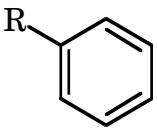
Common Functional Groups in Organic Molecules

General Formula	Name	General Formula	Name
$R-CH_2-H$	Alkane	$R-\overset{\overset{O}{\|\|}}{C}-H$	Aldehyde
$R-CH=CH_2$	Alkene	$R-\overset{\overset{O}{\|\|}}{C}-R$	Ketone
$R-C\equiv CH$	Alkyne	$R-\overset{\overset{O}{\|\|}}{C}-OH$	Carboxylic acid
	Aromatic	$R-\overset{\overset{O}{\|\|}}{C}-O-R$	Ester
$R-NH_2$	1° Amine	$R-\overset{\overset{O}{\|\|}}{C}-NH_2$	1° Amine
$R-\overset{\overset{R}{\|}}{N}H$	2° Amine	$R-\overset{\overset{O}{\|\|}}{C}-\overset{\overset{R}{\|}}{N}H$	2° Amine
$R-\overset{\overset{R}{\|}}{\underset{\underset{R}{\|}}{N}}$	3° Amine	$R-\overset{\overset{O}{\|\|}}{C}-\overset{\overset{R}{\|}}{\underset{\underset{R}{\|}}{N}}$	3° Amine
$R-CH_2-X$	1° Alkyl halide		
$R-\overset{\overset{R}{\|}}{C}H-X$	2° Alkyl halide	$R-\overset{\overset{O}{\|\|}}{C}-X$	Acid halide (acyl halide)
$R-\overset{\overset{R}{\|}}{\underset{\underset{R}{\|}}{C}}-X$	3° Alkyl halide		
$R-CH_2-OH$	1° Alcohol		
$R-\overset{\overset{R}{\|}}{C}H-OH$	2° Alcohol	$R-\overset{\overset{O}{\|\|}}{C}-O-\overset{\overset{O}{\|\|}}{C}-R$	Acid anhydride
$R-\overset{\overset{R}{\|}}{\underset{\underset{R}{\|}}{C}}-OH$	3° Alcohol		
$R-O-R$	Ether	$R-C\equiv N$	Nitrile