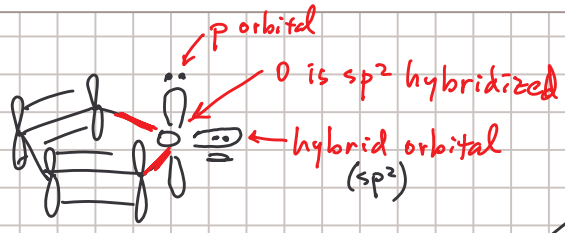
Ch 16

- homework due next Wed
- quiz next Wed (arom. / nomenclature)

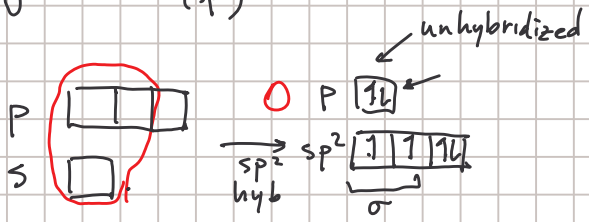
Note Title 2/15/2006

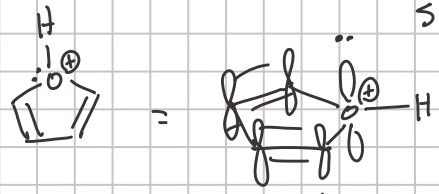
Furan



6 π e⁻

aromatic!



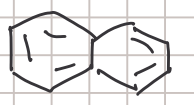


still aromatic!

Nomenclature

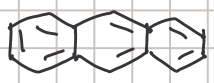
Polynuclear aromatic hydrocarbons (PAH)

(fused aromatic rings)



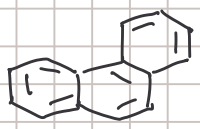
naphthalene (mothballs)

10 π e⁻



anthracene

14 π e⁻ $4N+2$ $N=3$



phenanthracene

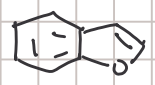
larger aromatic cpds are stronger carcinogens

become more reactive

PAH $\xrightarrow[\text{liver}]{[O]}$ PAH-epoxide (electrophile) $\xrightarrow[\text{Nuc}]{\text{DNA}}$ Alkylated DNA

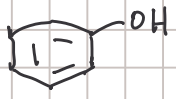
(combustion)

heterocyclic fused cpds



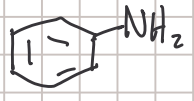
benzofuran

& common names

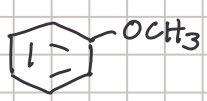


phenol

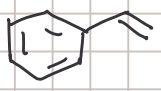
toluene



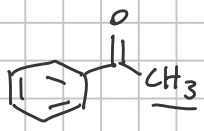
aniline



anisole

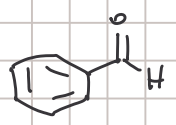


styrene

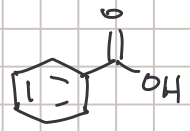


acetophenone

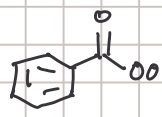
Ac



benzaldehyde



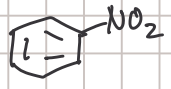
benzoic acid



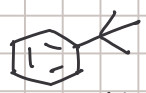
(peroxybenzoic acid)

monosubstituted benzene

chlorobenzene



nitrobenzene



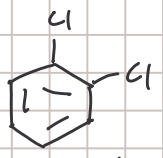
t-butylbenzene

Disubstituted

ortho , meta , para

1,2 1,3 1,4

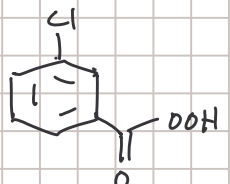
o- m- p-



1,2-dichlorobenzene (IUPAC)

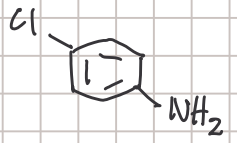
(ortho-dichlorobenzene

o-dichlorobenzene ★ more commonly used)



m-chloroperoxybenzoic acid

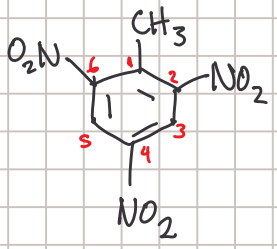
MCPBA!



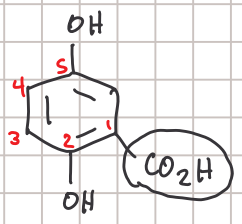
p-chloroaniline

3 or more - if common name available, use it!
(give its func group # on C1)

- number around ring to give smallest #'s



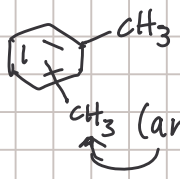
2,4,6-trinitrotoluene (TNT)



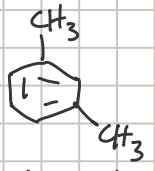
pick lone group as base name

2,5-dihydroxy benzoic acid

Xylenes



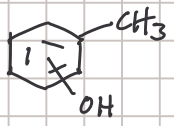
(any position)



m-xylene

common solvent

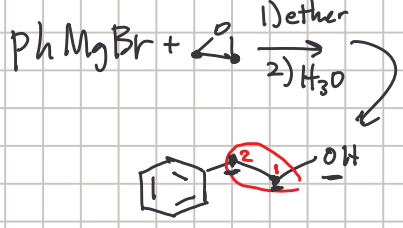
Cresols



p-cresol

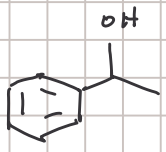
Benzene as substituent

phenyl group ("ph") = (Ø)



2-phenyl-1-ethanol

= ph—⌇—OH



1-phenyl-1-ethanol