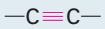
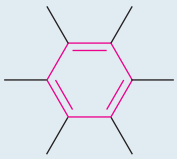
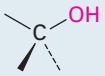
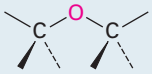
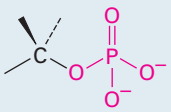
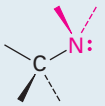
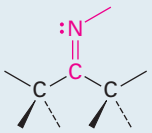
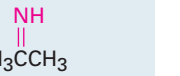
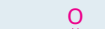
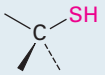
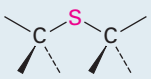
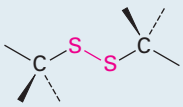
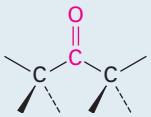
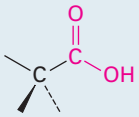
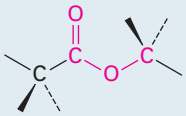
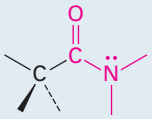
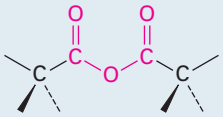
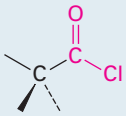
Index

The boldfaced references refer to pages where terms are defined.

Structures of Some Common Functional Groups

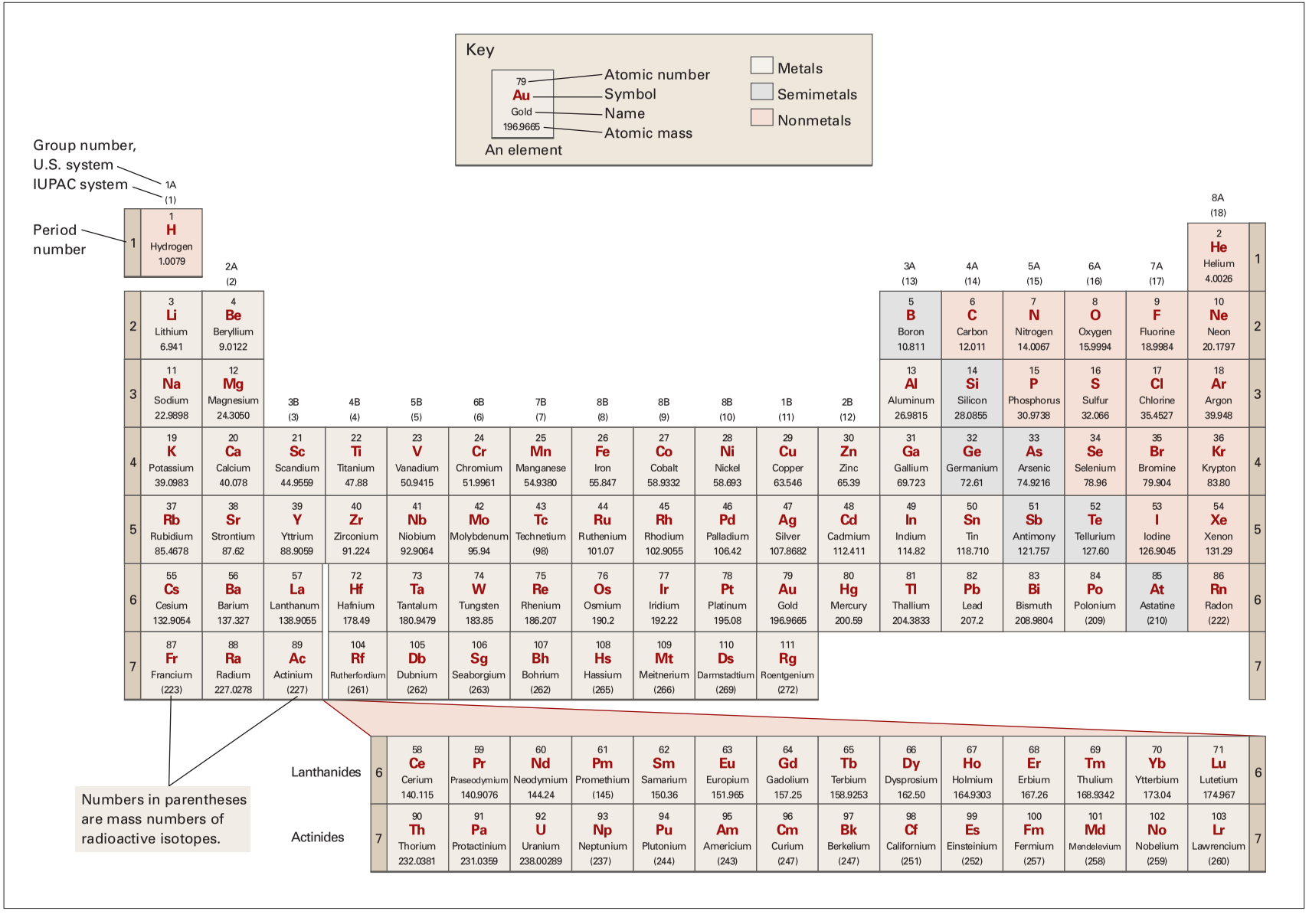
Name	Structure*	Name ending	Example
Alkene (double bond)		*-ene*	$H_2C{=}CH_2$ Ethene
Alkyne (triple bond)		*-yne*	$HC{\equiv}CH$ Ethyne
Arene (aromatic ring)		None	 Benzene
Halide	 (X = F, Cl, Br, I)	None	CH_3Cl Chloromethane
Alcohol		*-ol*	CH_3OH Methanol
Ether		*ether*	CH_3OCH_3 Dimethyl ether
Monophosphate		*phosphate*	$CH_3OPO_3^{2-}$ Methyl phosphate
Amine		*-amine*	CH_3NH_2 Methylamine
Imine (Schiff base)		None	 Acetone imine
Nitrile		*-nitrile*	$CH_3C{\equiv}N$ Ethanenitrile
Nitro		None	CH_3NO_2 Nitromethane
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.

Name	Structure*	Name ending	Example
Sulfide		*sulfide*	CH_3SCH_3 Dimethyl sulfide
Disulfide		*disulfide*	CH_3SSCH_3 Dimethyl disulfide
Carbonyl			
Aldehyde		*-al*	CH_3CH Ethanal
Ketone		*-one*	CH_3CCH_3 Propanone
Carboxylic acid		*-oic acid*	CH_3COH Ethanoic acid
Ester		*-oate*	CH_3COCH_3 Methyl ethanoate
Amide		*-amide*	CH_3CNH_2 Ethanamide
Carboxylic acid anhydride		*-oic anhydride*	CH_3COCCH_3 Ethanoic anhydride
Carboxylic acid chloride		*-oyl chloride*	CH_3CCl Ethanoyl chloride

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

Periodic Table of the Elements



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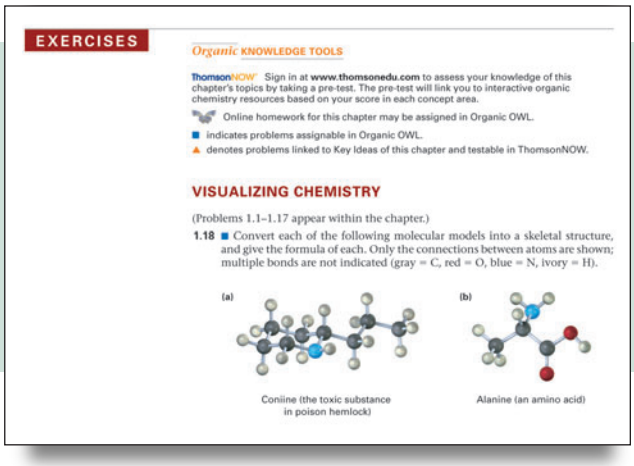
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(Problems 1.1–1.17 appear within the chapter.)

1.18 ■ Convert each of the following molecular models into a skeletal structure, and give the formula of each. Only the connections between atoms are shown; multiple bonds are not indicated (gray = C, red = O, blue = N, ivory = H).

(a) Coniine (the toxic substance in poison hemlock)

(b) Alanine (an amino acid)

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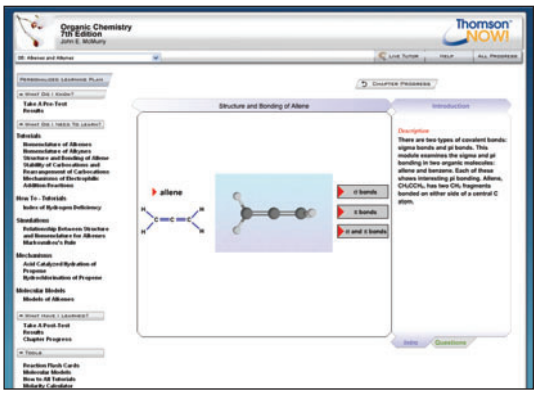

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