

Index

A

Acid–Base Titration

14.6: Acid–Base Titration

addition reaction

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

Aliphatic hydrocarbons

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

alkanes

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

alkenes

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

alkynes

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

ammonium ion

14.10: Buffers- Solutions that Resist pH Change

anion

4.7: Ions - Losing and Gaining Electrons

aromatic

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

aromatic hydrocarbons

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

atomic mass unit

4.4: The Properties of Protons, Neutrons, and Electrons

atomic theory

4.2: Indivisible - The Atomic Theory

autoionization of water

14.8: Water - Acid and Base in One

B

background radiation

17.5: Natural Radioactivity and Half-Life

balanced chemical equation

8.3: Making Molecules- Mole-to-Mole Conversions

Balancing a Chemical Equation

7.4: How to Write Balanced Chemical Equations

Bends

13.4: Solutions of Gases in Water

Bohr model

9.4: The Bohr Model - Atoms with Orbits

boiling point elevation

13.9: Freezing Point Depression and Boiling Point Elevation

Boyle's law

11.4: Boyle's Law - Pressure and Volume

buffer

14.10: Buffers- Solutions that Resist pH Change

buffer capacity

14.10: Buffers- Solutions that Resist pH Change

C

cation

4.7: Ions - Losing and Gaining Electrons

Charles's Law

11.5: Charles's Law- Volume and Temperature

chemical change

3.6: Changes in Matter - Physical and Chemical Changes

chemical property

3.5: Differences in Matter- Physical and Chemical Properties

coefficient

8.3: Making Molecules- Mole-to-Mole Conversions

Coefficients and Subscripts

7.4: How to Write Balanced Chemical Equations

colligative properties

13.9: Freezing Point Depression and Boiling Point Elevation

collision theory

15.2: The Rate of a Chemical Reaction

combined gas law

11.6: The Combined Gas Law- Pressure, Volume, and Temperature

Combustion Reaction

7.9: Oxidation–Reduction Reactions

complete ionic equation

7.7: Writing Chemical Equations for Reactions in Solution- Molecular, Complete Ionic, and Net Ionic Equations

compound

3.4: Classifying Matter According to Its Composition

condensation

12.4: Evaporation and Condensation

Condensed Structural Formula

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

Conservation of Energy

3.9: Energy and Chemical and Physical Change

conservation of mass

3.7: Conservation of Mass - There is No New Matter

corrosion

16.8: Corrosion- Undesirable Redox Reactions

crisscross method

5.5: Writing Formulas for Ionic Compounds

D

Dalton's law of partial pressures

11.9: Mixtures of Gases - Why Deep-Sea Divers Breathe a Mixture of Helium and Oxygen

Democritus

4.1: Cutting Aluminum until you get Atoms

4.2: Indivisible - The Atomic Theory

density

2.9: Density

dilution

13.7: Solution Dilution

Dimensional Analysis

2.6: Problem Solving and Unit Conversions

E

electrolysis

16.7: Electrolysis- Using Electricity to Do Chemistry

electromagnetic spectrum

9.3: The Electromagnetic Spectrum

electron

4.4: The Properties of Protons, Neutrons, and Electrons

electronegativity

10.8: Electronegativity and Polarity - Why Oil and Water Do not Mix

element

3.4: Classifying Matter According to Its Composition

empirical formula

6.9: Calculating Molecular Formulas for Compounds

empirical formula mass

6.9: Calculating Molecular Formulas for Compounds

endothermic process

3.9: Energy and Chemical and Physical Change

evaporation

12.4: Evaporation and Condensation

Exceptions to the Octet Rule

10.5: Writing Lewis Structures for Covalent Compounds

exothermic process

3.9: Energy and Chemical and Physical Change

F

formula mass

5.11: Formula Mass - The Mass of a Molecule or Formula Unit

formula unit

8.5: Stoichiometry

freezing

12.5: Melting, Freezing, and Sublimation

freezing point depression

13.9: Freezing Point Depression and Boiling Point Elevation

G

Geiger counter

17.4: Detecting Radioactivity

H

Heat capacity

3.11: Temperature Changes - Heat Capacity

Heat Capacity Calculations

3.12: Energy and Heat Capacity Calculations

hydrocarbons

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

hydrogenation reaction

18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon

hydrolysis

14.5: Reactions of Acids and Bases

hypothesis

1.6: Hypothesis, Theories, and Laws

I

ions

4.7: Ions - Losing and Gaining Electrons

isotopes

4.8: Isotopes - When the Number of Neutrons Varies

L

law

1.6: Hypothesis, Theories, and Laws

M

matter

[3.2: What is Matter?](#)

melting

[12.5: Melting, Freezing, and Sublimation](#)

melting point

[12.1: Interactions between Molecules](#)

mixture

[3.4: Classifying Matter According to Its Composition](#)

molarity

[13.6: Specifying Solution Concentration- Molarity](#)

mole ratio

[8.5: Stoichiometry](#)

molecular formula

[6.9: Calculating Molecular Formulas for Compounds](#)

N

net ionic equation

[7.7: Writing Chemical Equations for Reactions in Solution- Molecular, Complete Ionic, and Net Ionic Equations](#)

neutralization reaction

[14.5: Reactions of Acids and Bases](#)

neutron

[4.4: The Properties of Protons, Neutrons, and Electrons](#)

nylon

[18.17: Polymers](#)

O

osmosis

[13.10: Osmosis](#)

osmotic pressure

[13.10: Osmosis](#)

oxidation number

[7.9: Oxidation–Reduction Reactions](#)

P

pascal (unit)

[11.3: Pressure - The Result of Constant Molecular Collisions](#)

pH scale

[14.9: The pH and pOH Scales - Ways to Express Acidity and Basicity](#)

Physical change

[3.6: Changes in Matter - Physical and Chemical Changes](#)

physical property

[3.5: Differences in Matter- Physical and Chemical Properties](#)

pOH

[14.9: The pH and pOH Scales - Ways to Express Acidity and Basicity](#)

polarity

[10.8: Electronegativity and Polarity - Why Oil and Water Do not Mix](#)

polyethylene

[18.17: Polymers](#)

polymerization

[18.17: Polymers](#)

polymers

[18.17: Polymers](#)

Potential Energy

[3.8: Energy](#)

precipitate

[7.6: Precipitation Reactions](#)

Precipitation reaction

[7.6: Precipitation Reactions](#)

proton

[4.4: The Properties of Protons, Neutrons, and Electrons](#)

R

radiation biology

[17.10: The Effects of Radiation on Life](#)

redox reaction

[7.9: Oxidation–Reduction Reactions](#)

relative abundances

[4.9: Atomic Mass - The Average Mass of an Element's Atoms](#)

resonance

[10.6: Resonance - Equivalent Lewis Structures for the Same Molecule](#)

rounding

[2.4: Significant Figures in Calculations](#)

S

sacrificial anode

[16.8: Corrosion- Undesirable Redox Reactions](#)

saturated

[18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon](#)

saturated hydrocarbons

[18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon](#)

scientific notation

[2.2: Scientific Notation - Writing Large and Small Numbers](#)

scientific method

[1.3: The Scientific Method - How Chemists Think](#)

semipermeable membrane

[13.10: Osmosis](#)

Separation of Mixtures

[3.6: Changes in Matter - Physical and Chemical Changes](#)

significant figures

[2.3: Significant Figures - Writing Numbers to Reflect Precision](#)

[2.4: Significant Figures in Calculations](#)

Solubility of gases

[13.4: Solutions of Gases in Water](#)

solute

[13.2: Solutions - Homogeneous Mixtures](#)

Solution Stoichiometry

[13.8: Solution Stoichiometry](#)

solvent

[13.2: Solutions - Homogeneous Mixtures](#)

specific heat capacity

[3.11: Temperature Changes - Heat Capacity](#)

spectator ions

[7.7: Writing Chemical Equations for Reactions in Solution- Molecular, Complete Ionic, and Net Ionic Equations](#)

Stability of Isotopes

[4.8: Isotopes - When the Number of Neutrons Varies](#)

Stock system

[5.7: Naming Ionic Compounds](#)

stoichiometry

[8.5: Stoichiometry](#)

structural formulas

[18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon](#)

sublimation

[12.5: Melting, Freezing, and Sublimation](#)

surface tension

[12.3: Intermolecular Forces in Action- Surface Tension and Viscosity](#)

T

temperature

[3.10: Temperature - Random Motion of Molecules and Atoms](#)

theory

[1.6: Hypothesis, Theories, and Laws](#)

U

unit conversions

[2.6: Problem Solving and Unit Conversions](#)

units of energy

[3.8: Energy](#)

unsaturated

[18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon](#)

unsaturated hydrocarbons

[18.4: Hydrocarbons- Compounds Containing Only Carbon and Hydrocarbon](#)

V

valence shell electron pair repulsion theory

[10.7: Predicting the Shapes of Molecules](#)

viscosity

[12.3: Intermolecular Forces in Action- Surface Tension and Viscosity](#)

VSEPR

[10.7: Predicting the Shapes of Molecules](#)

W

Water

[12.8: Water - A Remarkable Molecule](#)

work

[3.8: Energy](#)