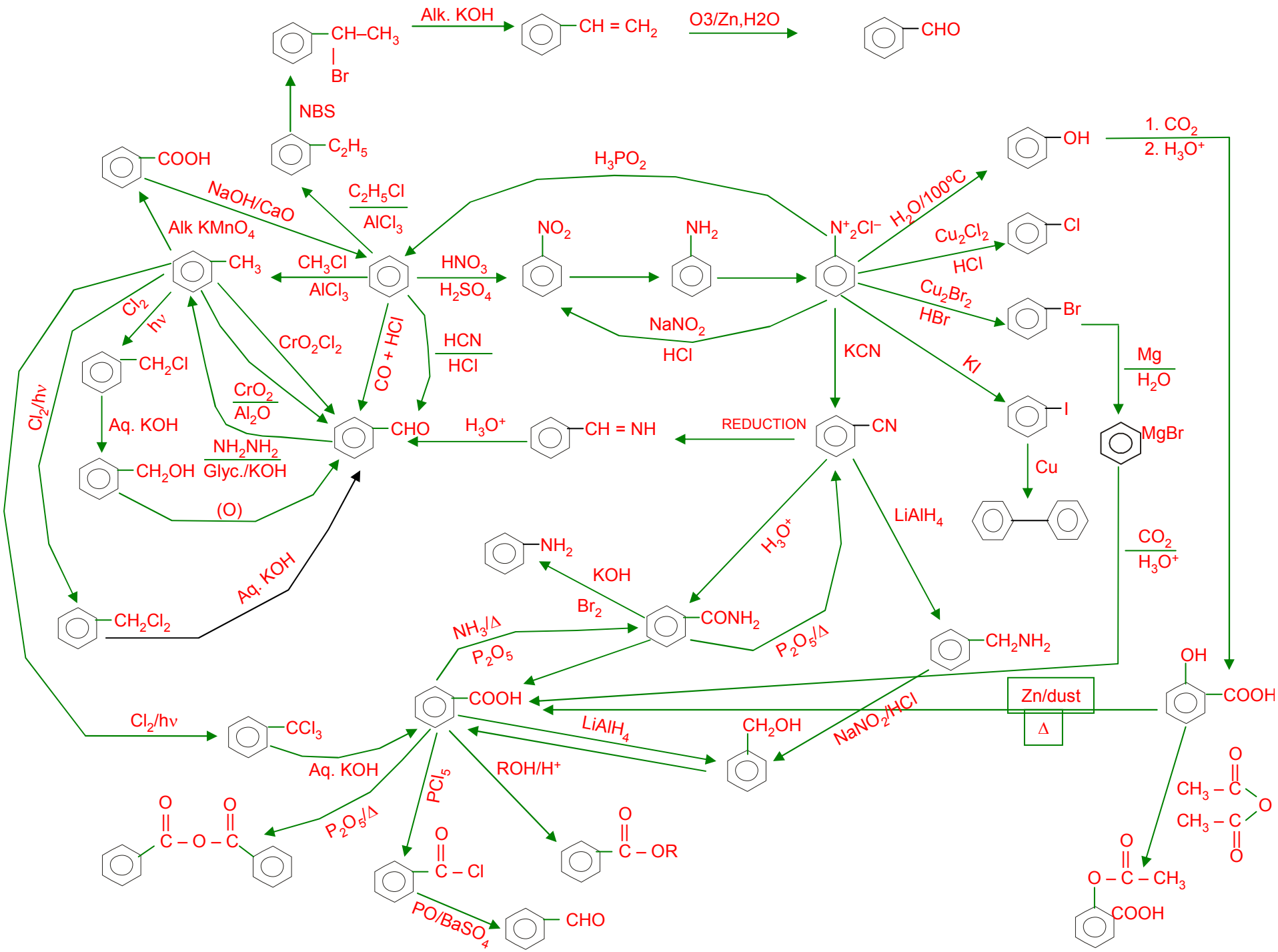
Alk. KOH
O3/Zn,H2O
CH–CH3
Br
CH = CH2
CHO
NBS
C2H5
COOH
NaOH/CaO
Alk KMnO4
C2H5Cl
AlCl3
H3PO2
NO2
NH2
N+2Cl−
H2O/100°C
OH
1. CO2
2. H3O+
Cu2Cl2
HCl
Cl
CH3
CH3Cl
AlCl3
HNO3
H2SO4
NaNO2
HCl
Cu2Br2
HBr
Br
Cl2
hν
CrO2Cl2
CO + HCl
HCN
HCl
KCN
KI
Mg
H2O
CH2Cl
Cl2/hν
CrO2
Al2O
Aq. KOH
CHO
H3O+
CH = NH
REDUCTION
CN
I
MgBr
NH2NH2
Glyc./KOH
CH2OH
(O)
Cu
LiAlH4
H3O+
NH2
KOH
Br2
CONH2
CO2
H3O+
Aq. KOH
CH2Cl2
NH3/Δ
P2O5
P2O5/Δ
CH2NH2
OH
COOH
Zn/dust
Δ
Cl2/hν
CCl3
LiAlH4
CH2OH
NaNO2/HCl
Aq. KOH
PCl5
ROH/H+
P2O5/Δ
C – O – C
C – Cl
C – OR
PO/BaSO4
CHO
CH3 – C
CH3 – C
O – C – CH3
COOH