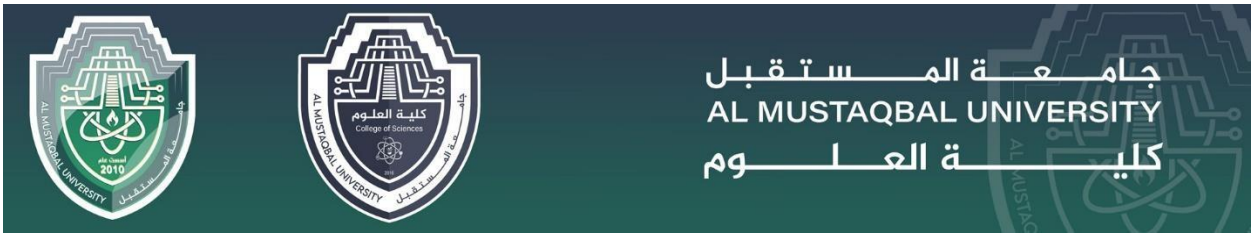



# Organic Chemistry

## 2nd stage

**Asst. Lect.Zahraa Hazim Hamid**

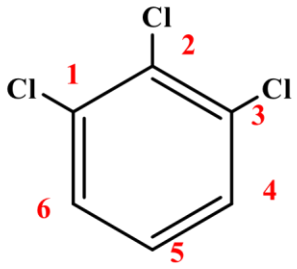
## Lecture 3: Aromatic compound (reaction& preparation)

**Department of Bio chemistry**

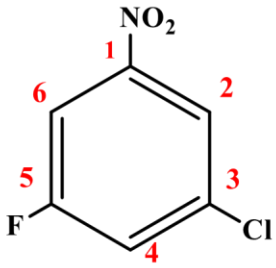
**2026-2025**

## List of Contents

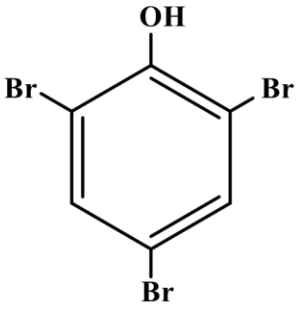
# 1.1 Naming of aromatic compound



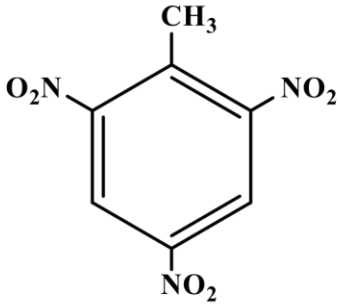

1,2,3-trichlorobenzene




3-chloro-5-fluoronitrobenzene

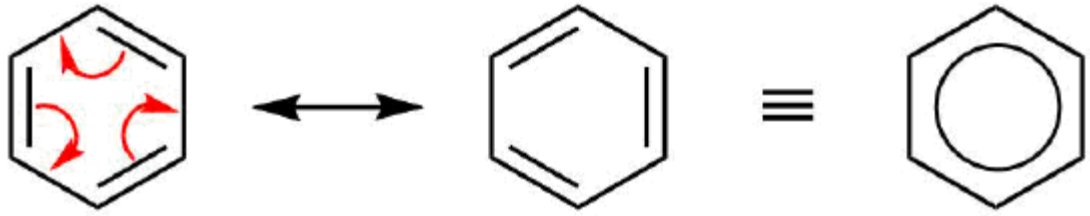



2,4,6-tribromophenol



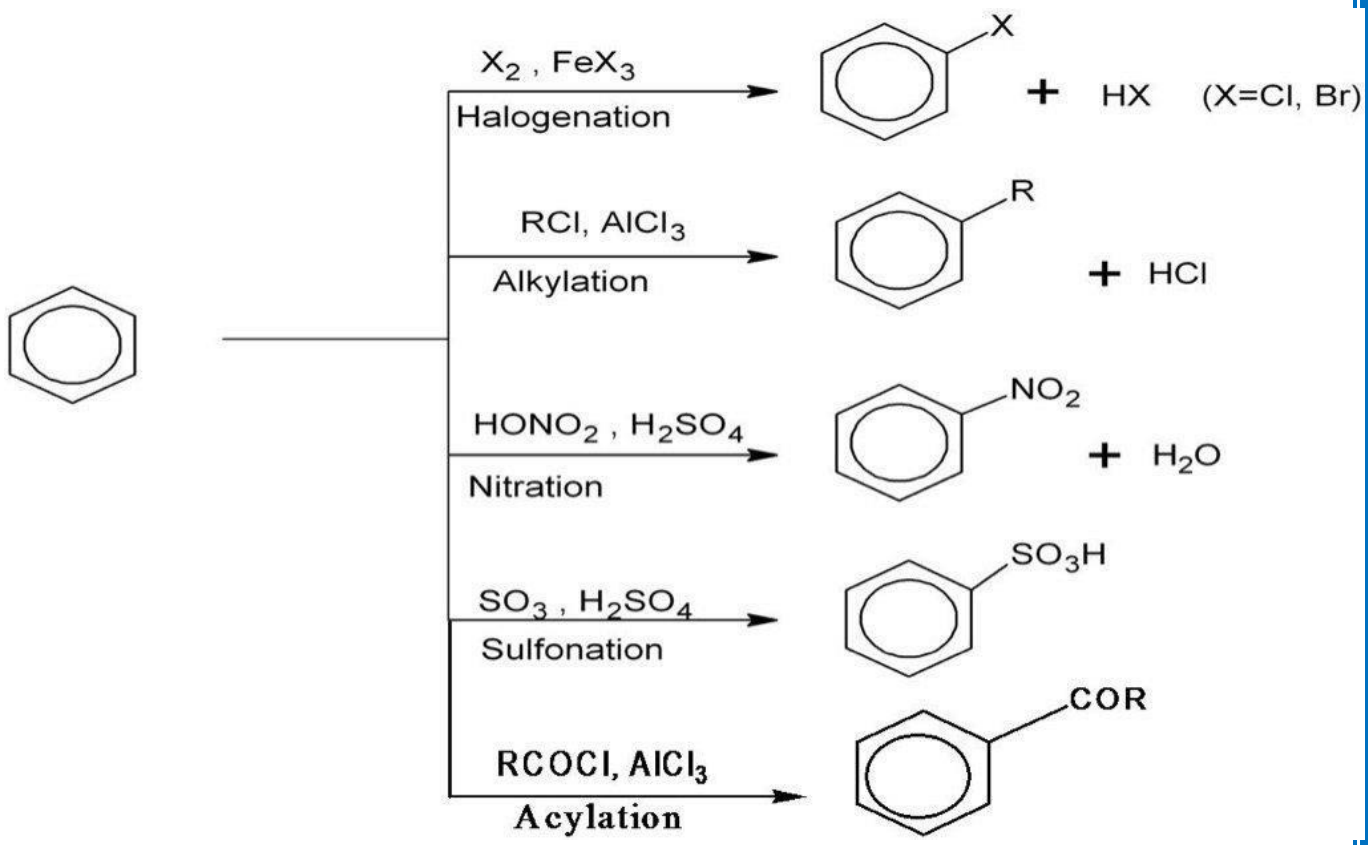

2,4,6-trinitrotoluene (TNT)

## 1.2 Resonance of benzene



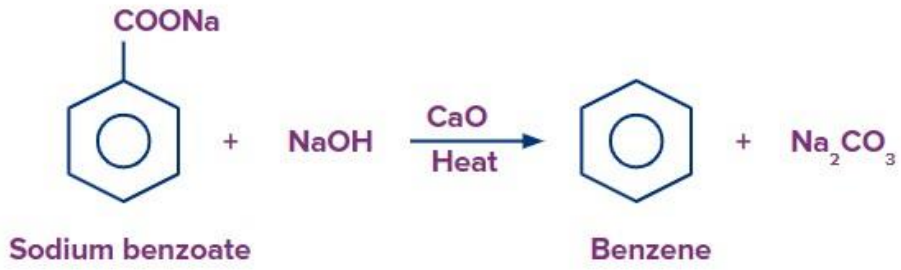
Benzene has delocalized π-electrons, making it more stable than expected. Instead of alternating single and double bonds, all C–C bonds are equal (~1.39 Å). This resonance hybrid lowers benzene's energy by ~36 kcal/mol, explaining its low reactivity in addition reactions and preference for electrophilic aromatic substitution (EAS).

# 1.3 Reaction of benzene



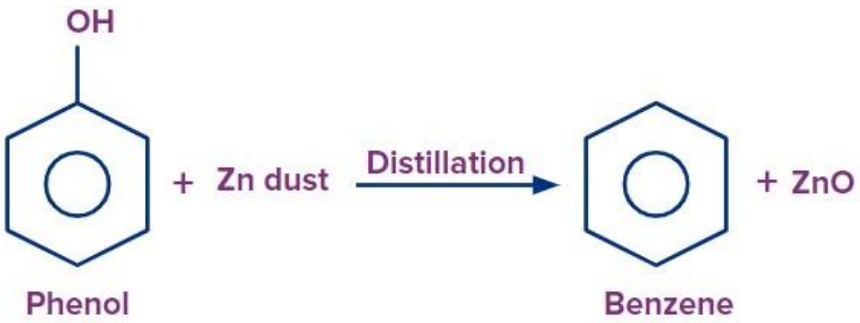
# 1.4 Preparation of Benzene

## 1. Preparation of Benzene from Aromatic Acids

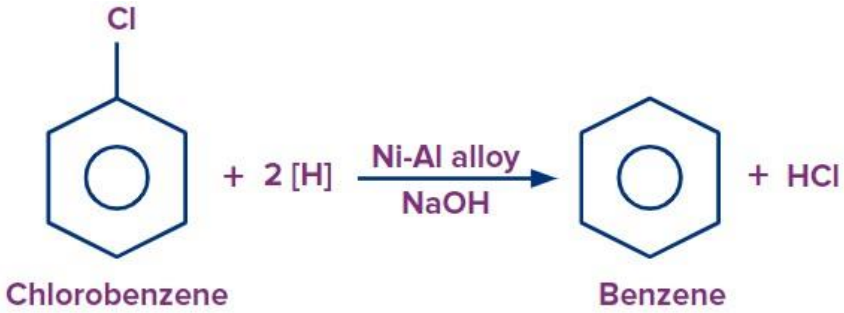



## 2. Preparation of Benzene from Sulphonic Acid

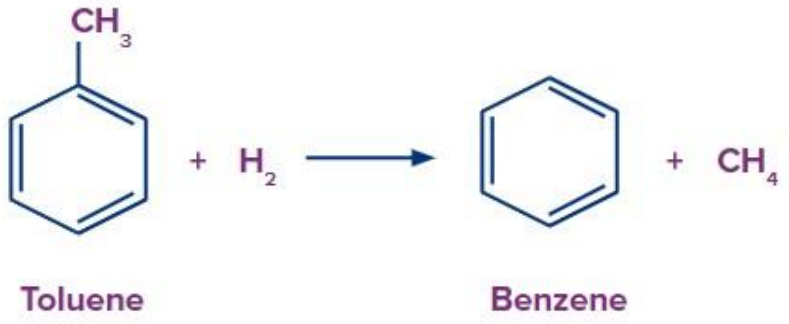
## 3. Preparation of Benzene from Phenol




## 4. Preparation of Benzene from Chlorobenzene



## 5. Preparation of Benzene by Toluene Hydrodealkylation




## 6. Preparation of Benzene from Cyclohexane


## 7. Preparation of Benzene from Grignard Reagent