

Periodic Table of Elements

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|---|--|---|---|---|--|---|---|--|--|---|--|---|--|--|--|---|---|--|---|--|---|---|--|---|--|---|--|---|--|--|--|--|---|--|--|--|---|---|---|---|---|--|---|--|--|---|---|--|--|
| hydrogen H 1 1.0080 ±1 1s ¹ | | | | | | | | | | | | | | | | | helium He 2 4.0026 - 1s ² | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| lithium Li 3 6.94 +1 [He]2s ¹ | beryllium Be 4 9.0122 +2 [He]2s ² | | | | | | | | | | | | | | | | | boron B 5 10.81 +3 [He]2s ² 2p ¹ | carbon C 6 12.011 +2±4 [He]2s ² 2p ² | nitrogen N 7 14.007 +2±3+4+5 [He]2s ² 2p ³ | oxygen O 8 15.999 -2 [He]2s ² 2p ⁴ | fluorine F 9 18.998 -1 [He]2s ² 2p ⁵ | neon Ne 10 20.180 - [He]2s ² 2p ⁶ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sodium Na 11 22.990 +1 [Ne]3s ¹ | magnesium Mg 12 24.305 +2 [Ne]3s ² | scandium Sc 21 44.956 +3 [Ar]4s ² 3d ¹ | titanium Ti 22 47.867 +2+3+4 [Ar]4s ² 3d ² | vanadium V 23 50.942 +2+3+4+5 [Ar]4s ² 3d ³ | chromium Cr 24 51.996 +2+3+4+6 [Ar]4s ¹ 3d ⁵ | manganese Mn 25 54.938 +2+3+4+6+7 [Ar]4s ² 3d ⁵ | iron Fe 26 55.845 +2+3+6 [Ar]4s ² 3d ⁶ | cobalt Co 27 58.933 +2+3 [Ar]4s ¹ 3d ⁷ | nickel Ni 28 58.693 +2+3 [Ar]4s ² 3d ⁸ | copper Cu 29 63.546 +1+2 [Ar]4s ¹ 3d ⁹ | zinc Zn 30 65.38 +2 [Ar]4s ² 3d ¹⁰ | gallium Ga 31 69.723 +3 [Ar]4s ² 3d ¹⁰ 4p ¹ | germanium Ge 32 72.630 +2+4 [Ar]4s ² 3d ¹⁰ 4p ² | arsenic As 33 74.922 ±3+5 [Ar]4s ² 3d ¹⁰ 4p ³ | selenium Se 34 78.971 -2+4+6 [Ar]4s ² 3d ¹⁰ 4p ⁴ | bromine Br 35 79.904 ±1+3+5+7 [Ar]4s ² 3d ¹⁰ 4p ⁵ | argon Ar 18 39.95 - [Ne]3s ² 3p ⁶ | krypton Kr 36 83.798 - [Ar]4s ² 3d ¹⁰ 4p ⁶ | xenon Xe 54 131.29 - [Kr]5s ² 4d ¹⁰ 5p ⁶ | radon Rn 86 222 - [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁶ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| rubidium Rb 37 85.468 +1 [Kr]5s ¹ | strontium Sr 38 87.62 +2 [Kr]5s ² | yttrium Y 39 88.906 +3 [Kr]5s ² 4d ¹ | zirconium Zr 40 91.224 +3 [Kr]5s ² 4d ² | niobium Nb 41 92.906 +4 [Kr]5s ¹ 4d ⁴ | molybdenum Mo 42 95.95 +3+5 [Kr]5s ¹ 4d ⁵ | technetium Tc 43 [98.91] +1+2+3+4+5+6 [Kr]5s ² 4d ⁵ | ruthenium Ru 44 101.07 +4+5+6+7 [Kr]5s ¹ 4d ⁷ | rhodium Rh 45 102.91 +2+3+4+5+6+7 [Kr]5s ¹ 4d ⁸ | palladium Pd 46 106.42 +2+4 [Kr]4d ¹⁰ | silver Ag 47 107.87 +1 [Kr]5s ¹ 4d ¹⁰ | cadmium Cd 48 112.41 +2 [Kr]5s ² 4d ¹⁰ | indium In 49 114.82 +3 [Kr]5s ² 4d ¹⁰ 5p ¹ | tin Sn 50 118.71 +2+4 [Kr]5s ² 4d ¹⁰ 5p ² | antimony Sb 51 121.76 ±3+5 [Kr]5s ² 4d ¹⁰ 5p ³ | tellurium Te 52 127.60 -2+4+6 [Kr]5s ² 4d ¹⁰ 5p ⁴ | iodine I 53 126.90 ±1+3+5+7 [Kr]5s ² 4d ¹⁰ 5p ⁵ | barium Ba 56 137.33 +2 [Xe]6s ² | lanthanides | hafnium Hf 72 178.49 +4 [Xe]6s ² 4f ¹⁴ 5d ² | tantalum Ta 73 180.95 +5 [Xe]6s ² 4f ¹⁴ 5d ³ | tungsten W 74 183.84 +1+2+3+4+5+6 [Xe]6s ² 4f ¹⁴ 5d ⁴ | rhenium Re 75 186.21 +4+6+7 [Xe]6s ² 4f ¹⁴ 5d ⁵ | osmium Os 76 190.23 +2+3+4+6+8 [Xe]6s ² 4f ¹⁴ 5d ⁶ | iridium Ir 77 192.22 +3+4 [Xe]6s ² 4f ¹⁴ 5d ⁷ | platinum Pt 78 195.08 +2+4 [Xe]6s ² 4f ¹⁴ 5d ⁹ | gold Au 79 196.97 +1+3 [Xe]6s ¹ 4f ¹⁴ 5d ¹⁰ | mercury Hg 80 200.59 +1+2 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ | thallium Tl 81 204.38 +1+3 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ¹ | lead Pb 82 207.2 +2+4 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ² | bismuth Bi 83 208.98 +3+5 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ³ | polonium Po 84 [209] +2+4+6 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁴ | astatine At 85 [210] ±1+3+5+7 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁵ | radon Rn 86 [222] +2+6 [Xe]6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁶ | | | | | | | | | | | | | | | | |
| francium Fr 87 [223] +1 [Rn]7s ¹ | radium Ra 88 [226] +2 [Rn]7s ² | actinides | rutherfordium Rf 104 [267] +4 [Rn]7s ² 5f ¹⁴ 6d ² | dubnium Db 105 [268] +5 [Rn]7s ² 5f ¹⁴ 6d ³ | seaborgium Sg 106 [269] +6 [Rn]7s ² 5f ¹⁴ 6d ⁴ | bohrium Bh 107 [270] +7 [Rn]7s ² 5f ¹⁴ 6d ⁵ | hassium Hs 108 [269] +8 [Rn]7s ² 5f ¹⁴ 6d ⁶ | meitnerium Mt 109 [278] +1+3+6 [Rn]7s ² 5f ¹⁴ 6d ⁷ | darmstadtium Ds 110 [281] +2+8 [Rn]7s ² 5f ¹⁴ 6d ⁸ | roentgenium Rg 111 [282] +3 [Rn]7s ² 5f ¹⁴ 6d ⁹ | copernicium Cn 112 [285] +2 [Rn]7s ² 5f ¹⁴ 6d ¹⁰ | nihonium Nh 113 [286] +1+3 [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 7p ¹ | flerovium Fl 114 [289] +2 [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 7p ² | moscovium Mc 115 [290] +1+3 [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 7p ³ | livermorium Lv 116 [293] +2 [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 7p ⁴ | tennessine Ts 117 [294] +1+3 [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 7p ⁵ | oganeson Og 118 [294] +2+4 [Rn]7s ² 5f ¹⁴ 6d ¹⁰ 7p ⁶ | ununennium Uue 119 [315] +1 [Og]8s ¹ | unbinilium Ubn 120 [299] +2 [Og]8s ² | lanthanum La 57 138.91 +3 [Xe]6s ² 5d ¹ | cerium Ce 58 140.12 +3+4 [Xe]6s ² 4f ¹ 5d ¹ | praseodymium Pr 59 140.91 +3 [Xe]6s ² 4f ³ | neodymium Nd 60 144.24 +3 [Xe]6s ² 4f ⁴ | promethium Pm 61 [144.9] +2+3 [Xe]6s ² 4f ⁵ | samarium Sm 62 150.36 +2+3 [Xe]6s ² 4f ⁶ | europium Eu 63 151.96 +3 [Xe]6s ² 4f ⁷ | gadolinium Gd 64 157.25 +3 [Xe]6s ² 4f ⁷ 5d ¹ | terbium Tb 65 158.93 +3 [Xe]6s ² 4f ⁹ | dysprosium Dy 66 162.50 +3 [Xe]6s ² 4f ¹⁰ | holmium Ho 67 164.93 +3 [Xe]6s ² 4f ¹¹ | erbium Er 68 167.26 +3 [Xe]6s ² 4f ¹² | thulium Tm 69 168.93 +2+3 [Xe]6s ² 4f ¹³ | ytterbium Yb 70 173.05 +2+3 [Xe]6s ² 4f ¹⁴ | lutetium Lu 71 174.97 +3 [Xe]6s ² 4f ¹⁴ 5d ¹ | actinium Ac 89 [227] +3 [Rn]7s ² 6d ¹ | thorium Th 90 232.04 +4 [Rn]7s ² 6d ² | protactinium Pa 91 231.04 +4+5 [Rn]7s ² 5f ² 6d ¹ | uranium U 92 238.03 +3+4+5+6 [Rn]7s ² 5f ³ 6d ¹ | neptunium Np 93 [237] +3+4+5+6 [Rn]7s ² 5f ⁴ 6d ¹ | plutonium Pu 94 [244] +3+4+5+6 [Rn]7s ² 5f ⁶ | americium Am 95 [243] +3+4+5+6 [Rn]7s ² 5f ⁷ | curium Cm 96 [247] +3 [Rn]7s ² 5f ⁷ 6d ¹ | berkelium Bk 97 [247] +3+4 [Rn]7s ² 5f ⁹ | californium Cf 98 [251] +3 [Rn]7s ² 5f ¹⁰ | einsteinium Es 99 [252] +3 [Rn]7s ² 5f ¹¹ | fermium Fm 100 [257] +3 [Rn]7s ² 5f ¹² | mendelevium Md 101 [258] +2+3 [Rn]7s ² 5f ¹³ | nobelium No 102 [259] +2+3 [Rn]7s ² 5f ¹⁴ | lawrencium Lr 103 [266] +3 [Rn]7s ² 5f ¹⁴ 7p ¹ |

name: hydrogen
 chemical symbol: H
 atomic number [Z]: 1
 atomic mass (g/mol): 1.0080
 electron configuration: 1s¹

melting point (K): 13.99
 boiling point (K): 20.27
 density (g/cm³) [at the b.p. for gases]: 0.071
 1st ionization energy (kJ/mol): 1312
 electronegativity [Pauling scale]: 2.20
 oxides property: 1s¹

X solid
 X liquid
 X gas
 X unknown

strongly acidic
 medium acid
 weakly acidic
 neutral
 weakly basic
 medium basic
 strongly basic
 amphiprotic

x@y = xK at the pressure of yMPa
 element = natural element
 element = synthetic element
 111 = radioactive (mass referred to the natural isotope mixture)
 [111] = radioactive (mass referred to the most stable isotope)

