

Index

- acceleration, 61
accuracy, 35, 37
acid, 8, 119, 165, 273, 404, 494, 495, 498, 501, 506, 513, 521
air, 130, 131, 141, 207, 234, 363, 384, 452, 520
alkali, 242
alkali metal, 242
alkaline, 242
alkaline earth metal, 242
alpha decay, 180
alpha particle, 180, 182, 195
amphoteric, 495
amplitude, 205
assumptions, 133
atom, 71, 72, 107, 118, 154, 155, 157, 158, 159, 160, 161, 164, 165, 173, 186, 187, 188, 191, 198, 203, 205, 206, 212, 215, 220, 226, 228, 229, 236, 244, 245, 246, 248, 251, 252, 253, 256, 257, 258, 263, 264, 276, 277, 280, 281, 282, 283, 284, 286, 287, 289, 290, 291, 292, 295, 296, 303, 306, 308, 309, 310, 320, 322, 380, 387, 388, 400, 401, 402
atomic mass, 150, 154, 155, 173, 174, 235, 236, 237, 238, 320, 321, 322, 329
atomic number, 155, 156, 183, 219, 237, 238
atomic radius, 251
band of stability, 179, 180, 181
base, 8, 70, 71, 72, 381, 404, 494, 495, 498, 501, 506, 513, 521
basic, 81, 159, 356, 498, 499
beta decay
 beta minus, 180
 beta plus, 181
beta particle, 182
binding energy, 186, 187
Bohr model, 202
boiling, 8, 105, 106, 108, 114, 117, 122, 144, 192, 241, 242, 243, 314, 360, 361, 362, 521
boiling point, 8, 106, 108, 117, 122, 144, 241, 242, 243, 314, 360, 361, 362, 521
boiling point elevation, 360, 362, 521
bonding, 17, 256, 280, 295, 296
boson, 171
buffer, 506
burning, 106, 108
calorimeter, 29, 30, 42
calorimetry, 439, 440
catalyst, 478
cell, 364, 407, 408
charge, 72, 82, 122, 154, 155, 156, 159, 160, 167, 170, 171, 180, 198, 229, 238, 245, 252, 253, 256, 259, 260, 261, 263, 266, 267, 268, 271, 284, 287, 303, 308, 309, 314, 380, 400, 402, 403, 404, 521
chemical bond, 107, 256, 280, 306, 313, 396, 461
chemical equilibrium, 481
chemical formula, 107, 141, 165, 258, 263, 264, 267, 276, 325, 328, 329, 335, 336, 360, 387
chemical reaction, 8, 17, 18, 29, 42, 120, 123, 154, 158, 211, 226, 228, 321, 348, 370, 374, 375, 379, 387, 395, 396, 401, 410, 415, 416, 419, 457, 458, 463, 476, 477, 478, 482
chemical symbol, 156
circuit, 195
collision
 elastic, 128
color, 168
combination, 10, 19, 71, 138, 165, 205, 458, 506
combined gas law, 132, 133
combustion, 375, 379, 401, 469, 471, 472
composition, 8, 157, 165, 328
compound, 73, 93, 95, 96, 106, 107, 109, 126, 141, 155, 158, 165, 236, 258, 259, 260, 261, 264, 266, 267, 268, 273, 275, 280, 287, 313, 314, 320, 322, 328, 329, 330, 331, 334, 335, 347, 349, 360, 365, 374, 375, 380, 401, 402, 403, 410, 411, 459, 460, 461, 463, 464, 468, 470, 482, 495, 497
concentration, 45, 82, 96, 97, 345, 354, 362, 364, 365, 479, 483, 499, 500, 509, 515
conjugate, 495
Cornell Notes, 9
current, 193
debye, 311
decomposition, 374, 401
density, 8, 44, 82, 83, 84, 85, 87, 94, 95, 97, 106, 108, 241, 510, 521
dipole, 311, 314, 315, 316, 341, 344, 456
dipole moment, 311, 314, 456
direction, 35, 36, 435
dissolve, 8, 27, 45, 107, 243, 316, 340, 341, 342, 344, 345, 347, 351, 354, 355, 360, 361, 362, 363, 371, 384, 404, 479, 494
distance, 23, 166, 179, 182
double displacement, 375
double replacement, 375, 379, 380, 381
effusion, 148, 150
electrolysis, 385
electrolytic cell, 408
electromagnet, 193
electron, 154, 157, 158, 159, 161, 162, 180, 181, 184, 186, 198, 202, 203, 205, 206, 210, 212, 213, 216, 220, 221, 222, 226, 227, 228, 229, 230, 231, 242, 244, 245, 246, 280, 281, 282, 284, 286, 287, 290, 291, 292, 296, 401, 514
electron capture, 181
electronegativity, 248, 249, 257, 258, 302, 303, 304, 305, 306, 314
electrostatic, 8, 103, 206
element, 9, 106, 107, 109, 118, 154, 155, 156, 158, 164, 173, 210, 211, 213, 216, 220, 222, 230, 234, 235, 236, 239, 244, 245, 248, 249, 253, 258, 264, 266, 267, 268, 304, 314, 328, 329, 374, 380, 389, 390, 401, 402, 403, 461, 515
empirical formula, 328, 329, 330, 331
energy, 128, 161, 166, 182, 186, 187, 193, 194, 195, 202, 434, 435, 436, 438, 445, 454
 kinetic, 434, 435, 454
enthalpy, 8, 342, 452, 455, 456, 458, 459, 460, 461, 468, 470, 476, 519, 521
entropy, 8, 342, 452, 455, 457, 458, 519, 521
equilibrium, 18, 82, 454, 481, 482, 483, 488, 489, 498, 500
expand, 438, 444
fermion, 170
fission, 191, 192
fluid, 111, 122, 371
force, 166, 171, 179, 180, 186, 202

- formula, 14, 29, 38, 61, 83, 107, 119, 129, 138, 141, 149, 150, 165, 212, 258, 260, 261, 263, 264, 265, 267, 268, 271, 276, 287, 304, 311, 314, 320, 325, 328, 329, 330, 331, 335, 336, 360, 365, 403, 512, 521
- free energy, 8, 457, 521
Gibbs free energy, 457, 458
- fuse, 193
- fusion, 110, 111, 112, 193, 445, 446, 521
- galvanic cell, 407, 408
- gamma ray, 182, 194, 195
- gas, 4, 8, 86, 87, 98, 103, 104, 105, 110, 111, 113, 115, 117, 119, 120, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 137, 138, 139, 141, 143, 145, 148, 149, 158, 222, 226, 229, 245, 246, 314, 320, 325, 345, 348, 362, 363, 365, 371, 438, 444, 445, 447, 456, 461, 512, 521
- gas constant, 86, 87, 126, 138, 149, 365, 521
- gravity, 166
- half-life, 188, 189, 195
- heat, 8, 13, 18, 29, 30, 32, 33, 42, 82, 87, 122, 124, 159, 187, 192, 193, 241, 245, 314, 342, 370, 371, 375, 384, 385, 434, 435, 436, 437, 438, 439, 440, 444, 445, 446, 447, 448, 453, 454, 456, 458, 460, 461, 463, 464, 466, 468, 469, 470, 471, 472, 476, 489, 521
- heat capacity, 314, 521
- heat of fusion, 445, 446, 521
- heat of vaporization, 445, 447, 521
- heating curve, 446, 447
- hydrocarbon, 331, 375, 379
- hydrogen bond, 314, 315, 316, 341
- hydroxide, 119, 265, 350, 511, 512, 513
- ideal gas law, 139
- inorganic, 18
- intermolecular force, 313, 314, 342, 344, 349
- ion, 155, 156, 157, 198, 229, 243, 245, 246, 249, 253, 256, 257, 260, 263, 264, 265, 266, 267, 268, 270, 271, 273, 284, 287, 314, 315, 316, 341, 344, 347, 348, 349, 374, 381, 384, 395, 402, 403, 461, 495, 512
- isotope, 173, 174, 183, 195
- Kelvin, 133, 139
- kinetic energy, 94, 123, 124, 138, 144, 148, 150, 345, 434, 435, 454, 456, 476, 479
- kinetic molecular theory, 103
- kinetics, 8, 18
- limiting reactant, 419, 420, 421, 422
- limiting reagent, 419
- liquid, 32, 33, 97, 104, 105, 109, 110, 111, 112, 113, 114, 115, 116, 117, 122, 123, 128, 144, 193, 243, 256, 314, 316, 345, 348, 361, 363, 371, 434, 444, 445, 446, 512
- mass defect, 186, 187
- mass number, 155, 156, 173, 174, 183
- matter, 4, 16, 17, 23, 81, 85, 104, 107, 109, 115, 118, 164, 282, 320, 391, 396, 404
- melt, 112, 193, 243
- metal, 13, 44, 87, 159, 195, 257, 266, 282, 304, 313, 314, 315, 374, 380, 384, 400, 403, 408, 416
- metathesis, 375
- metric system, 71, 74, 138
- mixture, 103, 106, 107, 108, 109, 149, 363
- molecule, 115, 117, 118, 144, 150, 155, 158, 235, 239, 275, 276, 282, 286, 289, 290, 291, 292, 303, 308, 309, 310, 311, 313, 314, 322, 328, 347, 362, 371, 387, 388, 390, 410, 456, 460
- momentum, 128, 434
- negative charge, 154, 159, 211, 253, 259, 260, 261, 266, 284, 303, 308, 309
- neutralization, 494
- neutralize, 195
- neutrino, 170
- neutron, 154, 162, 186, 191, 198, 514
- noble gas, 222, 226, 229, 243, 245, 246, 249
- nonmetal, 257, 266, 304, 313, 315
- non-metal, 240, 241, 257
- non-metal, 257
- non-metal, 280
- non-metal, 282
- non-metal, 374
- non-metal, 380
- nonpolar bond, 305
- nuclear, 118, 119, 120, 183, 186, 192, 193, 194, 198, 238, 252, 456
- nucleus, 154, 155, 157, 159, 160, 161, 162, 186, 191, 198, 203, 205, 212, 213, 245, 251, 252, 253, 291
- orbital, 157, 206, 212, 214, 216, 220, 221, 230, 231, 295, 296
- organic, 18, 258, 469
- osmosis, 364, 365
- osmotic pressure, 365, 521
- oxidation, 8, 400, 401, 402, 403, 404, 407, 408
- oxidation number, 8, 402, 403
- oxidation state, 402
- particle, 154, 159, 162, 198, 205, 211, 408, 456, 514
- percent error, 38
- percent yield, 8, 427, 428
- period, 71, 73, 211, 213, 239, 249
- periodic law, 237
- periodic table, 17, 107, 213, 216, 219, 220, 222, 226, 227, 229, 230, 236, 237, 238, 239, 242, 243, 249, 320, 322
- periodic trend, 8
- phase change, 444
- physical, 8, 18, 71, 81, 103, 104, 106, 107, 108, 115, 118, 164, 212, 236, 237, 239, 360, 385, 456
- plasma, 193, 444
- positive charge, 154, 159, 160, 195, 245, 252, 253, 259, 261, 266, 303, 308
- power, 78, 182, 189, 194
- precision, 35, 37, 39, 43, 47, 51, 452, 463, 468, 474
- pressure, 127, 130, 131, 132, 134, 139, 192, 438
- propagation, 191
- proton, 154, 162, 186, 191, 198, 514
- quantum, 18, 157, 161, 162, 202, 203, 205, 206, 210, 220
- quantum mechanics, 18
- quantum number, 161, 162, 206
- quark, 166, 171, 179, 180, 181
- radiation, 71, 72, 182, 194, 514
- radioactive, 183, 188, 192, 194, 195
- radioactive decay, 178, 179, 180, 181, 182, 183, 184, 188
- reactant, 29, 30, 374, 410, 415, 419, 420, 421, 422, 466, 479
- reaction, 8, 30, 42, 62, 118, 119, 164, 191, 192, 193, 321, 347, 348, 370, 371, 374, 375, 379, 380, 381, 384, 387, 388, 395, 396, 400, 401, 404, 407, 408, 410, 415, 416, 419, 420, 422, 427, 428, 457, 461, 463, 464, 466, 468, 469, 470, 471, 472, 474, 475, 476, 477, 478, 479, 481, 482, 483, 488, 494, 506
- reagent, 419
- redox, 401, 404, 407
- reduction, 8, 400, 401, 404, 407, 408, 521
- relative error, 37, 38, 41, 42, 44, 45, 62
- salt, 97, 107, 109, 361, 362, 408, 494

- scientific notation, 48, 51, 75, 77, 78, 79, 80
- significant figures, 14, 46, 47, 48, 51, 52, 54, 57, 81, 91, 93, 96, 104
- single displacement, 374
- single replacement, 374, 379, 380, 384, 401
- solid, 104, 105, 108, 109, 110, 111, 113, 115, 116, 122, 123, 128, 157, 198, 243, 256, 314, 334, 347, 361, 371, 396, 408, 434, 444, 445, 446, 512
- solubility, 340, 347, 350, 351
- soluble, 242, 243, 313, 340, 349
- solute, 313, 340, 341, 342, 344, 345, 347, 349, 351, 354, 355, 356, 360, 361, 362, 363, 364, 365
- solution, 11, 14, 45, 97, 107, 340, 341, 342, 345, 347, 348, 351, 354, 355, 356, 360, 361, 362, 363, 365, 371, 388, 395, 408, 416, 498, 499, 500, 506
- solvent, 108, 313, 314, 340, 341, 342, 344, 345, 349, 351, 354, 360, 361, 362, 363, 364, 497
- specific heat, 13, 29, 30, 42, 87, 314, 521
- specific heat capacity, 13, 29, 30, 42, 87, 437, 438, 439, 446, 447, 521
- spectrum, 200
- speed, 180, 181, 186, 191
- standard model, 168
- stoichiometry, 8, 18, 325, 410, 411, 412, 415, 416, 419, 421, 427, 428, 463, 466
- strong force, 166, 171, 179
- surroundings, 445, 453, 454
- synthesis, 374, 401
- system, 9, 11, 13, 16, 19, 26, 32, 35, 37, 46, 55, 59, 64, 70, 77, 81, 88, 93, 104, 106, 110, 434, 444, 445, 452, 453, 454, 463, 468
- temperature, 127, 130, 131, 132, 133, 134, 139, 195, 434, 435, 438, 439, 440, 441, 446, 447, 448, 453, 454
- theoretical yield, 427
- theory, 8, 11, 19, 22, 23, 123, 157, 158, 159, 160, 165, 289, 290, 365, 387, 474, 483
- thermal equilibrium, 454
- thermal expansion, 434
- thermometer, 40, 57, 434, 454
- uncertainty, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 49, 51, 52, 57, 58, 61, 62, 63, 66
- unit, 4, 38, 70, 71, 73, 74, 79, 82, 85, 88, 89, 90, 91, 93, 94, 95, 96, 138, 154, 177, 208, 311, 354, 415, 421
- units, 14, 17, 42, 55, 57, 70, 71, 72, 73, 81, 82, 86, 87, 88, 90, 93, 94, 104, 106, 110, 133, 138, 139, 149, 150, 322, 325, 438, 459, 463, 468
- valence, 228, 229, 230, 231, 236, 239, 241, 242, 243, 249, 257, 280, 286, 287
- valent, 229, 236, 245, 246, 257, 281, 282, 284, 296, 403
- vapor, 8, 110, 115, 117, 144, 360, 363, 371, 512
- velocity, 182
- VSEPR, 289, 290, 291, 292, 293, 296, 297
- water, 17, 27, 29, 30, 42, 44, 71, 96, 107, 108, 109, 112, 114, 119, 131, 144, 165, 192, 207, 234, 242, 243, 273, 310, 314, 316, 334, 335, 336, 344, 347, 348, 349, 351, 354, 355, 356, 360, 361, 362, 363, 364, 371, 380, 384, 385, 404, 408, 454, 494, 495, 497, 498, 500, 520
- wave, 162, 200, 205
- wavelength, 162
- weak force, 166, 179, 180
- weight, 57
- wire, 193
- work, 58, 59, 78, 180
- yield, 427, 428