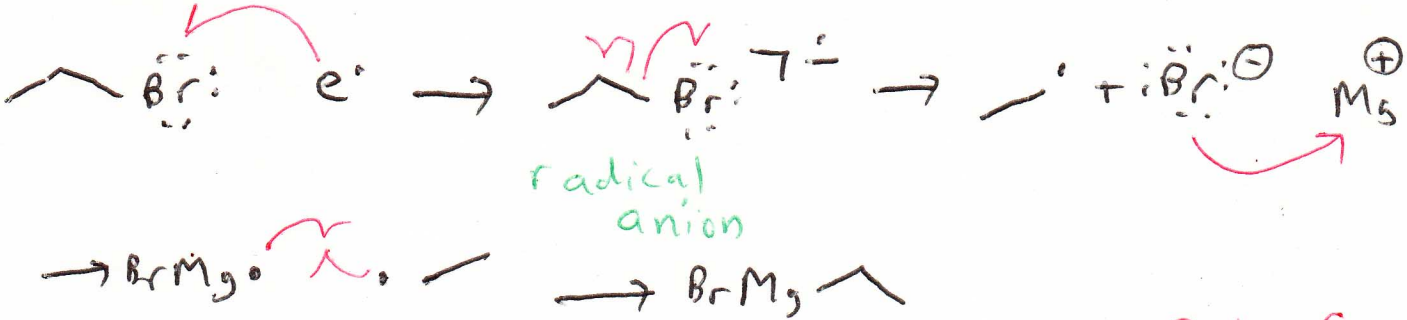
---

hydroxylamine H_2N-OH



oxime

Grignard reagents

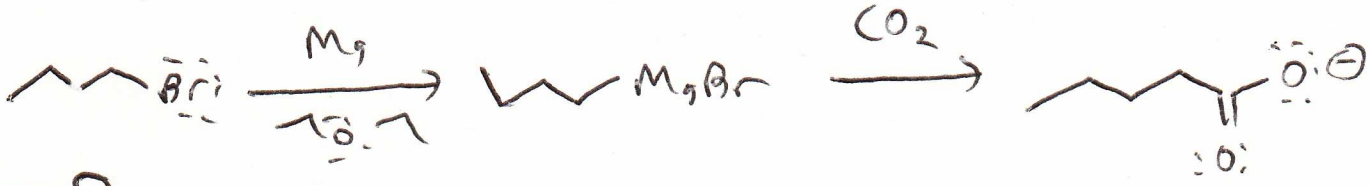


* Grignard reagents will only successfully form if an ether is present to complex w/ magnesium

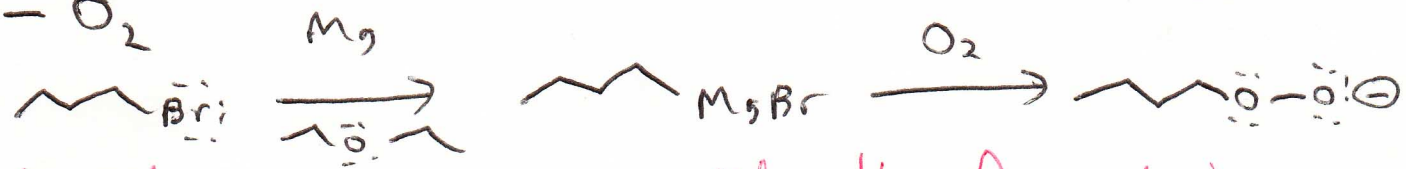
Grignards reagents can be destroyed by:

- H_2O (or any protic compound)

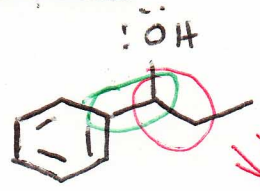
- CO_2



- O_2



Grignard reagents are ideally formed in flame-dried glassware under inert atmosphere (N_2, Ar)



⇒ ?

- The alcohol is located at the carbon that used to be part of the C=O
- The new C-C bond must contain the carbon that was part of the C=O