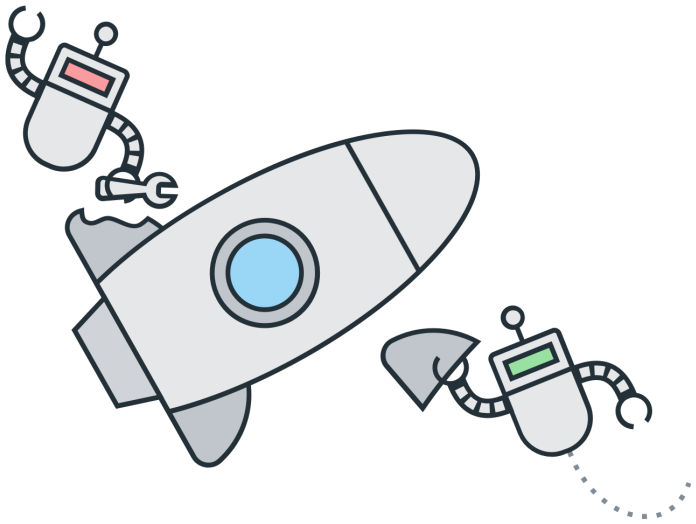


Canvas is experiencing issues due to an ongoing AWS incident.

We are working on recovering as soon as possible.

You can follow the status of the issue at https://health.aws.amazon.com/health/status and https://status.instructure.com/

Great Idea ...

Or

Very Bad Idea?

Gatorade Cucumber Lime, 28 oz, 15 Units

Brand: Gatorade Thirst

4.5 out of 5 stars 41 ratings

15 pack

$50.99 ($3.40 / Count)

Get $50 off instantly: Pay $0.99 ~~$50.99~~ upon approval for the Amazon Rewards Visa Card. No annual fee.

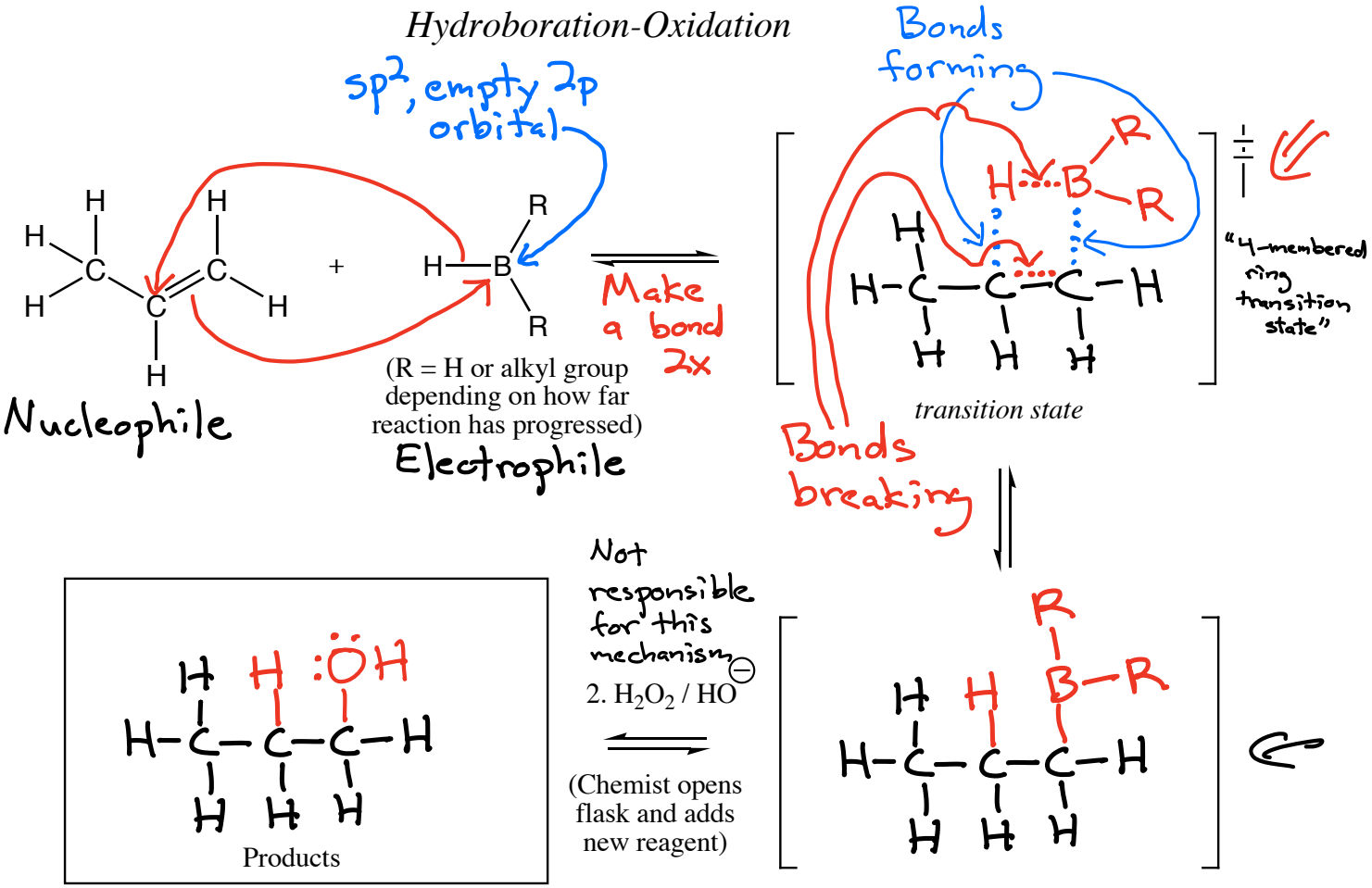
Size: **28 Fl Oz (Pack of 15)**

2 Set 28 Fl Oz (Pack of 15) 1 option from $100.00	3 Set 28 Fl Oz (Pack of 15) - -
4 Set 28 Fl Oz (Pack of 15) - -	**28 Fl Oz (Pack of 15)** **$50.99** **($3.40 / Count)**

Item Form	Liquid
Flavor	Lime
Package Information	Bottle
Volume	28 Fluid Ounces
Package Weight	425 Ounces

When you see BH_3 think "4-membered ring transition state."

Hydroboration-Oxidation



H → More substituted C atom
OH → Less substituted C atom
} Steric strain in the first transition state

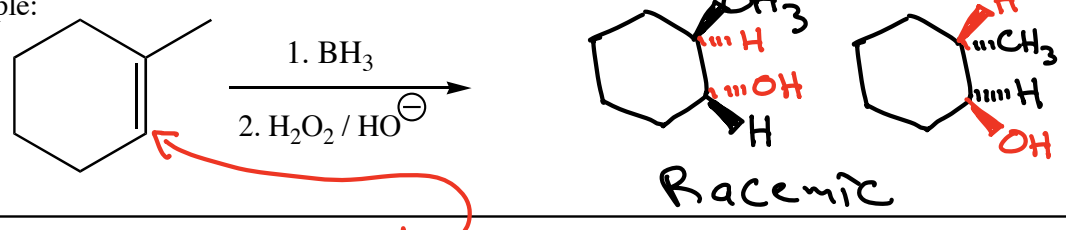
H and OH are syn

Summary: The pi bond of the alkene attacks the Lewis acid (electrophile) B atom at the same time a new bond forms between C and H. In 2nd step OH replaces B(R)2. "4-membered ring transition state"

Regiochemistry: Non-Markovnikov

Stereochemistry: Syn

Example:



When studying OChem → Call a NIRRS

Learn each of these things for every reaction → then you will be able to predict mechanisms and therefore products

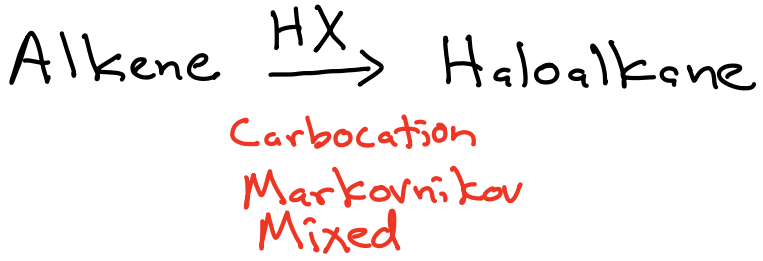
Nature of the reaction; what is the starting material/product? (i.e. alkene converted to an alcohol)

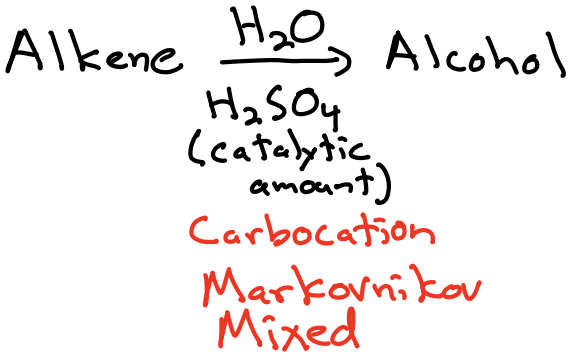
Intermediate (or "**I**mportant transition state" if applicable) of the reaction, the key to the mechanism (carbocation, halonium ion, etc.)

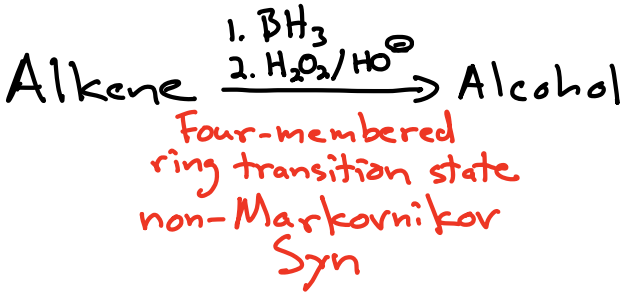
Reagents Learn the exact way to designate the reagents for each reaction

Regiochemistry What is the regiochemistry of addition? (Markovnikov, non-Markovinikov, etc.)

Stereochemistry of addition (anti, syn or mixed)

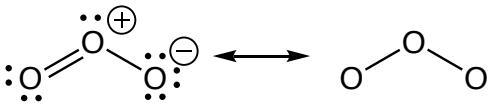




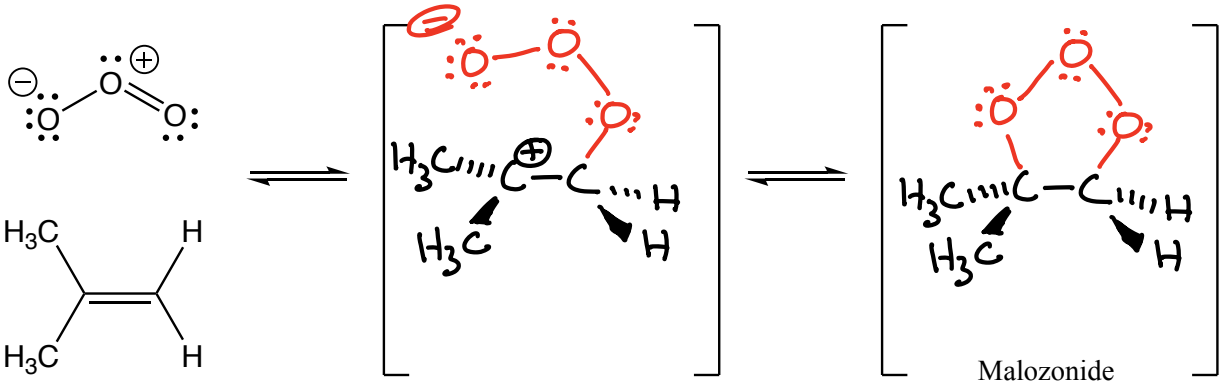


This reaction breaks a C=C bond!

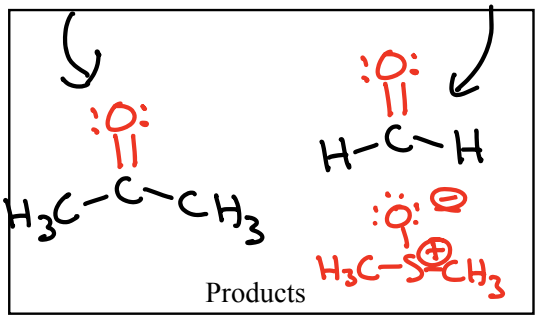
Ozonolysis Partial Mechanism



Ozone contributing structures



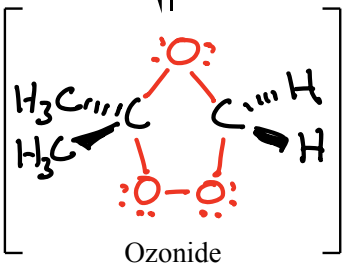
Ketone Aldehyde



Rearrangement in two steps

2. $(CH_3)_2S$

(Chemist opens up flask)

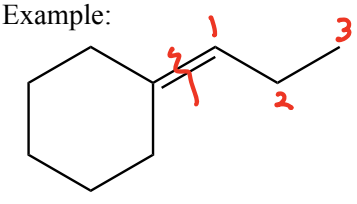


Summary: Reaction of an alkene with O_3 gives a malozonide than an ozonide intermediate (the C=C pi bond then C–C sigma bond is broken). Adding $(CH_3)_2S$ decomposes the ozonide into ketone and aldehyde products. Breaks C=C bond!

Regiochemistry: N/A

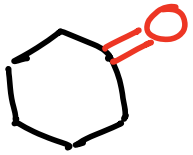
Stereochemistry: N/A

Example:

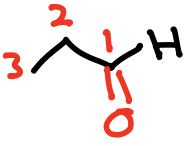


1. O_3

2. $(CH_3)_2S$

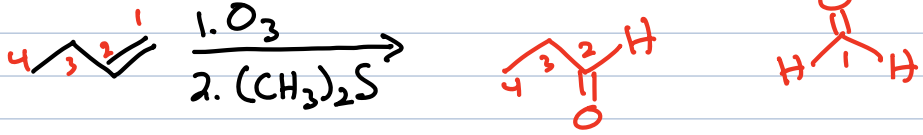


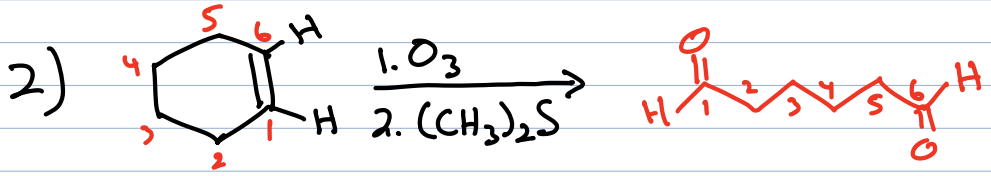
A ketone



An aldehyde

Ozonolysis is the only reaction that breaks C=C bonds!

1) 

2) 

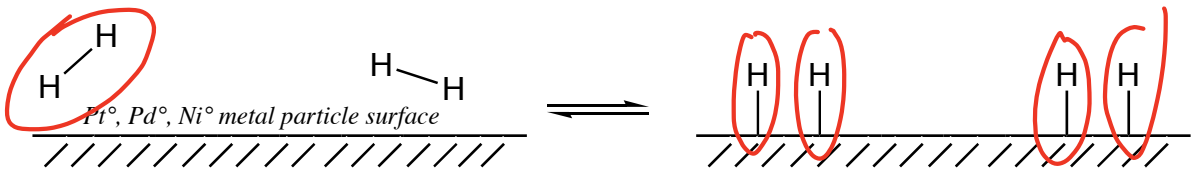
Notice the numbers!

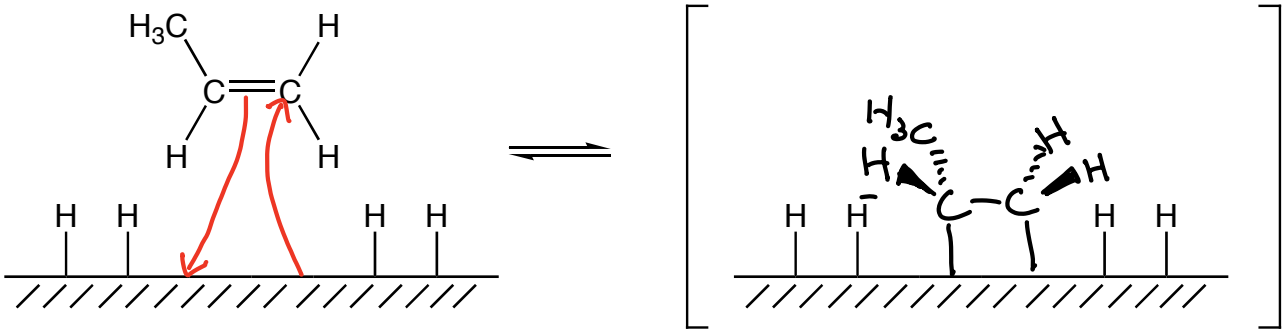
No numbers ⇒ H_2O, H_2SO_4 (catalytic) } These reagents are added at the same time

Numbers ⇒ 1. O_3, 2. $(CH_3)_2S$ } These reagents are added in 2 separate steps

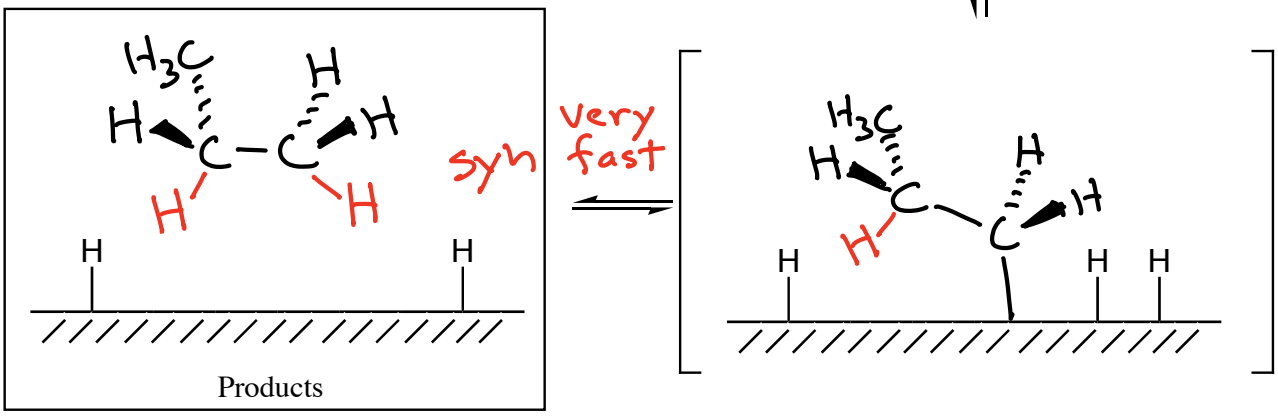
Hydrogenation: H_2 with Pt°, Pd°, Ni°

"In the elemental state – a metal"





Very fast

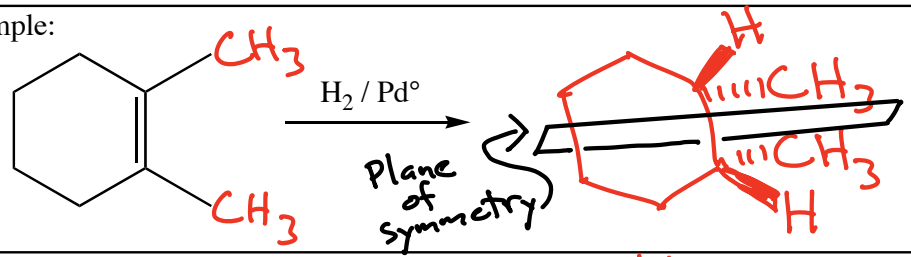


Summary: H_2 adsorbs onto the metal surface. The alkene adsorbs onto the metal surface. H atoms transfer to both C atoms → on the same face → before the C-C bond rotates

Regiochemistry: N/A

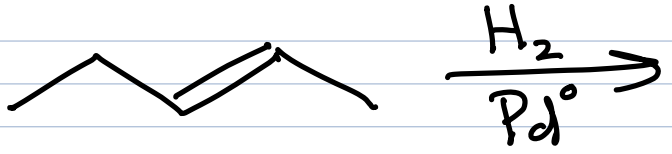
Stereochemistry: Syn

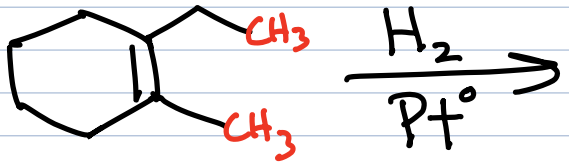
Example:

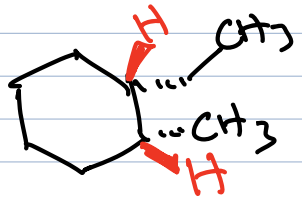


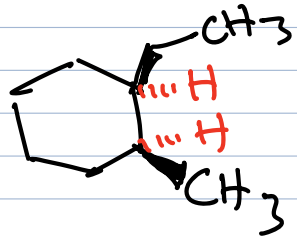
Alkene → Alkane

Examples:









Racemic

Exam 2 will not cover anything after this