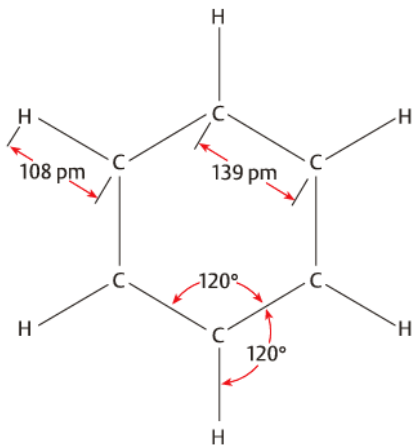


3. Aromatische Verbindungen (Arene)

= Verbindungen, die einen Benzol-Ring enthalten.

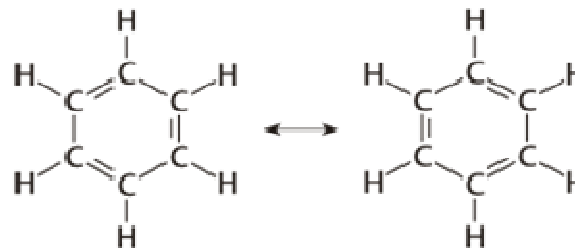
Molekülbau: sp^2 -Hybridisierung, planar

delokalisierte π -Elektronen \rightarrow besondere Stabilität des Benzol-Rings

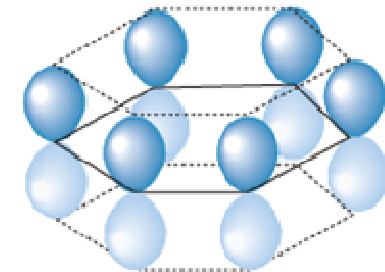


Struktur des Benzol-Moleküls

C-C-Bindungslänge
zwischen Einfach- und
Doppelbindung



Mesomere Grenzformeln

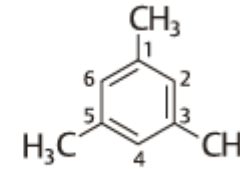
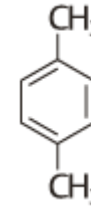
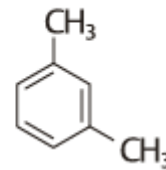
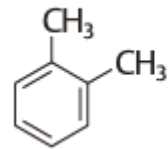
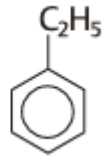
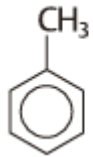


π -Bindungssystem

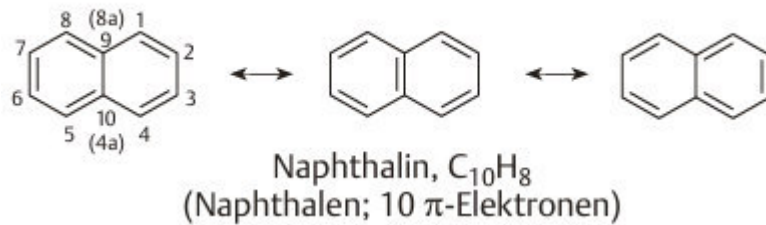
(σ -Bindungen als schwarze
Striche)

Nomenklaturbeispiele:

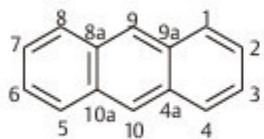
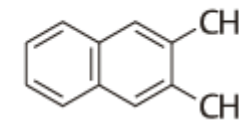
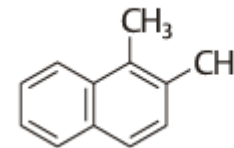
Akylbenzole



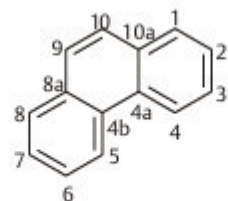
Kondensierte Ringsysteme



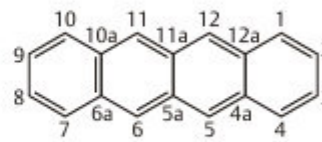
Naphthalin, $C_{10}H_8$
(Naphthalen; 10 π -Elektronen)



Anthracen, $C_{14}H_{10}$

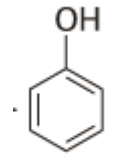


Phenanthren, $C_{14}H_{10}$

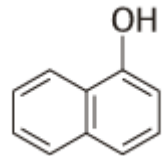


Tetracen, $C_{18}H_{12}$

Phenole

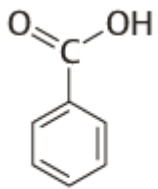


Phenol

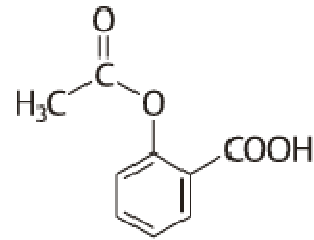


1-Naphthol

Aromatische Carbonsäuren

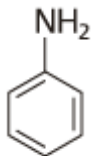


Benzoessäure



Acetylsalicylsäure
(Aspirin, 2-Acetoxybenzoessäure)

Aromatische Amine



Anilin

N,N-Dimethylanilin

Übungen Nomenklatur Organische Chemie

Name	Struktur	Stoffklasse
Propantriol		dreiwertiger Alkohol
n-Propylchlorid		Halogenderivat der Alkane
Dimethylsulfid		
Methanal (= Formaldehyd)		
Essigsäureethylester (= Ethylacetat)		
Propanol		
Trichlormethan (= Chloroform)		
Propanon (= Aceton)		

Propionsäure		
4-Penten-2-ol		
Diethylether		
trans-Buten-1,4-disäure (= Fumarsäure)		
cis-Buten-1,4-disäure (= Maleinsäure)		
1,2-Diamino-ethan (= Ethylendiamin)		
Ethylbenzol		
3-Methylphenol		