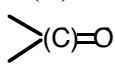


Ordering of functional groups

Some have asked what I am talking about then I mention a “priority group”. In IUPAC nomenclature, functional groups are ranked in a specific order. The order of the ranking is somewhat linked to the chemistry of the compounds. This is used when there are multiple functional groups on one compound (very common). In finding the parent chain and determining the suffix for the name, the group of the highest priority is used. That group is used to name the parent compound and all other functional groups are named as substituents.

Substitutive name prefixes and suffixes for selected organic functional groups

(Arranged in descending order of preference for citation as suffixes)

Class	Formula or Group ^a	Prefix ^b	Suffix ^c
Carboxylic acids	—COOH	Carboxy	-carboxylic acid
	—(C)OH)	—	-oic acid
Esters	—COOR	R ^d -oxycarbonyl	R ^d ...-carboxylate
Amides	—CO—NH ₂	aminocarbonyl or carbamoyl	-carboxamide
	—(C)O—NH ₂	—	-amide
Aldehydes	—CHO	formyl	-carbaldehyde
	—(C)HO	oxo	-al
Keytones		oxo	-one
Alcohol	—OH	hydroxy	-ol
Phenol	—OH	hydroxy	-ol
Thiols	—SH	sulfanyl	-thiol
Amines	—NH ₂	amino or azanyl	-amine
Ethers	—OR	R ^d -oxy	—
Sulfides (thioether)	—SR	R ^d -sulfamyl	—

^a C in parentheses is included in the stem of the parent chain and not in the prefix or suffix.

^b Functional group is treated as a substituent.

^c Functional group is part of the parent compound; suffix is added to the name of the corresponding hydrocarbon.

^d R is alkyl, aryl, etc; when R is part of a prefix, the name is the R group is written as part of the prefix name without a hyphen (except in locants).