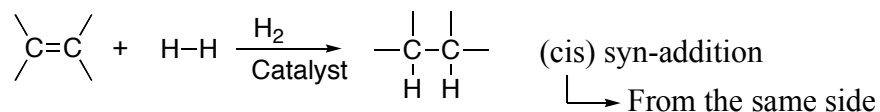
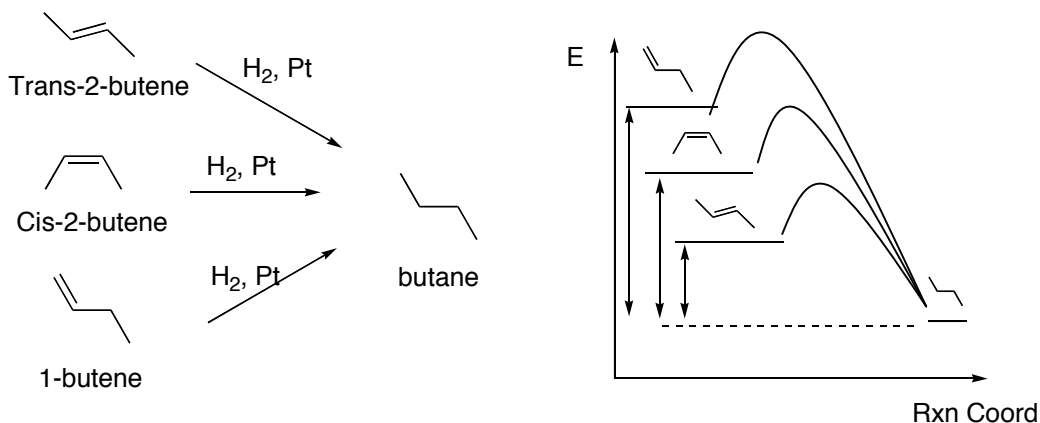


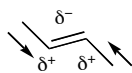
Review:Hydrogenation (H-H addition): Addition of H₂

Catalyst is one of Ni (Nickel), Pd(Palladium), Pt(Platinum)

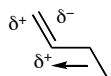
Example:



All of the above reactions are exothermic.



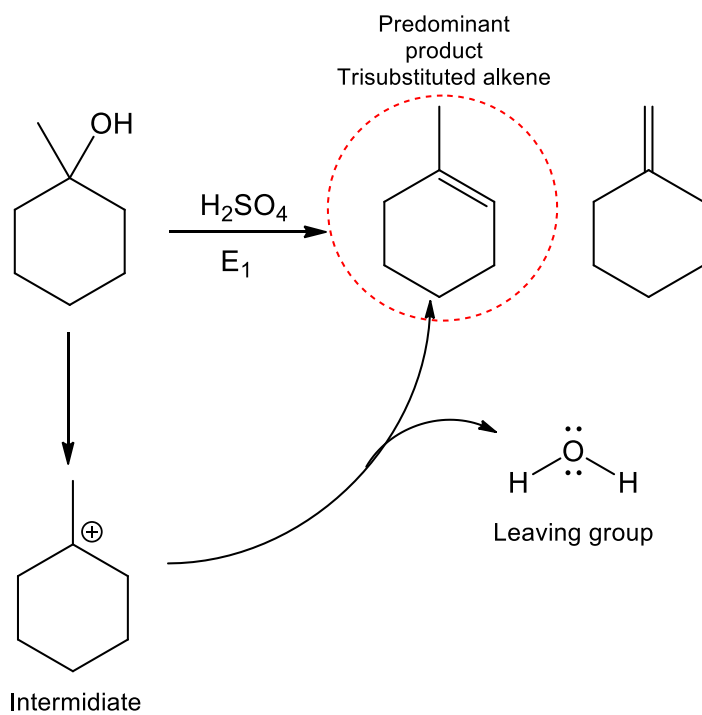
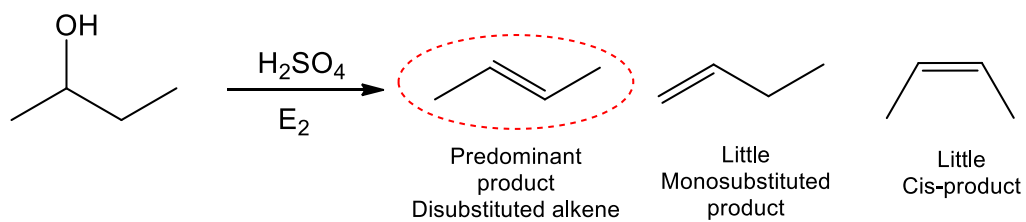
more alkyl substitution gives increased electron donation, making the alkene more stable and less reactive



trans more stable than cis due to sterics

The physical principles above are the concepts behind the **Zaitzev rule**.

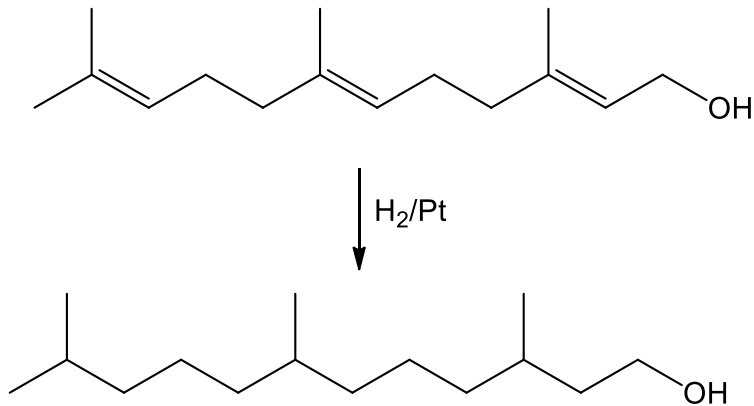
Examples:



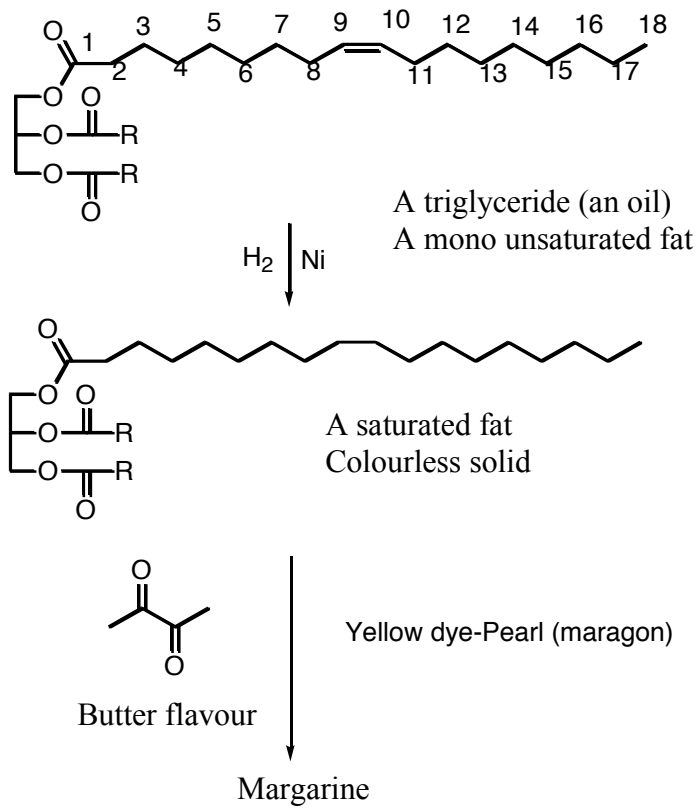
Hydrogenation:

Eg. Farnesol

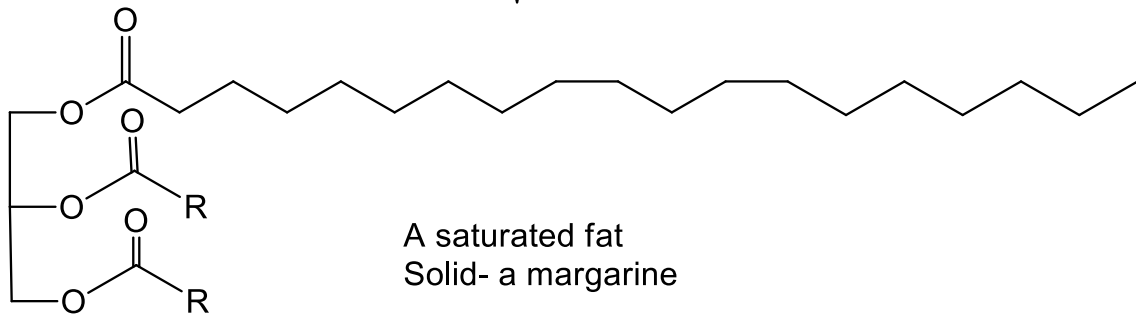
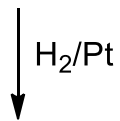
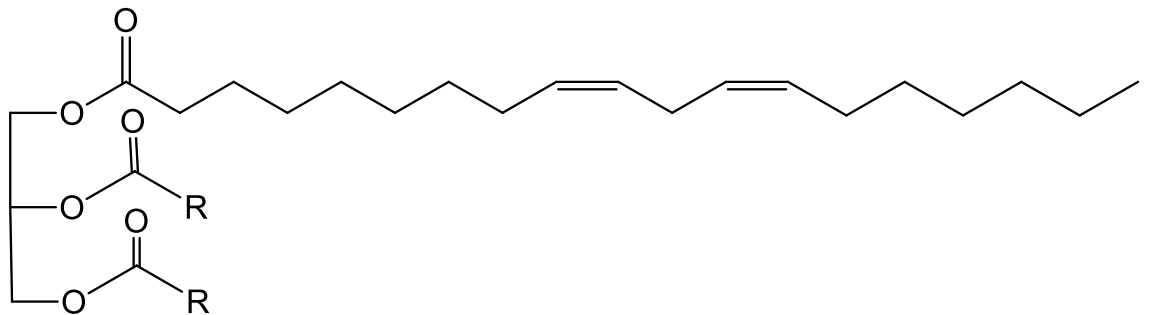
3,7,11-trimethyldodeca-2,6,10-trien-1-ol



Hydrogenation of Triglycerides (Fat)

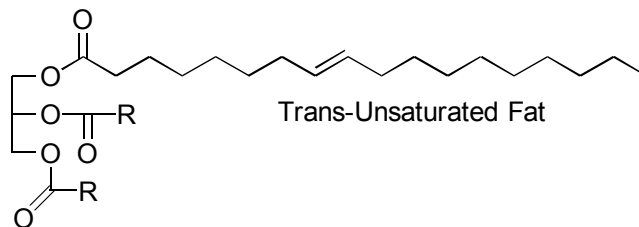


Cis-Polyunsaturated Fat



A saturated fat
Solid- a margarine

Example of a Trans-Unsaturated Fat:



Trans-Unsaturated Fat