Academie toegepaste biowetenschappen en chemie

Chemie Course 3

Week 7: H13

HAN_UNIVERSITY OF APPLIED SCIENCES

Hoofdstuk 13; alkenen, alkynen en aromatische stoffen

Vandaag

Terugblik op vorige week

Deze week:

- 13.7 Alkeen polymeren
- 13.8 Aromatische stoffen de structuur van benzeen
- 13.9 Benoemen van aromatische stoffen
- 13.10 Reacties van aromatische stoffen

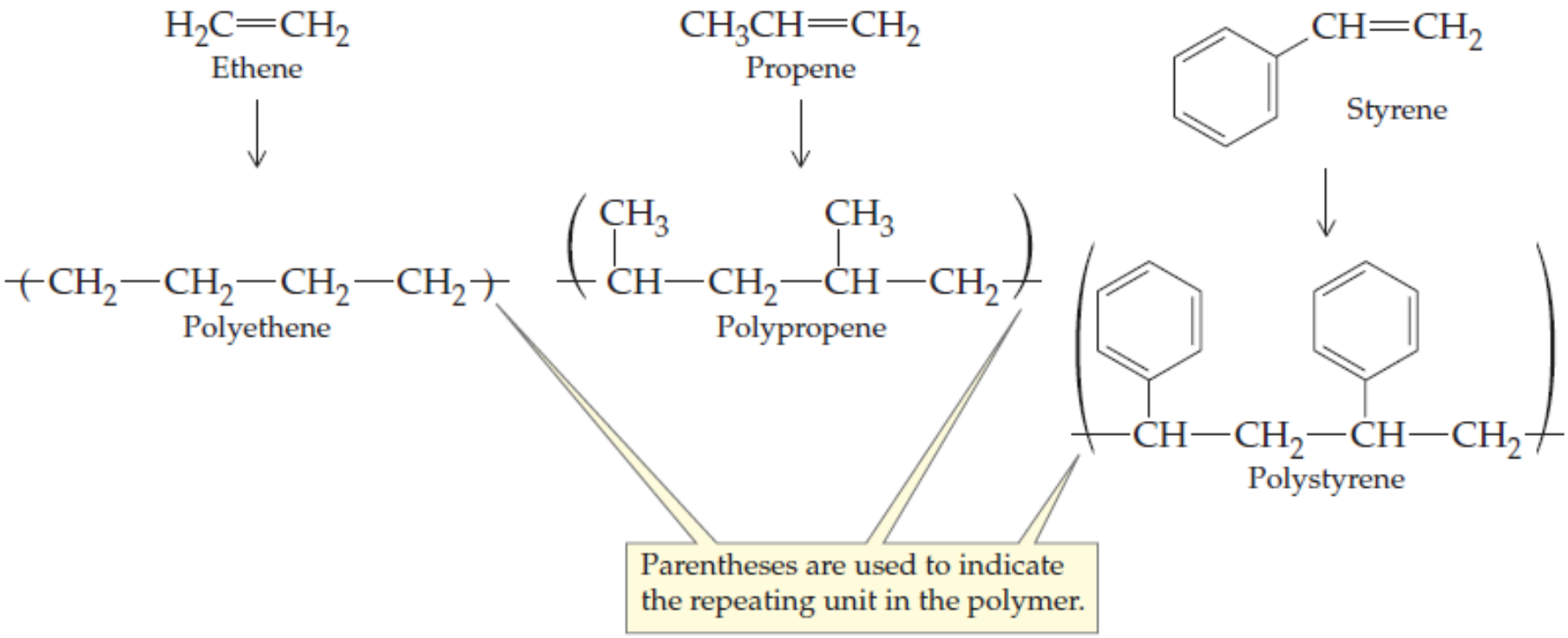
HAN_UNIVERSITY
OF APPLIED SCIENCES

13.7 Alkeen polymeren

Wat is een polymeer?

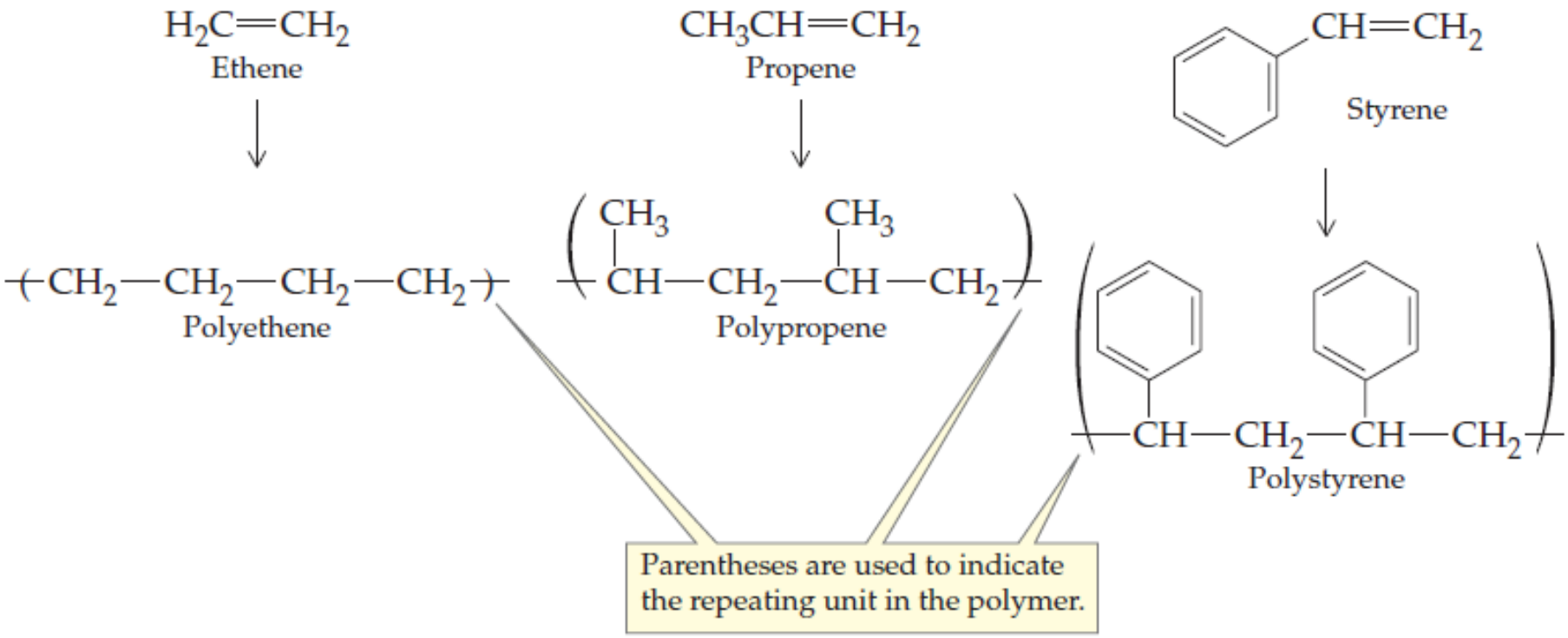
13.7 Alkeen polymeren

Een polymeer bestaat uit monomeren.



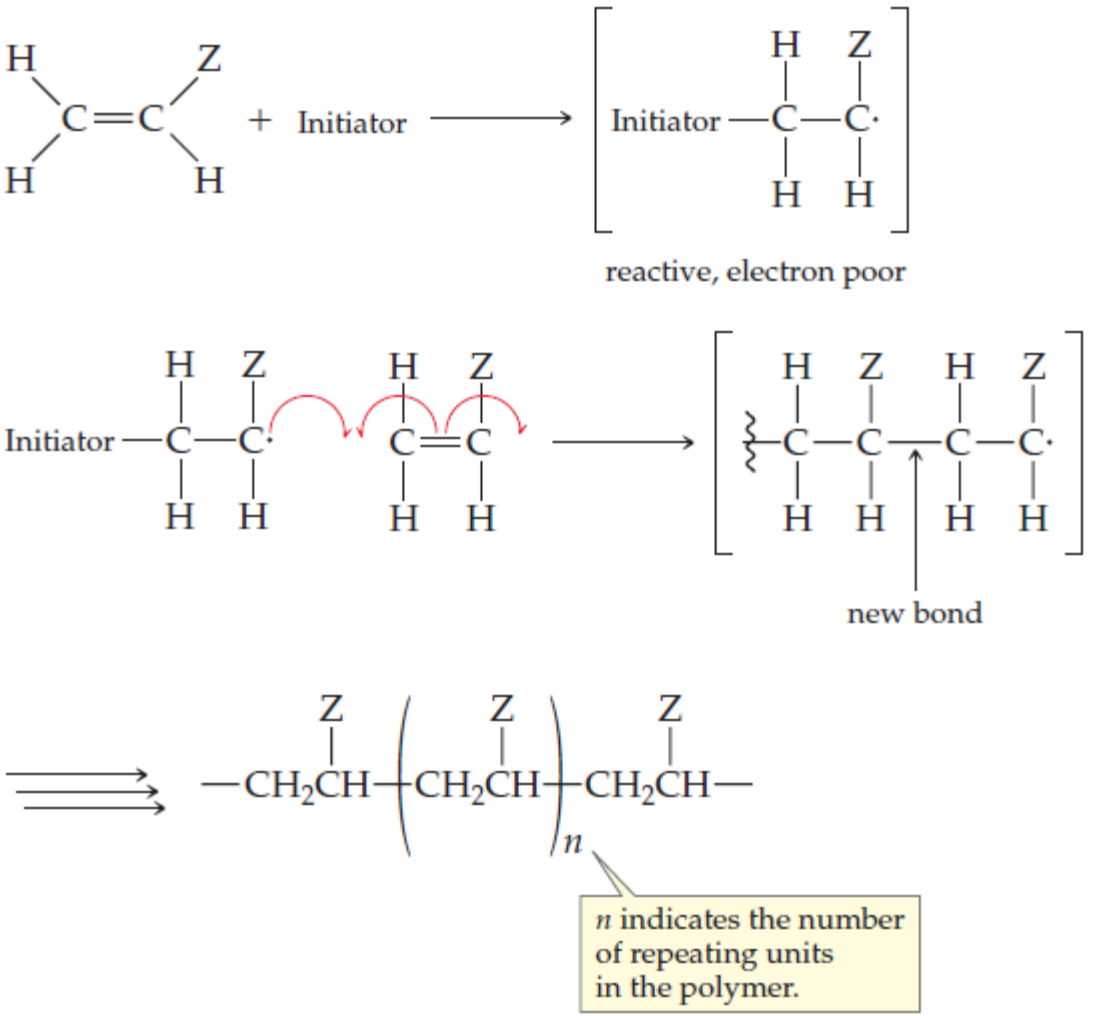
13.7 Alkeen polymeren

Een polymeer bestaat uit monomeren.



13.7 Alkeen polymeren

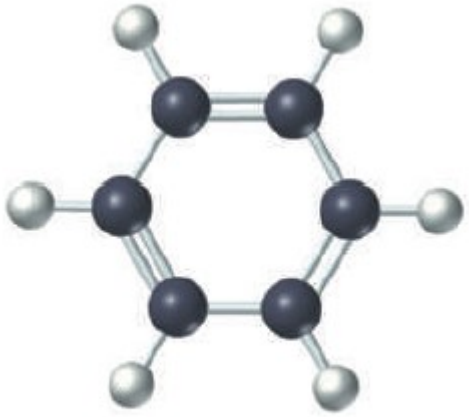
Een polymeer bestaat uit monomeren.



Worked example 13.9

13.8 Aromatische stoffen en de structuur van Benzeen

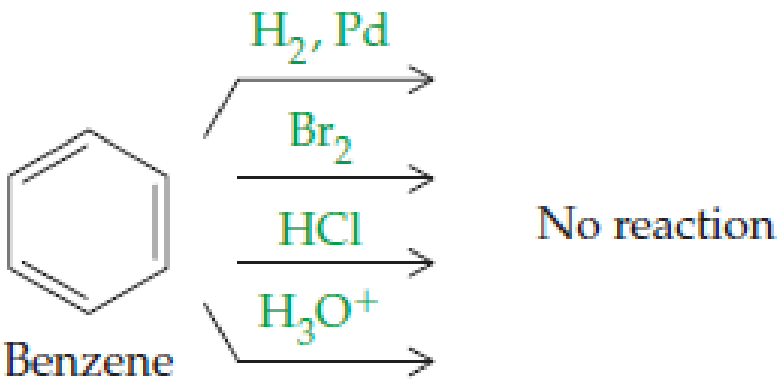
Aromatische stoffen zijn stoffen die een benzeenachtige ring bevatten

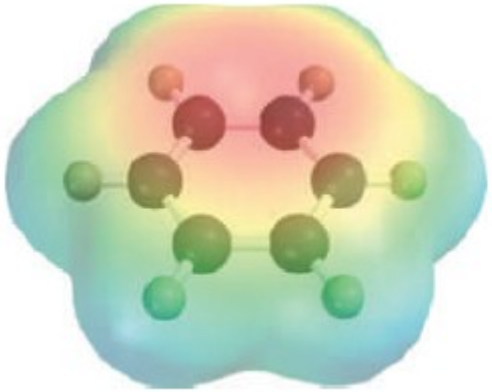


Aromatic The class of compounds containing benzene-like rings.

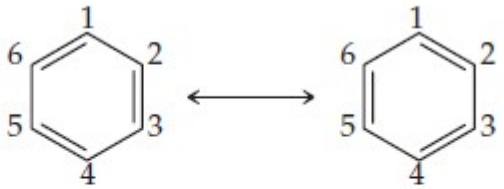
13.8 Aromatische stoffen en de structuur van Benzeen

Benzeen is niet reactief



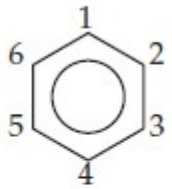


(a)



Two equivalent structures, which differ in the position of their double-bond electrons. Neither structure is correct by itself.

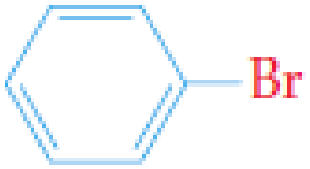
(b)



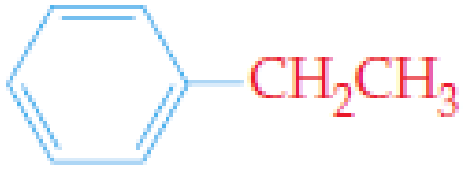
(c)

13.9 Benoemen van aromatische stoffen

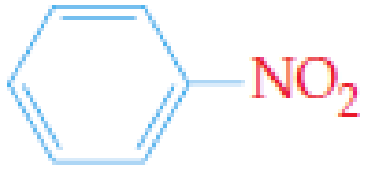
Benzeen is de hoofdnaam in benzenen met een zijgroep.
bv.



Bromobenzene



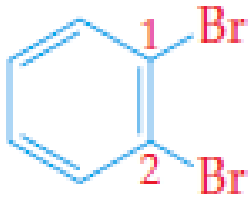
Ethylbenzene



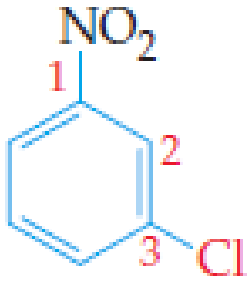
Nitrobenzene

13.9 Benoemen van aromatische stoffen

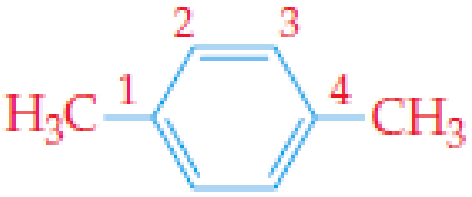
Ortho (1,2)
Meta (1,3)
Para (1,4)



1,2-Dibromobenzene
ortho-Dibromobenzene
o-Dibromobenzene



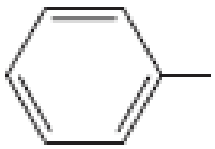
3-Chloronitrobenzene
meta-Chloronitrobenzene
m-Chloronitrobenzene



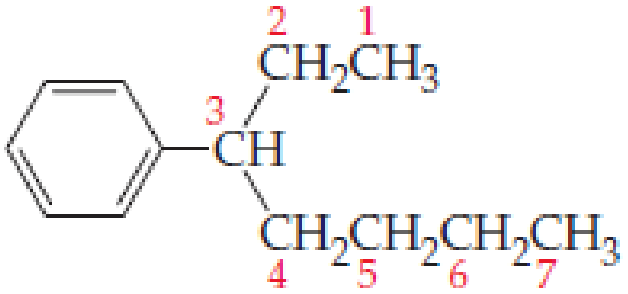
1,4-Dimethylbenzene
para-Dimethylbenzene
p-Dimethylbenzene

13.9 Benoemen van aromatische stoffen

De benzeenring kan zelf ook een zijgroep zijn.
In dat geval wordt het een fenyl genoemd.



A phenyl group
C_6H_5—

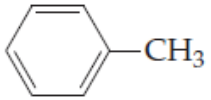
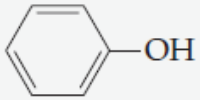
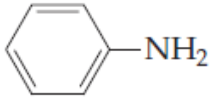
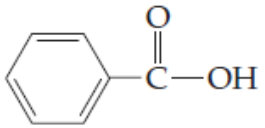
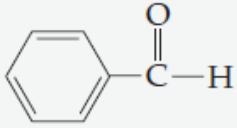


3-Phenylheptane

13.9 Benoemen van aromatische stoffen

Wat bekende aromatische groepen.

Table 13.2 Common Names of Some Aromatic Compounds

Structure	Name
	Toluene
	Phenol
	Aniline
	*para*-Xylene (*p*-Xylene)
	Benzoic acid
	Benzaldehyde

Worked example 13.10

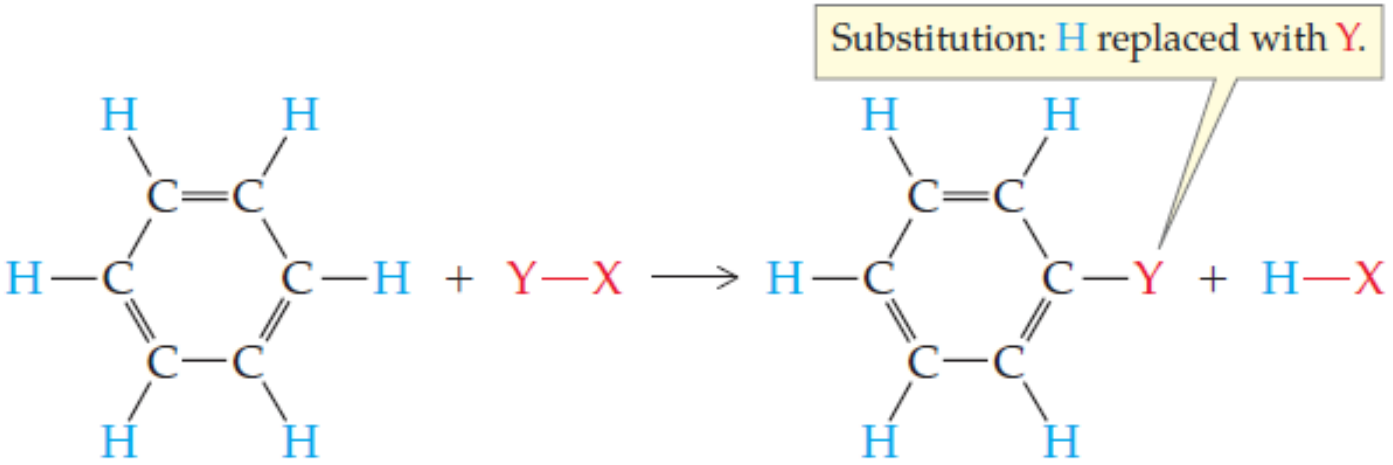
Worked example 13.11

13.10 Reactions of aromatic compounds

Aromatische stoffen kunnen substitutie reacties ondergaan.
Wat was ook al weer een substitutiereactie?

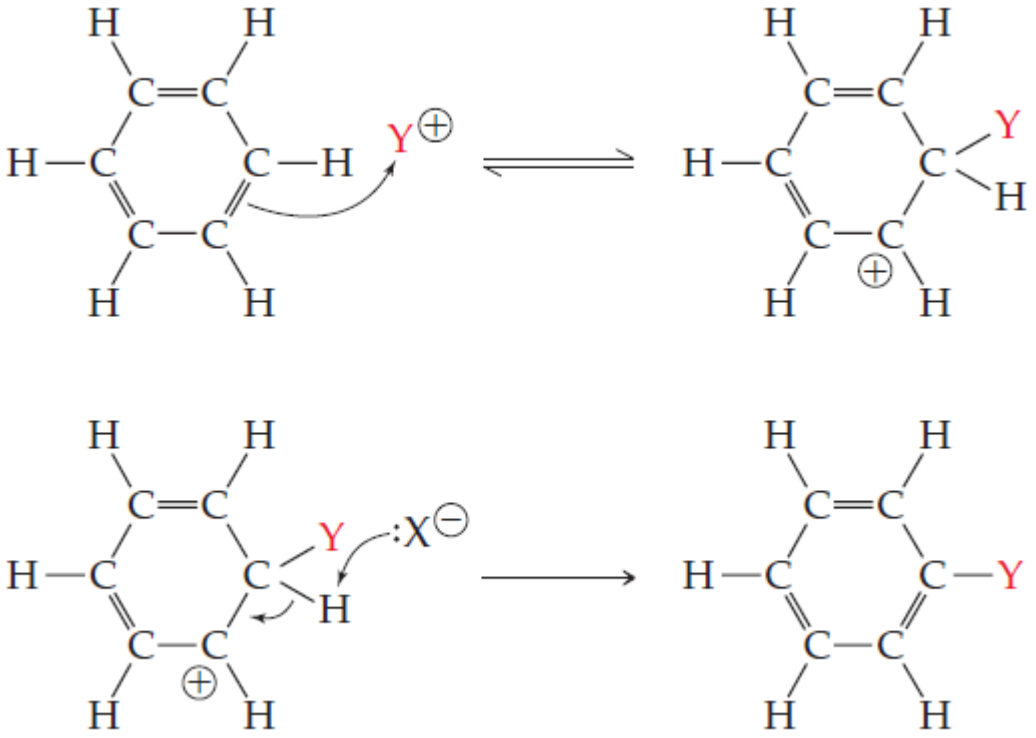
13.10 Reactions of aromatic compounds

Aromatische stoffen kunnen substitutie reacties ondergaan.



13.10 Reactions of aromatic compounds

De stabiele vorm van de aromatische ring blijft bestaan bij een substitutie.

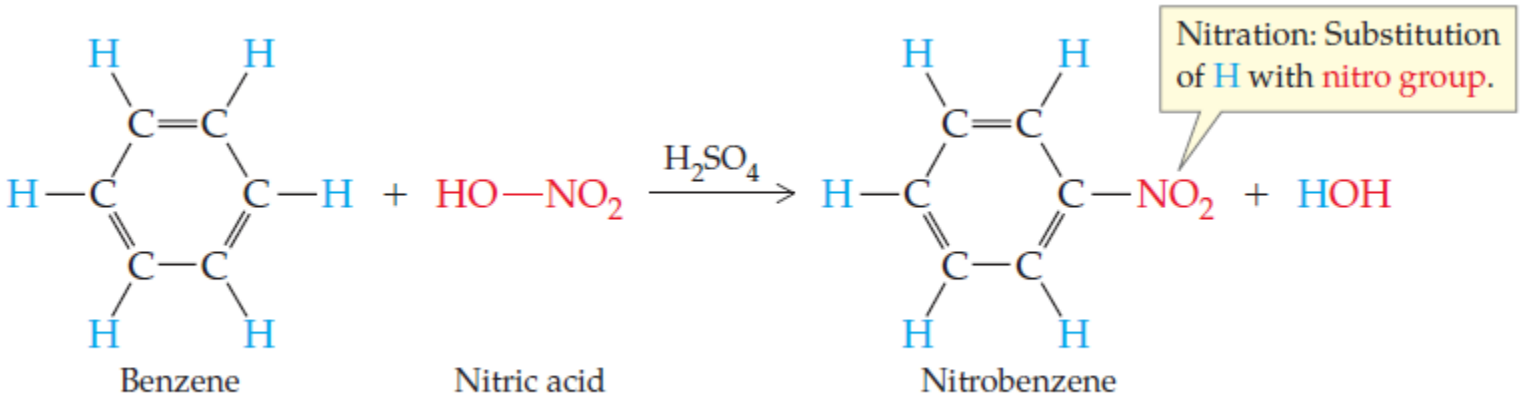


13.10 Reactions of aromatic compounds

Nitratie
Halogenatie
Sulfonatie

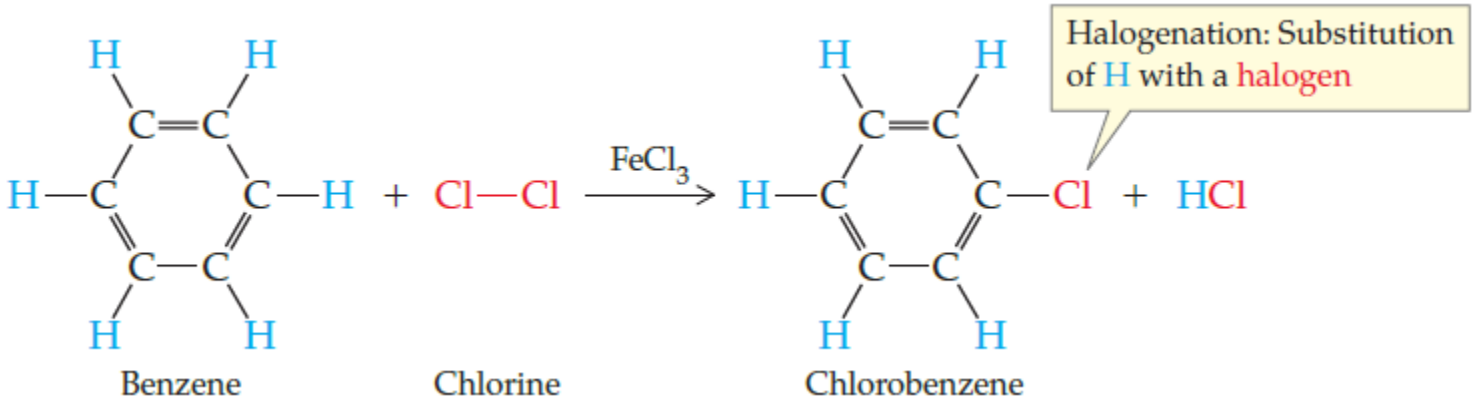
13.10 Reactions of aromatic compounds

Nitratie



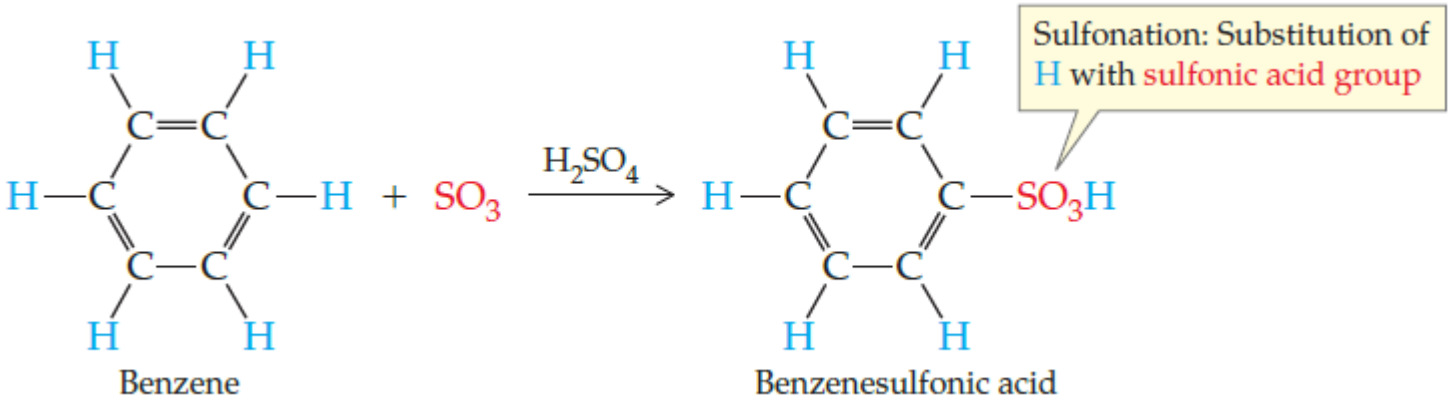
13.10 Reactions of aromatic compounds

Halogenatie



13.10 Reactions of aromatic compounds

Sulfonatie



Huiswerk

Maken alle opdrachten H13
t/m 13.23
Zelf nakijken (volgende week vragen stellen)

Oefentoets maken (volgende week nabespreken)

Bronnen

Afbeeldingen afkomstig van:

- McMurry - Fundamentals of general, organic, and biological chemistry. 7th edition, uitgever: Pearson.
  - Veplicht boek boekenlijst opleiding