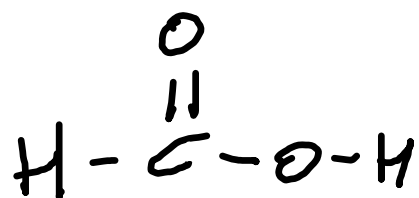


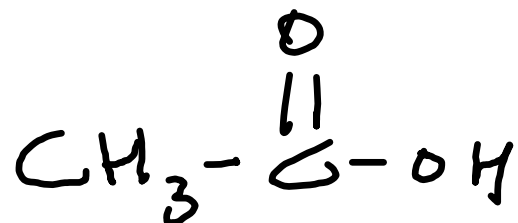
# CARBOXYLIC ACIDS AND DERIVATIVES

## NOMENCLATURE



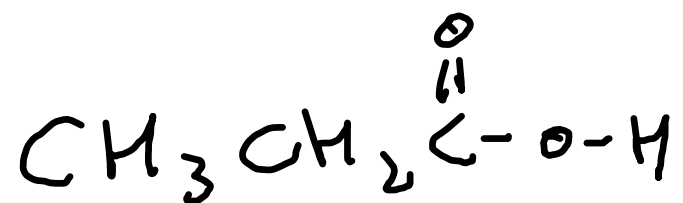
FORMIC  
ACID

METHANOIC  
ACID



ACETIC ACID

ETHANOIC  
ACID



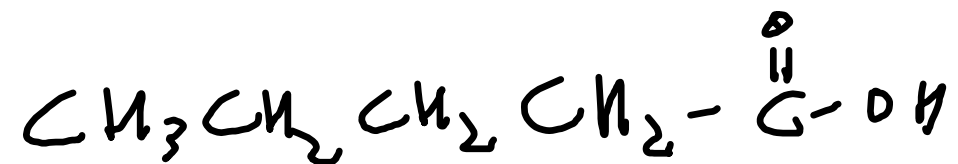
PROPLIONIC ACID

PROPANOIC ACID



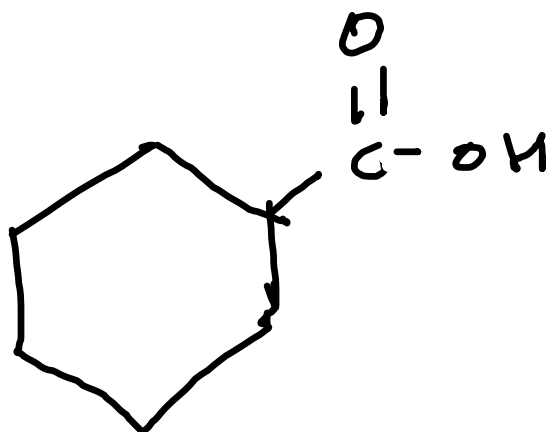
BUTYRIC ACID

BUTANOIC ACID

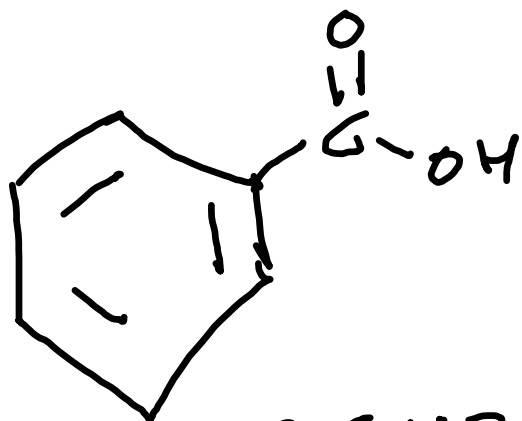


VALERIC ACID

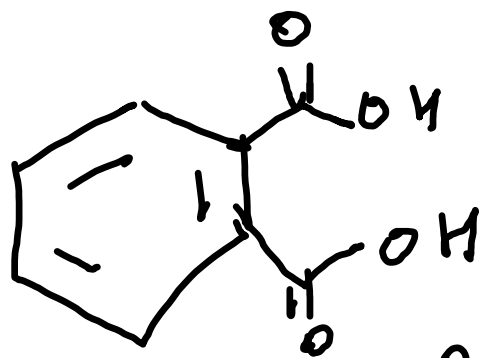
PENTANOIC ACID



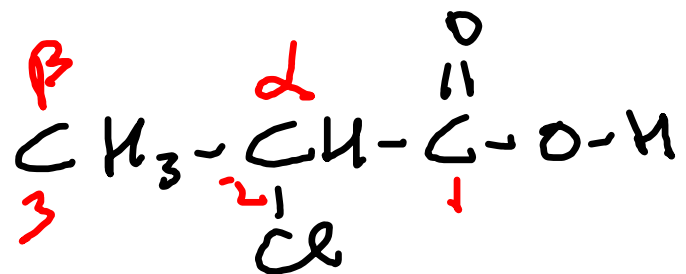
CYCLOHEXANE CARBOXYLIC  
ACID



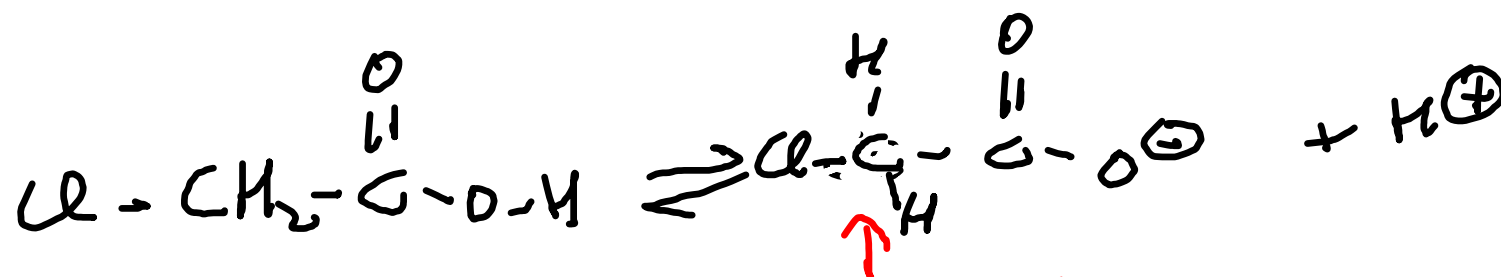
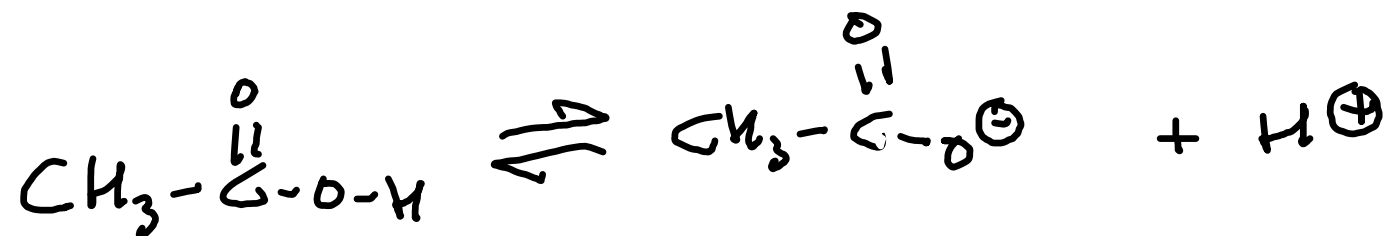
BENZOIC ACID



PHTHALIC ACID



$\alpha$ -CHLOROPROPANOIC ACID



more acidic

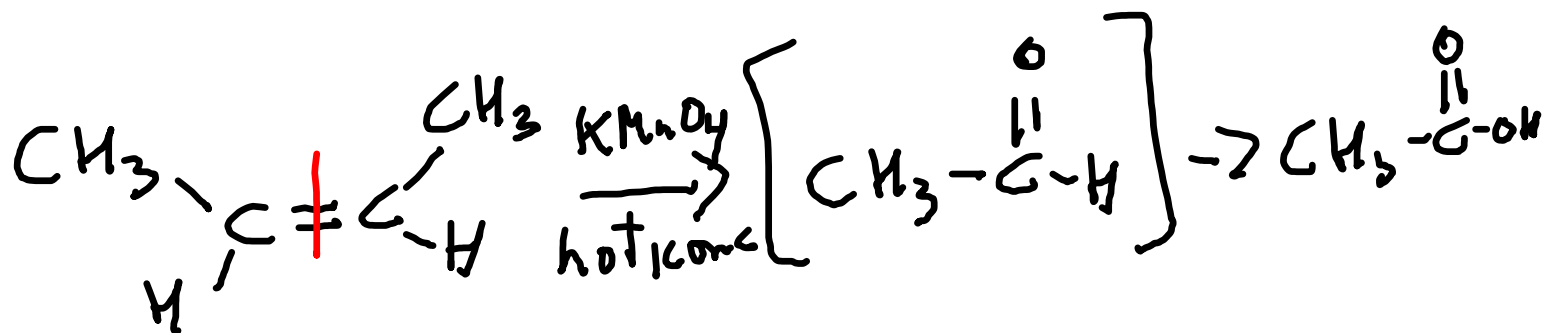
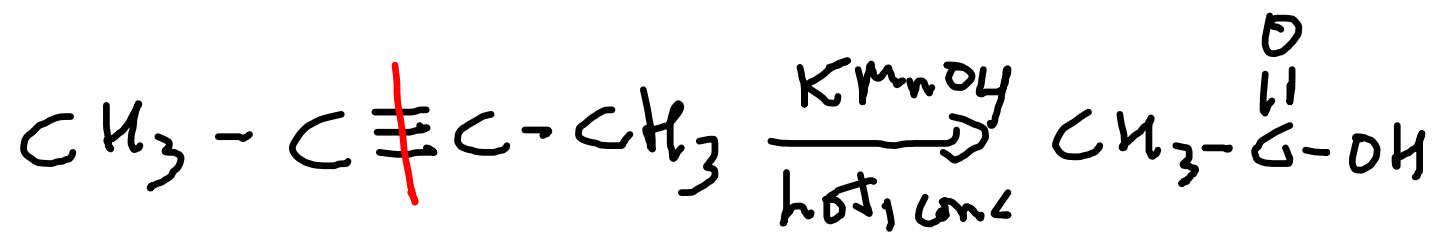
↑  
stabilizes  
negative  
charge

# SYNTHESIS

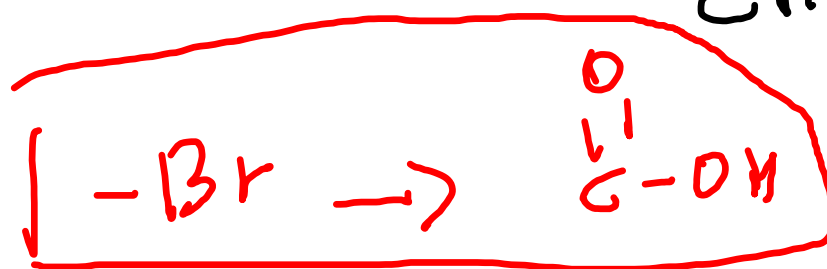
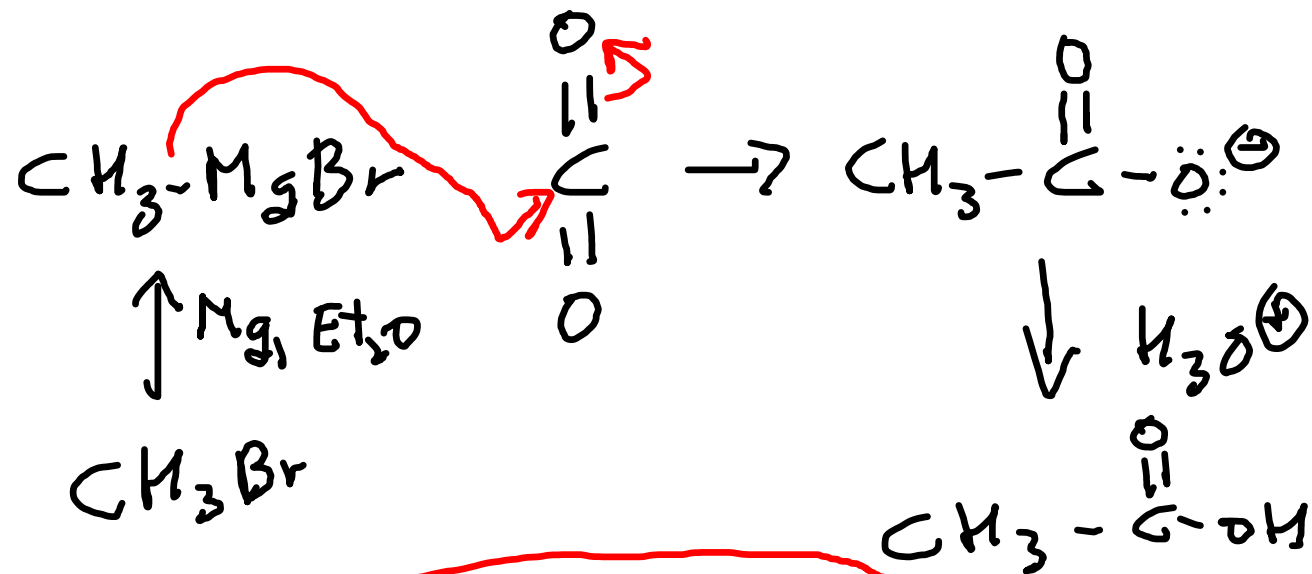
FROM PRIMARY ALCOHOLS



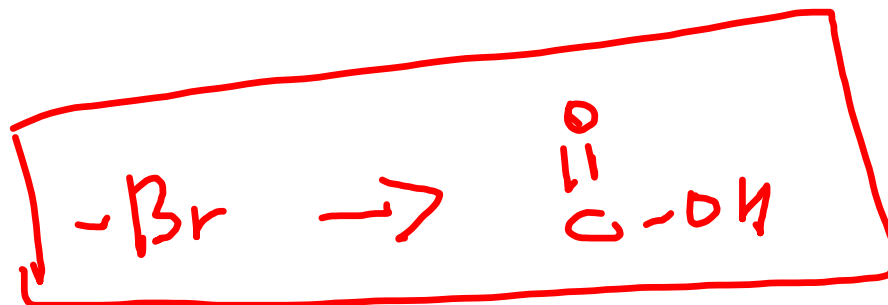
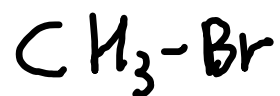
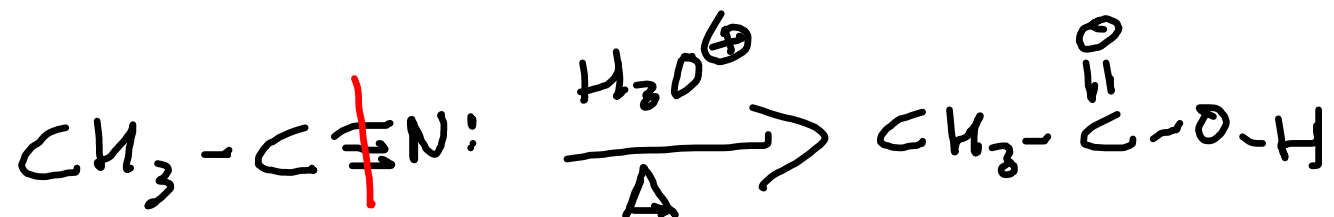
FROM ALKYNES OR ALKENES



# CARBONYLATION OF GRIGNARD

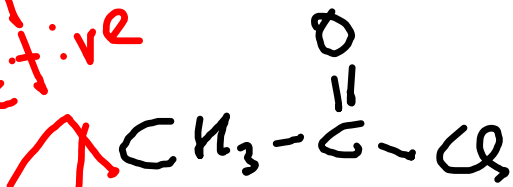


# HYDROLYSIS OF NITRILES

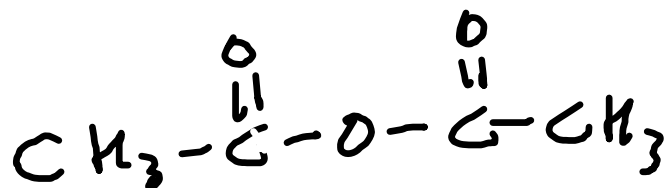


# NUCLEOPHILIC ACYL SUBSTITUTION

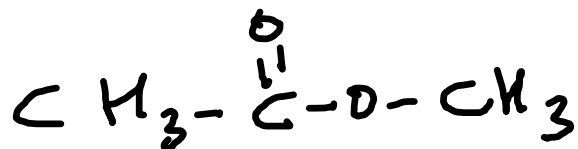
most  
reactive



acid chloride



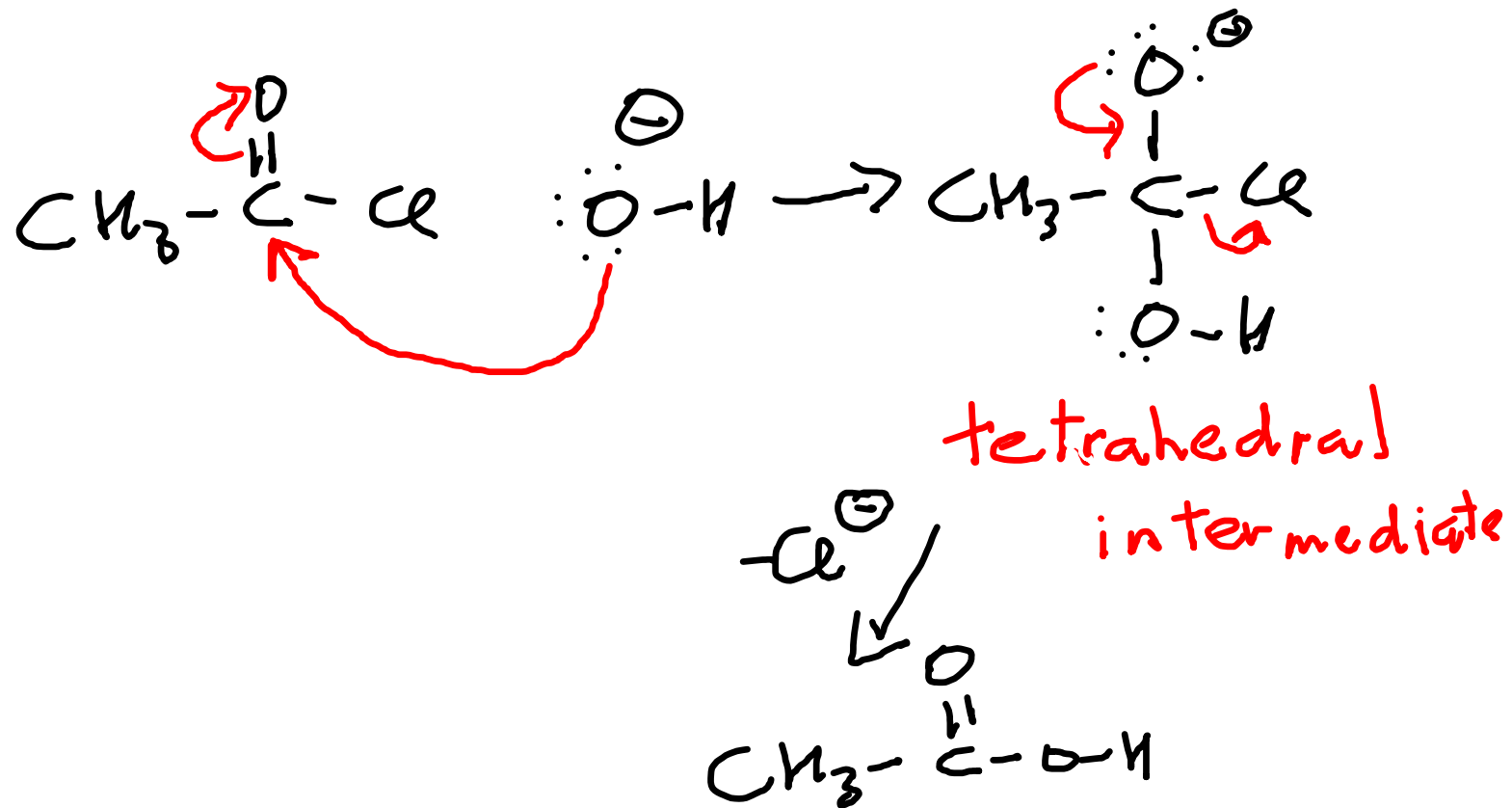
anhydride



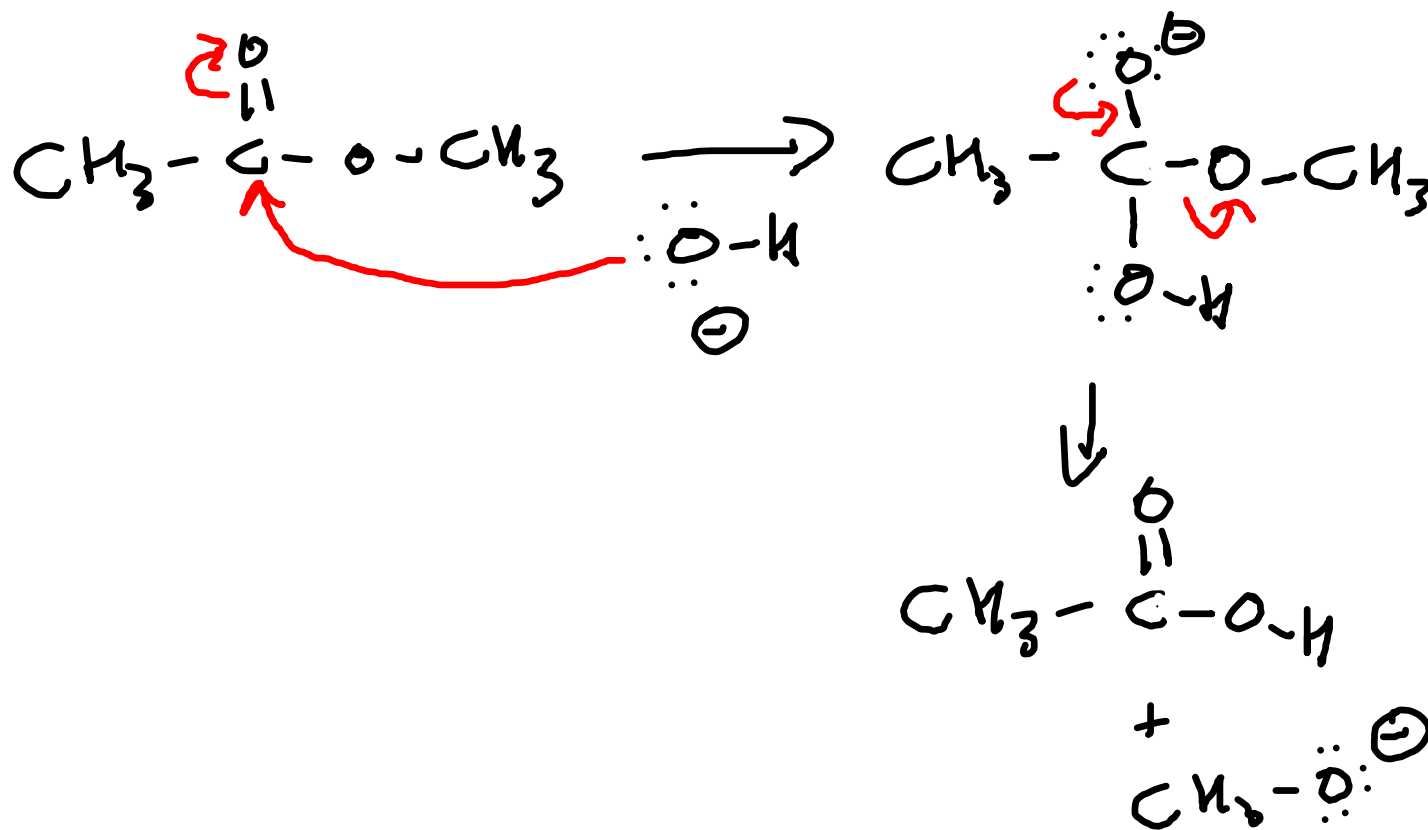
ester



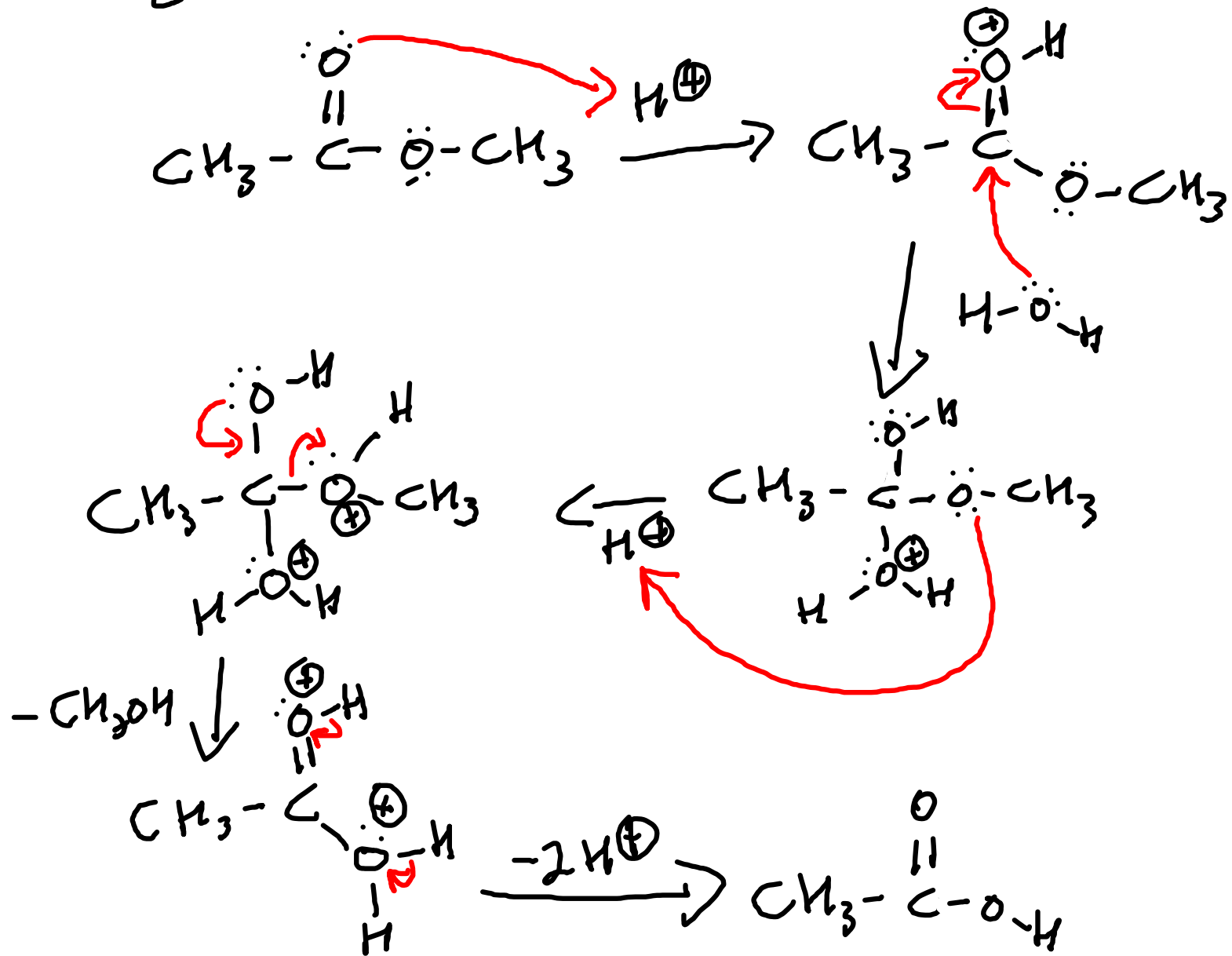
amide



# ESTER HYDROLYSIS - BASIC



# ESTER HYDROLYSIS - ACID



# REACTIONS

