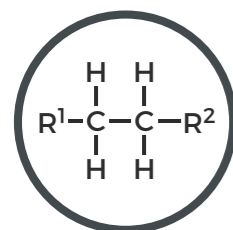


# Functional groups in organic chemistry

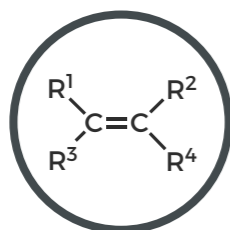
Functional groups are the characteristic groups in organic molecules that give them their reactivity. In the formulae below, R represents the rest of the molecule and X represents any halogen atom.

● Hydrocarbons  
 ● Halogen-containing groups  
 ● Oxygen-containing groups  
 ● Nitrogen-containing groups  
 ● Sulfur-containing groups  
 ● Phosphorus-containing groups



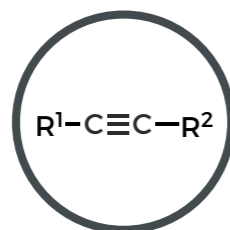
**Alkane**

Naming: -ane  
e.g. ethane



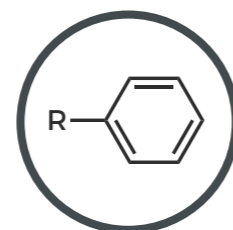
**Alkene**

Naming: -ene  
e.g. ethene



**Alkyne**

Naming: -yne  
e.g. ethyne



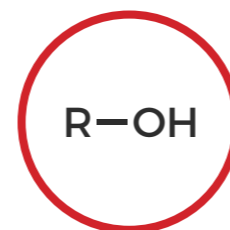
**Arene**

Naming: -yl benzene  
e.g. ethyl benzene



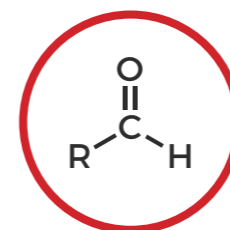
**Haloalkane**

Naming: halo-  
e.g. chloroethane



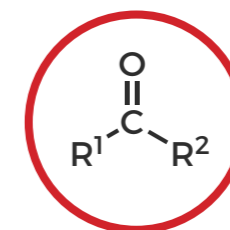
**Alcohol**

Naming: -ol  
e.g. ethanol



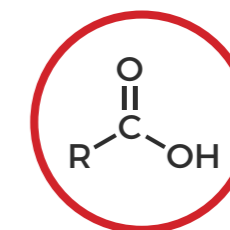
**Aldehyde**

Naming: -al  
e.g. ethanal



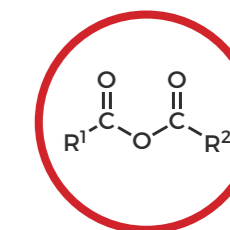
**Ketone**

Naming: -one  
e.g. propanone



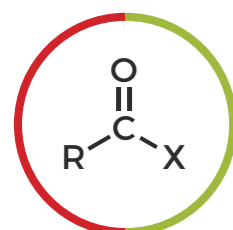
**Carboxylic acid**

Naming: -oic acid  
e.g. ethanoic acid



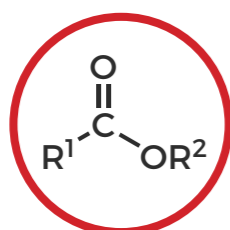
**Acid anhydride**

Naming: -oic anhydride  
e.g. ethanoic anhydride



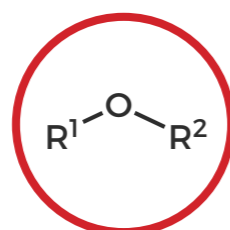
**Acyl halide**

Naming: -oyl halide  
e.g. ethanoyl chloride



**Ester**

Naming: -yl -oate  
e.g. ethyl ethanoate



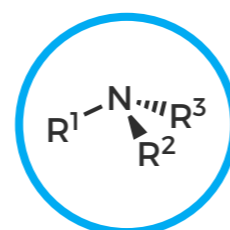
**Ether**

Naming: -oxy -ane  
e.g. methoxyethane



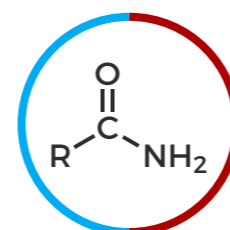
**Epoxide**

Naming: -ene oxide  
e.g. ethene oxide



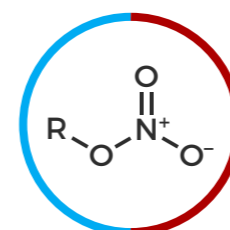
**Amine**

Naming: -amine  
e.g. ethanamine



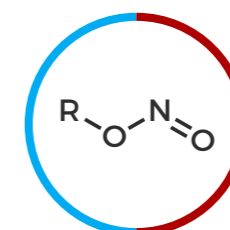
**Amide**

Naming: -amide  
e.g. ethanamide



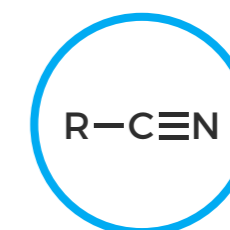
**Nitrate**

Naming: -yl nitrate  
e.g. ethyl nitrate



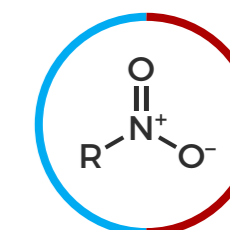
**Nitrite**

Naming: -yl nitrite  
e.g. ethyl nitrite



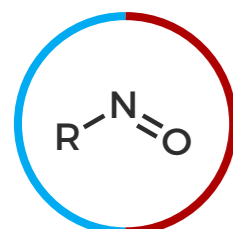
**Nitrile**

Naming: -nitrile  
e.g. ethanenitrile



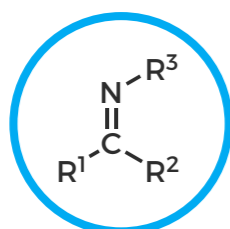
**Nitro**

Naming: nitro-  
e.g. nitromethane



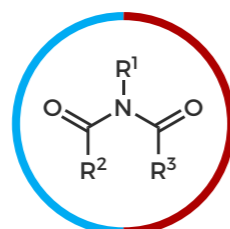
**Nitroso**

Naming: nitroso-  
e.g. nitrosoethane



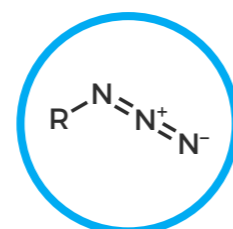
**Imine**

Naming: -imine  
e.g. ethanimine



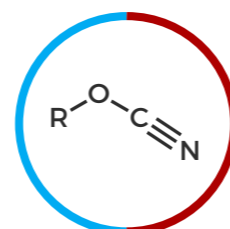
**Imide**

Naming: -imide  
e.g. succinimide



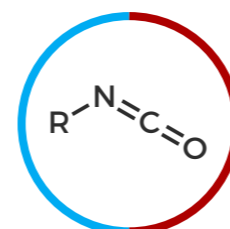
**Azide**

Naming: -yl azide  
e.g. phenylazide



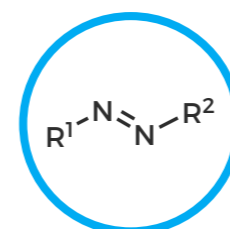
**Cyanate**

Naming: -yl cyanate  
e.g. methyl cyanate



**Isocyanate**

Naming: -yl isocyanate  
e.g. methyl isocyanate



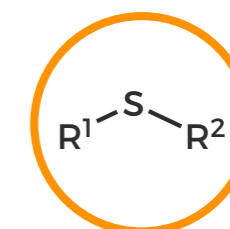
**Azo compound**

Naming: azo-  
e.g. azoethane



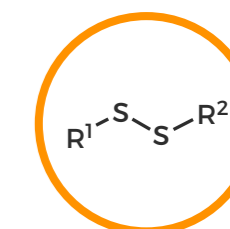
**Thiol**

Naming: -thiol  
e.g. methanethiol



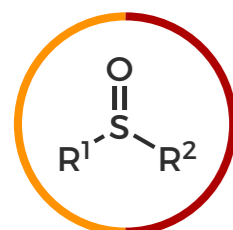
**Sulfide**

Naming: sulfide  
e.g. dimethyl sulfide



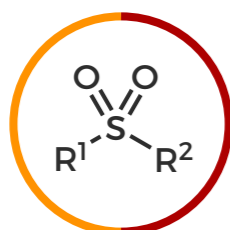
**Disulfide**

Naming: disulfide  
e.g. dimethyl disulfide



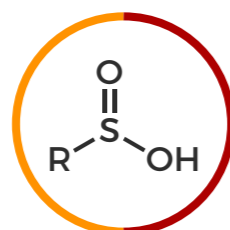
**Sulfoxide**

Naming: sulfoxide  
e.g. dimethyl sulfoxide



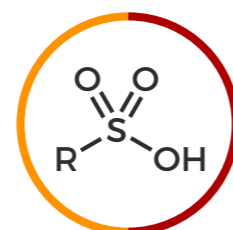
**Sulfone**

Naming: sulfone  
e.g. dimethyl sulfone



**Sulfinic acid**

Naming: -sulfinic acid  
e.g. benzenesulfinic acid



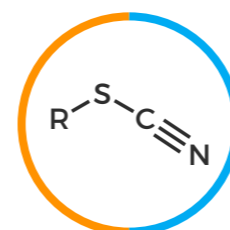
**Sulfonic acid**

Naming: -sulfonic acid  
e.g. benzenesulfonic acid



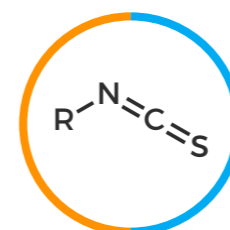
**Sulfonate ester**

Naming: -yl sulfonate  
e.g. methylmethanesulfonate



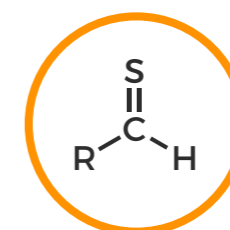
**Thiocyanate**

Naming: thiocyanate  
e.g. ethyl thiocyanate



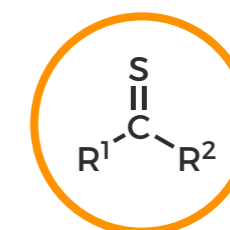
**Isothiocyanate**

Naming: isothiocyanate  
e.g. ethyl isothiocyanate



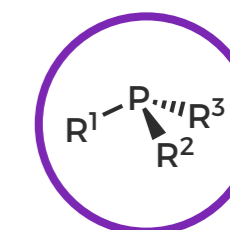
**Thial**

Naming: -thial  
e.g. ethanethial



**Thio ketone**

Naming: -thione  
e.g. propanethione



**Phosphine**

Naming: phosphane  
e.g. methylphosphane