Review:

Hydrogenation (H-H addition): Addition of H2



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



Stereospecific Reaction: Is one in which the stereochemistry of the starting material determines the stereochemistry of product.

Catalyst: Lowers the activation energy of a reaction (transition state) but is not permanently transformed.



> Hydrogenation with these catalyst gives syn (cis) addition, giving the cis-product



A Steroid:



This is a male pheromone; an Androgen



All of the above reactions are exothermic.



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

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trans more stable than cis due to sterics

FAT Hydrogenation:

Eg.



Example of a Trans-Unsaturated Fat:



Addition of X₂ to alkenes (Halogenation)

General reaction:



Example:

