

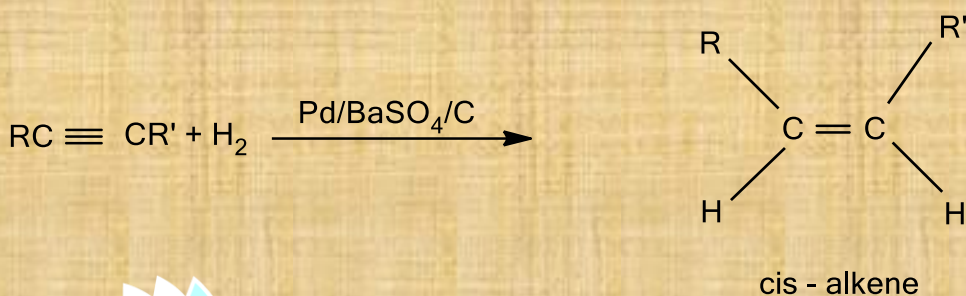
## CHAPTER 13

# HYDROCARBONS

### Preparation of alkanes:

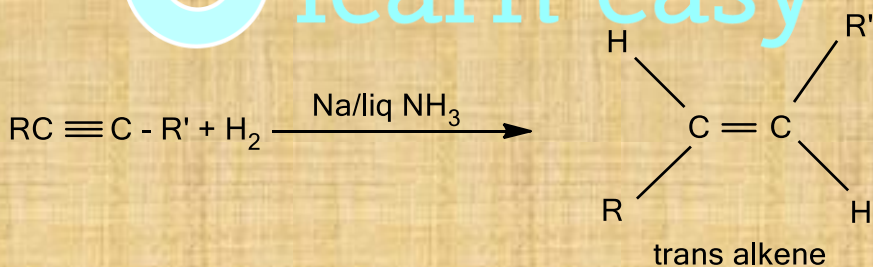
#### From alkynes:

Alkynes when treated with calculated amount of hydrogen in presence of Lindlar's catalyst undergoes partial reduction to give alkenes.



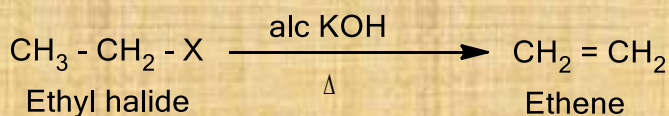
Partially deactivated palladised charcoal is known as Lindlar's catalyst. It always gives cis - alkene.

Alkynes on reduction with sodium in liq  $NH_3$  gives trans alkenes.



#### From alkyl halides:

Alkyl halides when treated with alcoholic potassium hydroxide undergoes dehydrohalogenation to give alkenes.



Alc KOH is known as dehydrohalogenating agent. This reaction is an example of  $\beta$  - elimination reaction as the hydrogen is eliminated from

$\beta$  - carbon.

### From vicinal dihalides:

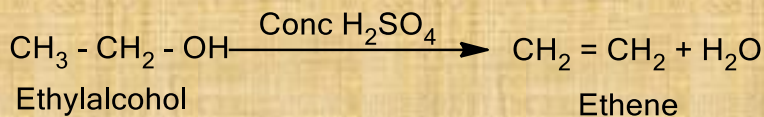
Dihalides containing two halogen atom son adjacent positions are called vicinal dihalides.

Vicinal dihalides when treated with zinc metal undergoes dehalogenation to give alkenes.



### From alcohols:

Alcohols when treated with concentrated sulphuric acid undergoes dehydrogenation to give alkenes.



Conc. H<sub>2</sub>SO<sub>4</sub> is known as dehydrating agent. Above reaction is also an example of  $\beta$  - elimination reaction.

