

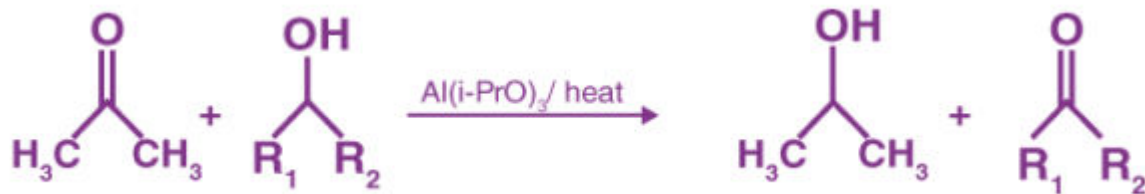
*DEPTH OF BIOLOGY*

# OPPENAUER OXIDATION REACTION

# DEPTH OF BIOLOGY

- Oxidation means removal of  $H^+$  or addition of Oxygen
- In oppenauer oxidation-

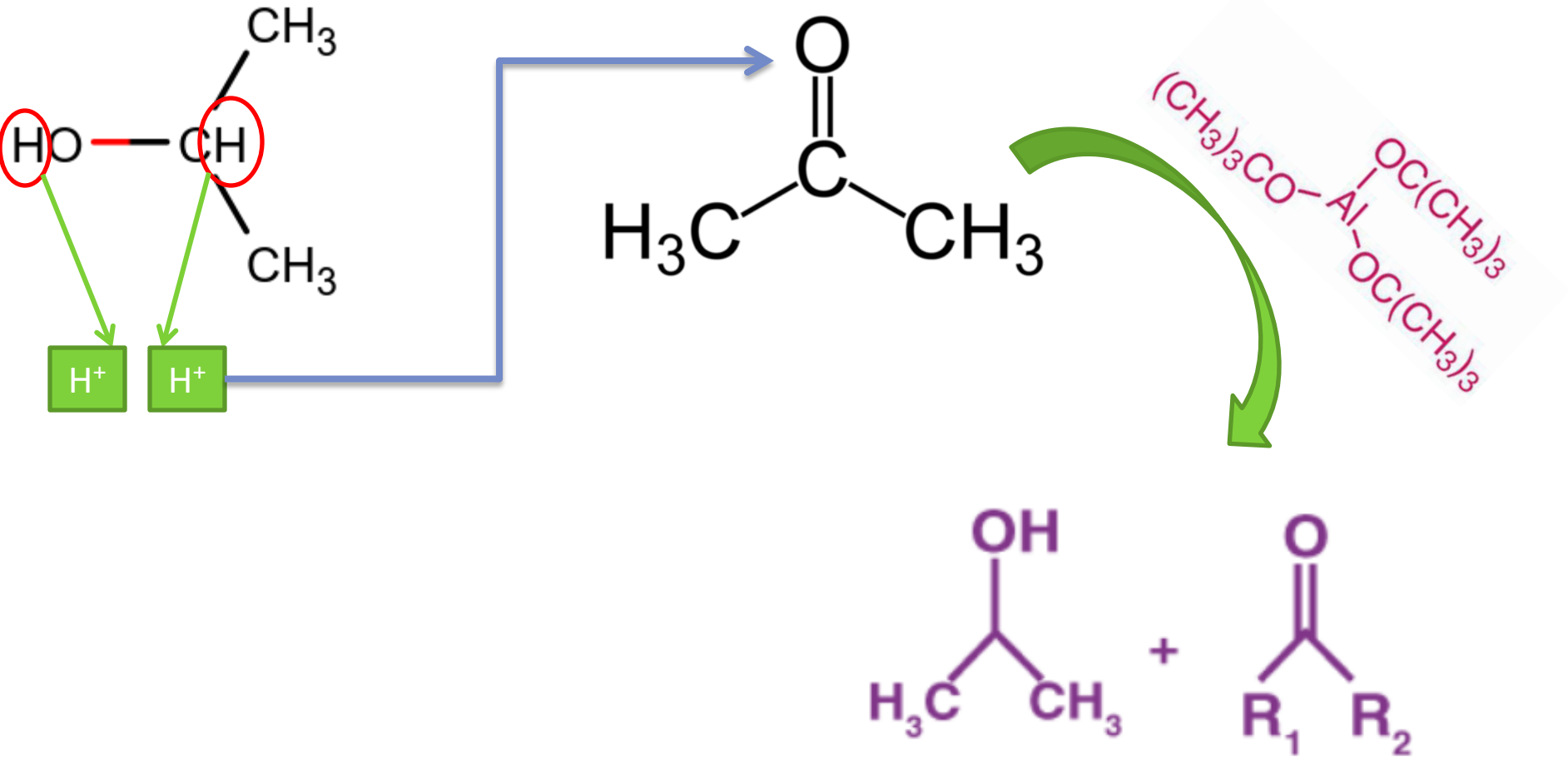
Secondary alcohol gets converted into ketones by oxidation in presence of aluminium tertiary butoxide



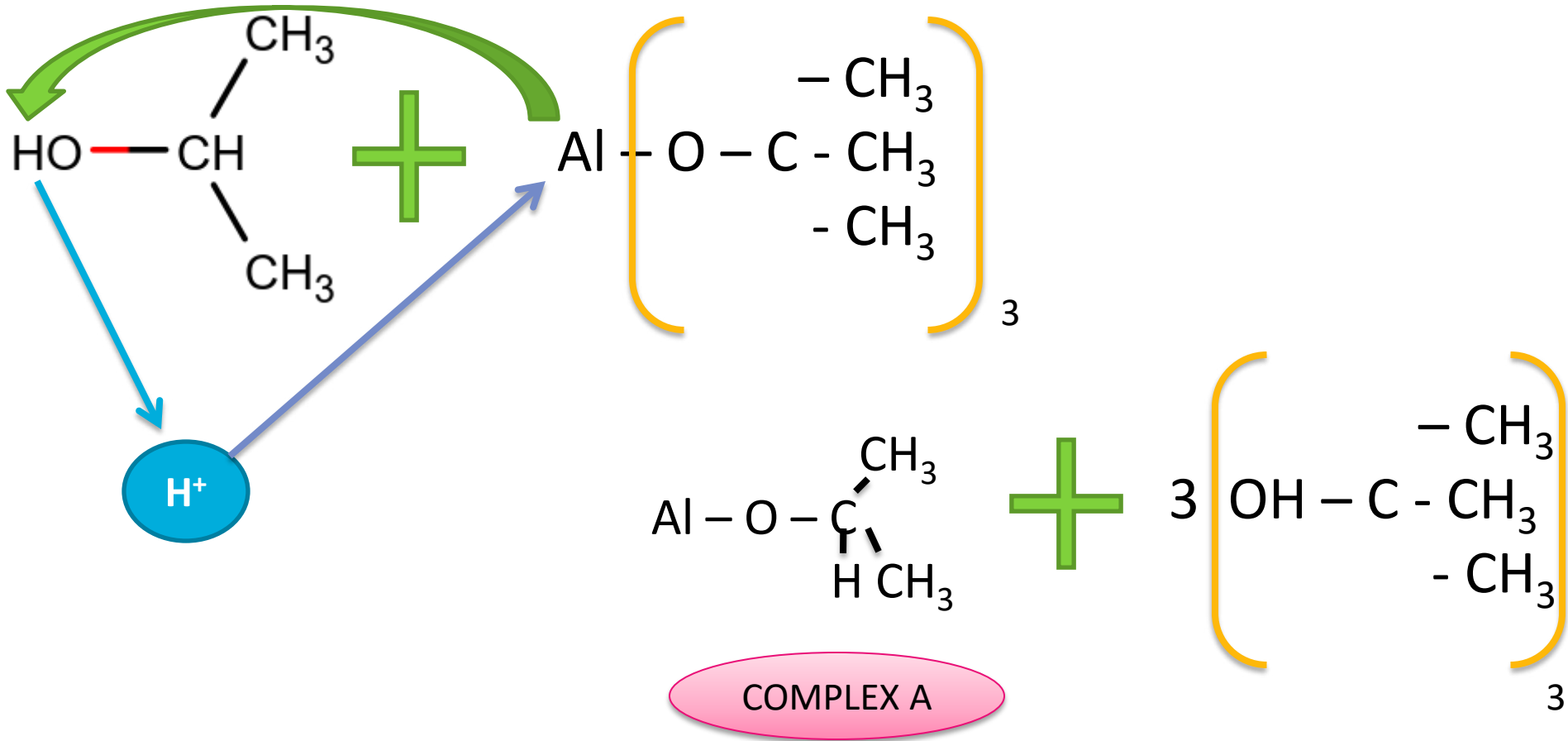
## *DEPTH OF BIOLOGY*

- The secondary alcohol donates 2  $\text{H}^+$  ions, one of the  $\text{H}^+$  ion gets attached to the oxygen atom of acetone
- And in the presence of aluminium tertiary butoxide ketone is formed with remaining elements as by product

# DEPTH OF BIOLOGY



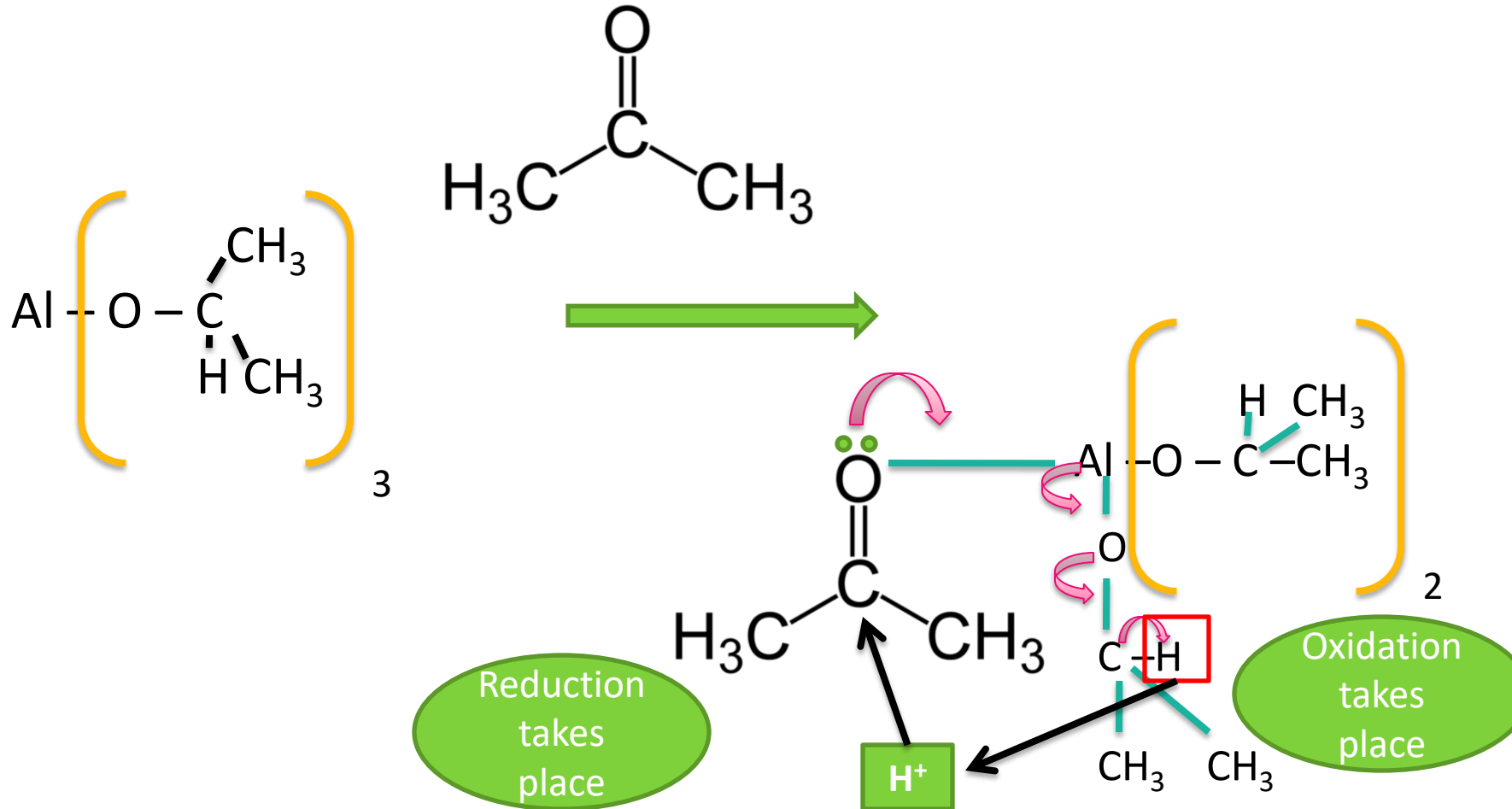
# DEPTH OF BIOLOGY



## *DEPTH OF BIOLOGY*

- Al replaces the hydrogen in secondary alcohol, the  $H^+$  released attacks the oxygen in Al. tert. Butoxide
- Complex A is formed which in turn reacts with acetone
- L.P. of oxygen attracts Al and hence a new compound is formed as follows

# DEPTH OF BIOLOGY



## *DEPTH OF BIOLOGY*

- Since oxygen is highly electronegative element delocalisation of charges occurs and Hydrogen in form of  $H^+$  is released
- Which in turn gets attached to the carbon [of acetone]
- A ketone is formed



# *DEPTH OF BIOLOGY*

- Final product formed is as follows-

