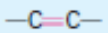
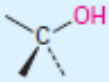
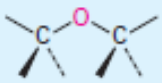
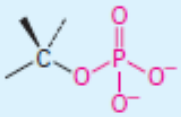
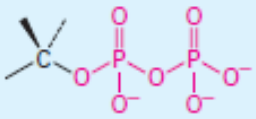
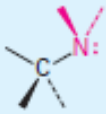
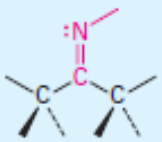
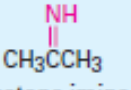
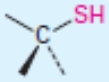
Organic Chemistry

Common Function Groups

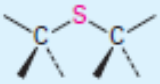
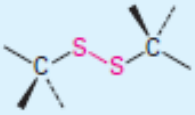
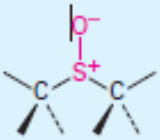
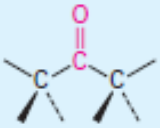
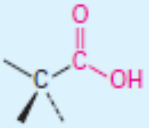
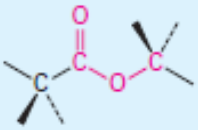
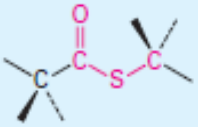
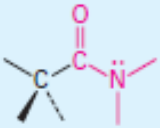
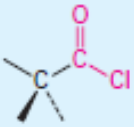
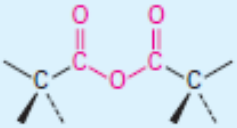
Structures of Some Common Functional Groups

Name	Structure*	Name ending	Example
Alkene (double bond)		*-ene*	$H_2C{=}CH_2$ Ethene
Alkyne (triple bond)		*-yne*	$HC{\equiv}CH$ Ethyne
Arene (aromatic ring)		None	 Benzene
Halide	 (X = F, Cl, Br, I)	None	CH_3Cl Chloromethane
Alcohol		*-ol*	CH_3OH Methanol
Ether		*ether*	CH_3OCH_3 Dimethyl ether
Monophosphate		*phosphate*	$CH_3OPO_3^{2-}$ Methyl phosphate
Diphosphate		*diphosphate*	$CH_3OP_2O_6^{3-}$ Methyl diphosphate
Amine		*-amine*	CH_3NH_2 Methylamine
Imine (Schiff base)		None	 Acetone imine
Nitrile		*-nitrile*	$CH_3C{\equiv}N$ Ethanenitrile
Thiol		*-thiol*	CH_3SH Methanethiol

*The bonds whose connections aren't specified are assumed to be attached to carbon or hydrogen atoms in the rest of the molecule.

Organic Chemistry

Common Function Groups

Name	Structure*	Name ending	Example
Sulfide		*sulfide*	CH_3SCH_3 Dimethyl sulfide
Disulfide		*disulfide*	CH_3SSCH_3 Dimethyl disulfide
Sulfoxide		*sulfoxide*	$CH_3S(=O)CH_3$ Dimethyl sulfoxide
Aldehyde		*-al*	CH_3CHO Ethanal
Ketone		*-one*	CH_3COCH_3 Propanone
Carboxylic acid		-oic acid	CH_3COOH Ethanoic acid
Ester		*-oate*	CH_3COOCH_3 Methyl ethanoate
Thioester		*-thioate*	CH_3COSCH_3 Methyl ethanethioate
Amide		*-amide*	CH_3CONH_2 Ethanamide
Acid chloride		*-oyl chloride*	CH_3COCl Ethanoyl chloride
Carboxylic acid anhydride		*-oic anhydride*	$CH_3CO(O)COCH_3$ Ethanoic anhydride

*The bonds whose connections aren't specified are assumed to be attached to carbon or hydrogen atoms in the rest of the molecule.