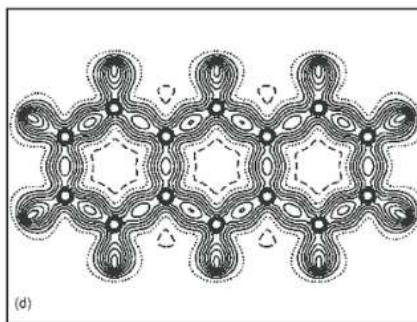
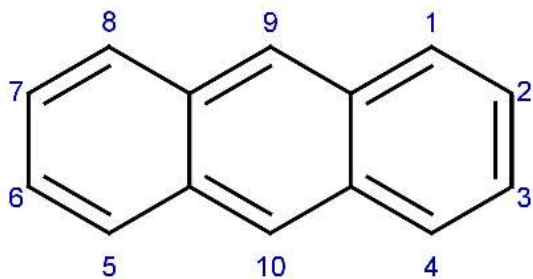


Anthracene

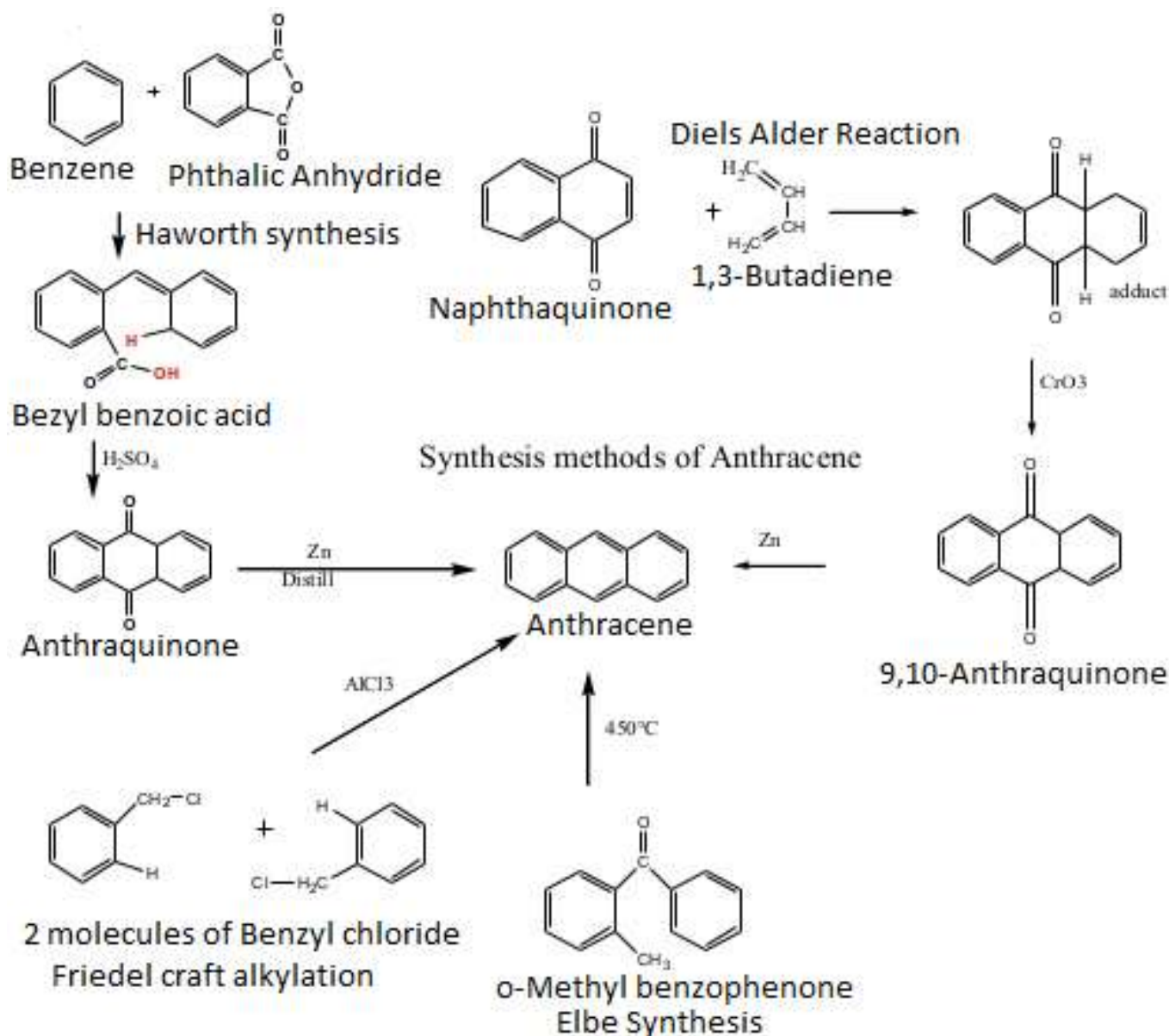


Molecular Formula: $C_{14}H_{10}$

Synonyms: Anthracene, Paranaphthalene, Anthracin, Green Oil

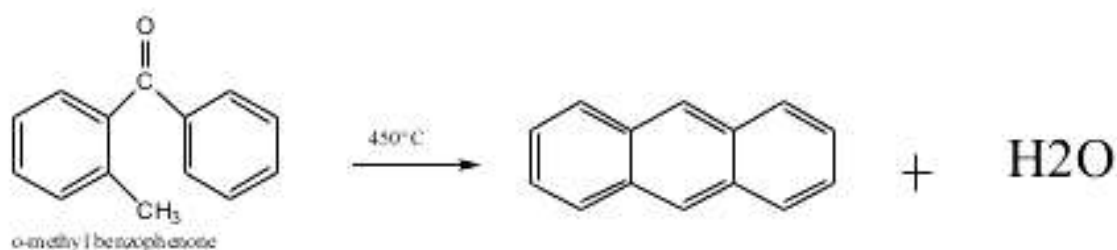
Molecular Weight: 178.23 g/mol

Preparation of Anthracene:



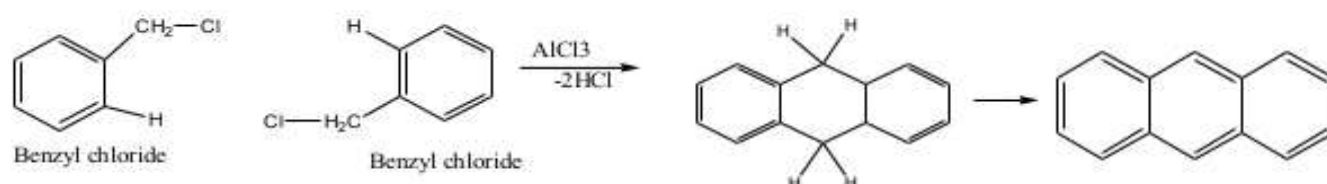
1. Elbe synthesis

- The conversion of a diaryl ketone containing a methyl or methylene group *ortho* to the carbonyl function is known as the *Elbs Reaction*.
- when o-methylbenzophenone is heated at 450°C, anthracene is formed.

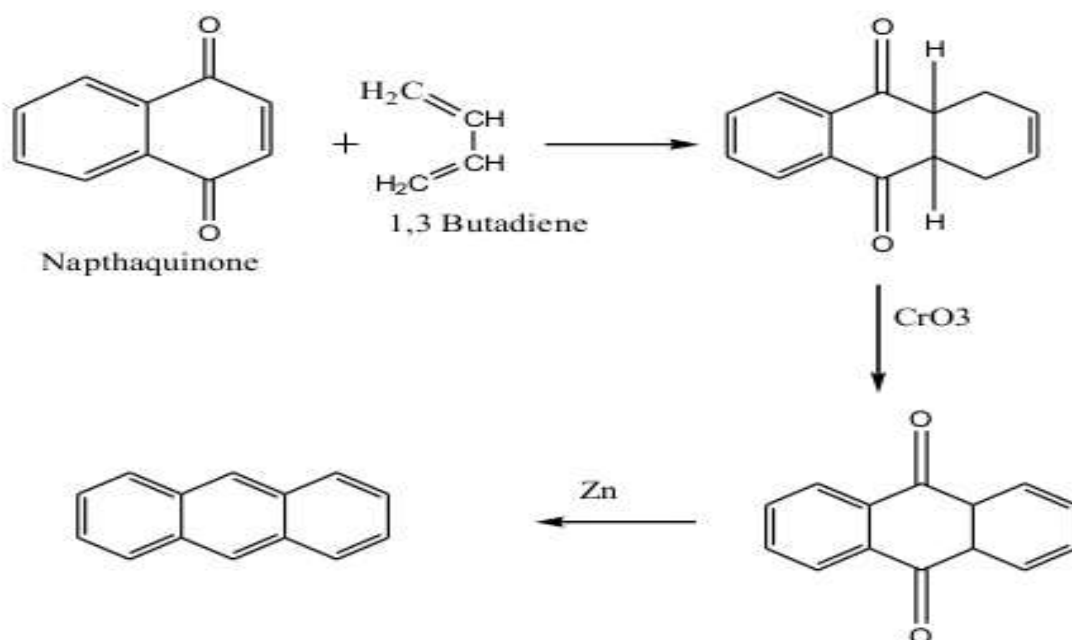


2. Friedel-Crafts Reactions

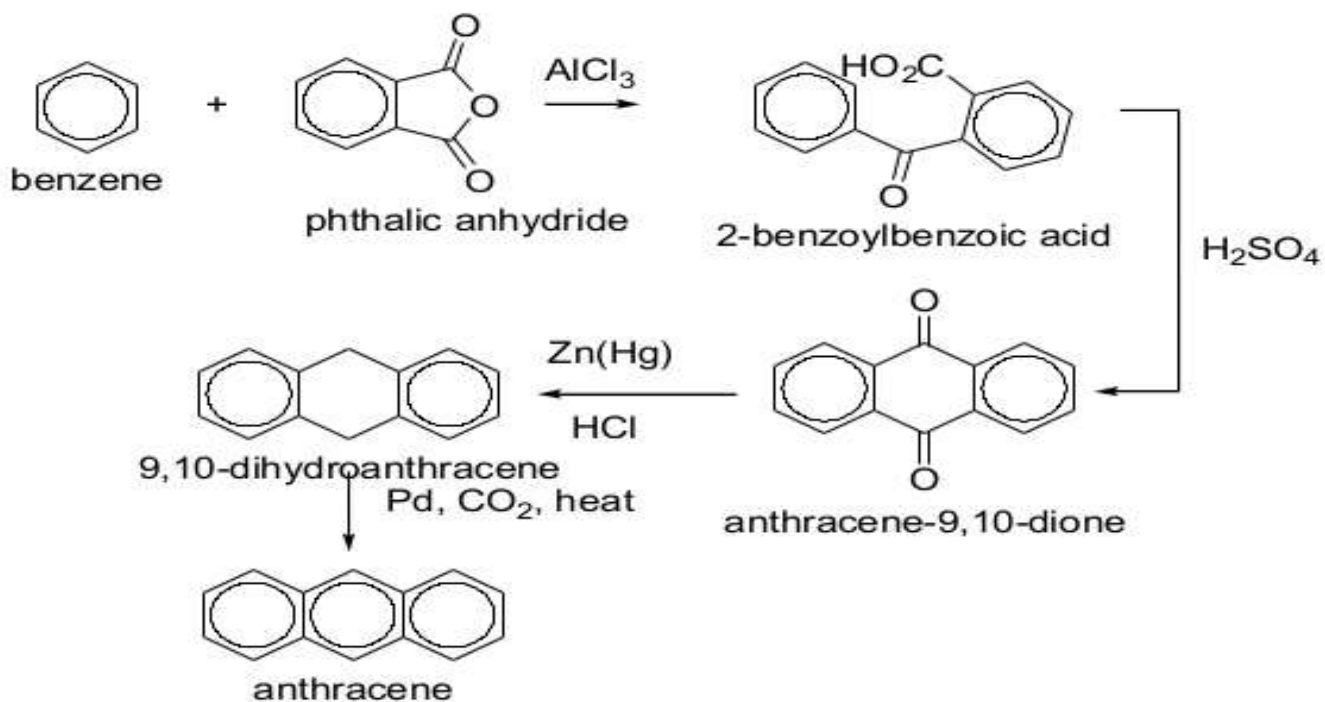
- Benzyl chloride reacts with itself to form 9,10-dihydroanthracene, which readily loses two hydrogen atoms to yield anthracene.



3. Diels alder reaction

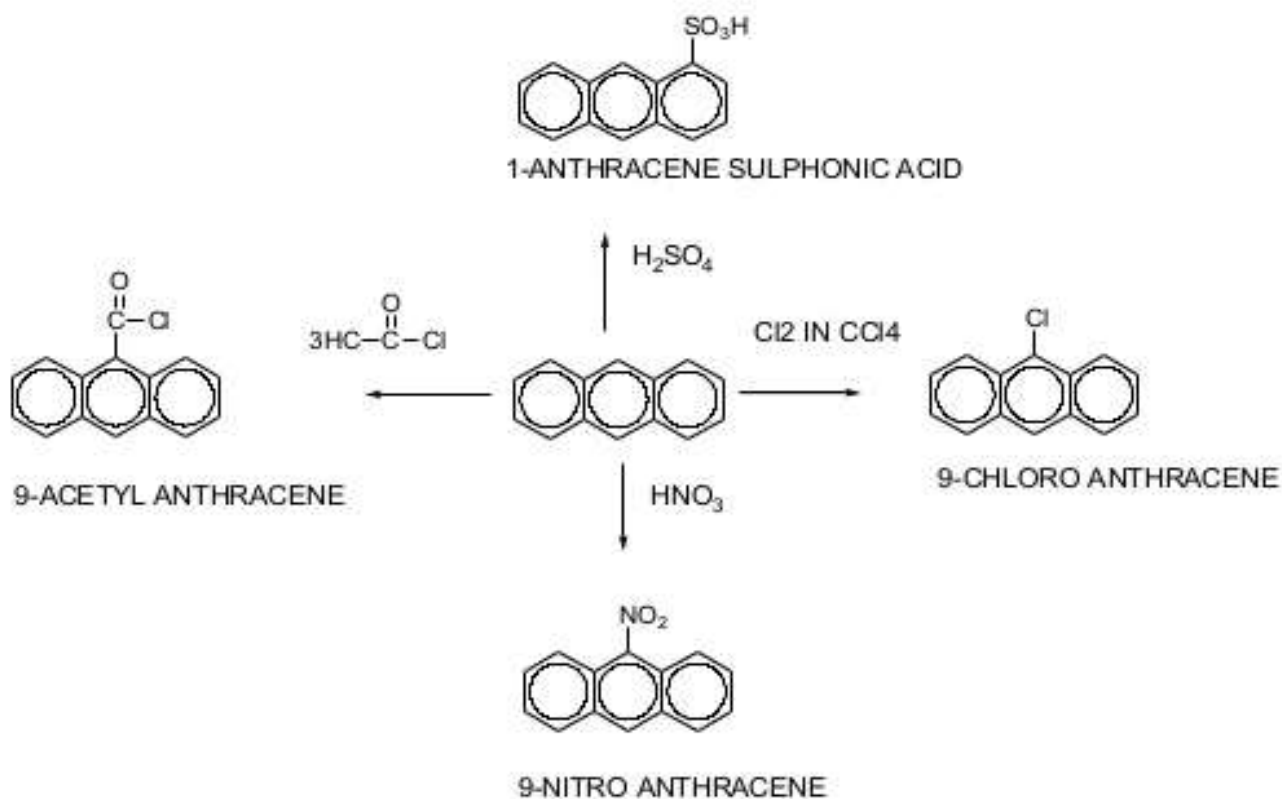


4. Haworth synthesis of anthracene

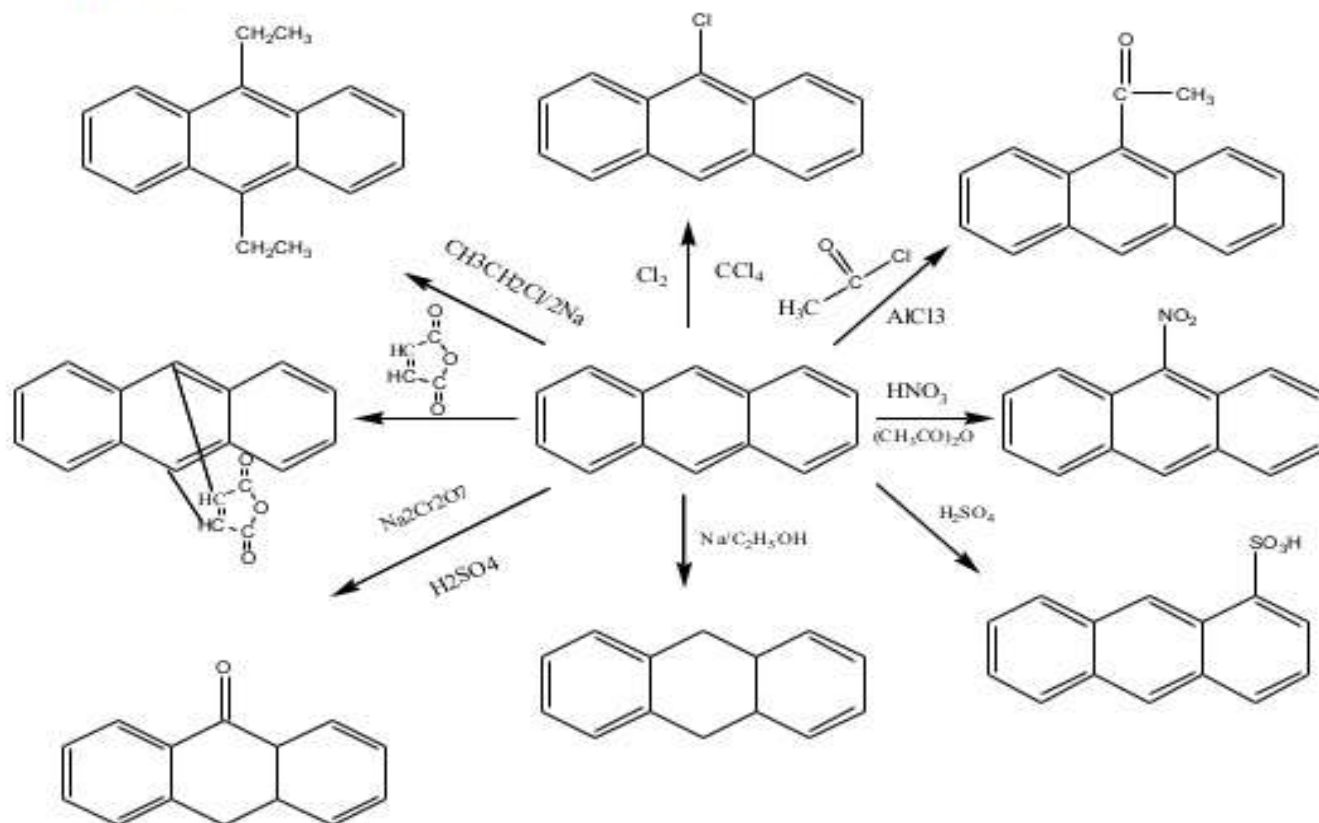


Chemical Reactions of Anthracene:

Electrophilic substitution reaction of Anthracene



OTHER REACTIONS OF ANTHRACENE



Medicinal Uses: Anthracene, also called paranaphthalene or green oil, a solid polycyclic aromatic hydrocarbon (PAH) consisting of three benzene rings derived from coal-tar, is the simplest tricyclic aromatic hydrocarbon. It is on the EPA's priority pollutant list. It is ubiquitous in the environment as a product of incomplete combustion of fossil fuels. It has been identified in surface and drinking water, ambient air, exhaust emissions, smoke of cigarettes and cigars, and in smoked foods and edible aquatic organisms. It is primarily used as an intermediate in the production of dyes, smoke screens, scintillation counter crystals, and in organic semiconductor research.