

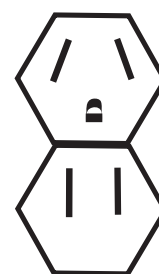


# "Ben"-zene

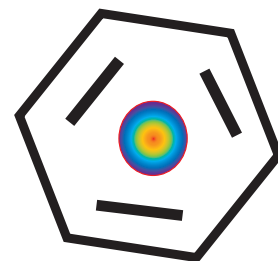
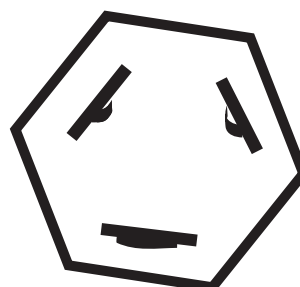
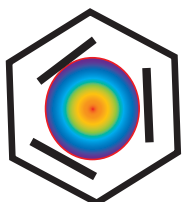
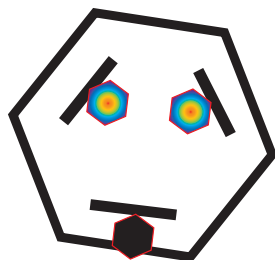
1,3,5-cyclohexatriene



Napthalene Socket



Benzene, or benzol, is an organic chemical compound with the molecular formula  $C_6H_6$ . It is sometimes abbreviated Ph-H. Benzene is a colorless and highly flammable liquid with a sweet smell and a relatively high melting point. Because it is a known carcinogen, its use as an additive in gasoline is now limited, but it is an important industrial solvent and precursor in the production of drugs, plastics, synthetic rubber, and dyes. Benzene is a natural constituent of crude oil, and may be synthesized from other compounds present in petroleum. Benzene is an aromatic hydrocarbon and the second [n]-annulene (-annulene), a cyclic hydrocarbon with a continuous pi bond.



"Big Ben"

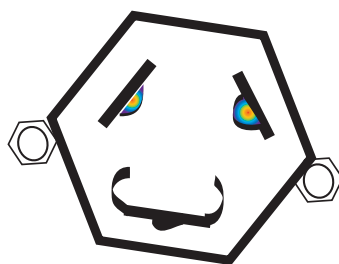
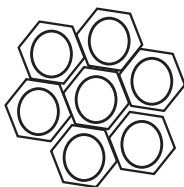
The word "benzene" derives historically from "gum benzoin", sometimes called "benjamin" (i.e., benzoin resin), an aromatic resin known to European pharmacists and perfumers since the 15th century as a product of southeast Asia.

"Benzoin" is itself a corruption of the Arabic expression "luban jawi," or "frankincense of Java." An acidic material was derived from benzoin by sublimation, and named "flowers of benzoin," or benzoic acid. The hydrocarbon derived from benzoic acid thus acquired the name benzin, benzol, or benzene

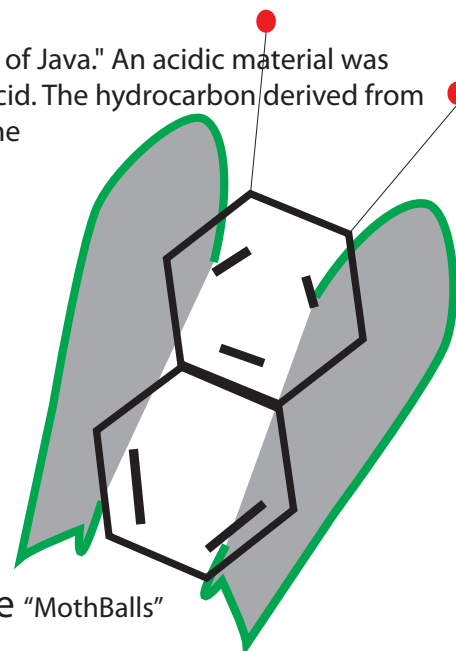
Hexa="Six"  
Structurally  
Strong



Benzene's  
Beehive



Napthalene "MothBalls"



Benzene has been the subject of many studies by scientists ranging from Michael Faraday to Linus Pauling. Faraday first isolated and identified benzene in 1825 from the oily residue derived from the production of illuminating gas, giving it the name bicarburet of hydrogen. In 1833, Eilhard Mitscherlich produced it via the distillation of benzoic acid (from gum benzoin) and lime. Mitscherlich gave the compound the name benzin. In 1836 the French chemist Auguste Laurent named the substance "phène"; this is the root of the word phenol, which is hydroxylated benzene, and phenyl, which is the radical formed by abstraction of a hydrogen atom from benzene.

