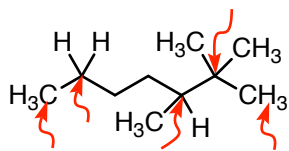
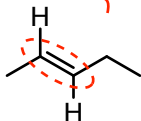


Important Families of Organic Compounds (Functional Groups)

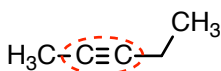
Alkanes only C-C and C-H



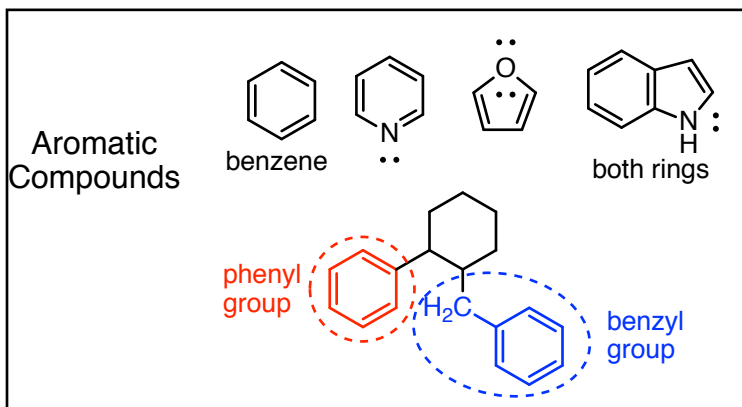
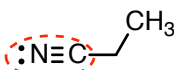
Alkenes C=C



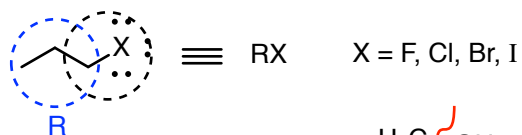
Alkynes C≡C



Nitriles C≡N:



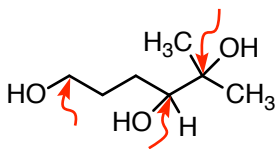
Alkyl halides (haloalkanes)



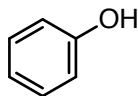
1°, 2°, 3°

Alcohols

R-OH



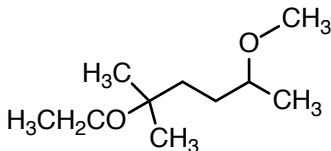
Phenol



Ethers

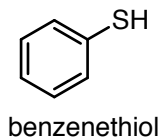
R-O-R¹

R, R ≠ H
R = R¹ or R ≠ R¹



Thiols

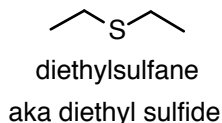
R-SH



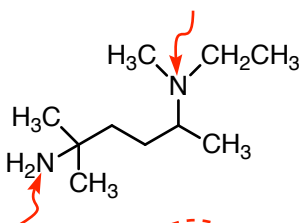
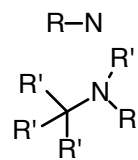
Sulfides

R-S-R¹

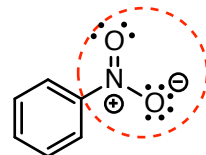
R, R ≠ H
R = R¹ or R ≠ R¹



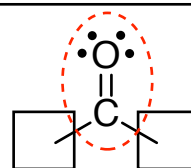
Amines



Nitro groups R-NO₂

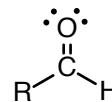


Carbonyl

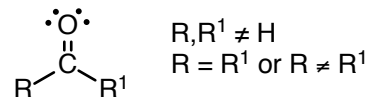


Carbonyl containing functional Groups:

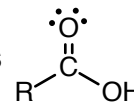
Aldehydes



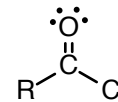
Ketones



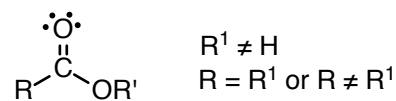
Carboxylic acids



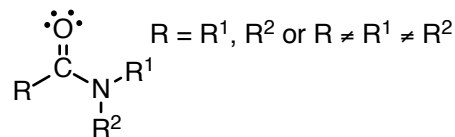
Acid chlorides



Esters

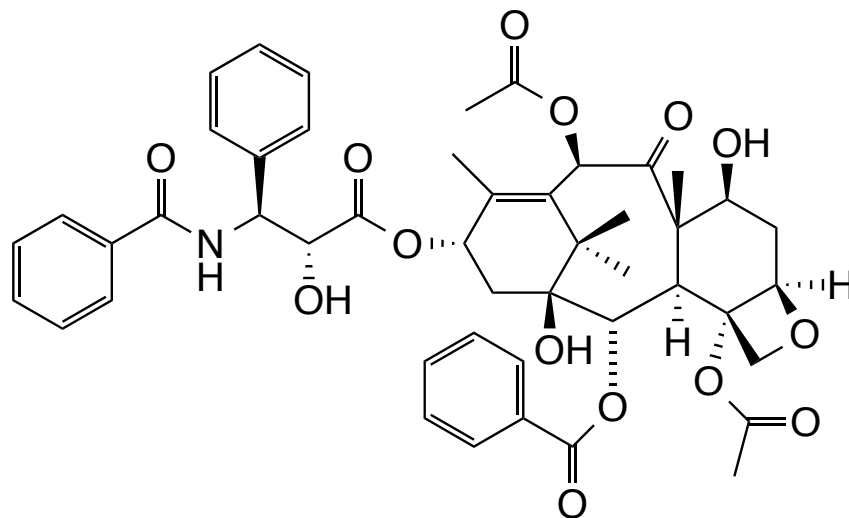


Amides



Nitriles

R-C≡N



Taxol® (paclitaxel)
(Holton and Nicolaou (independently), 1994)