Periodensystem der Elemente

	I	II	III	IV	V	VI	VII	VIII
1	**H** 1 Hydrogen Wasserstoff $1s^1$ 1,00794(7) -1,**1** 14,0221 / 20,228 K 0,08988 (273 K) 2,2 7,18 eV							**He** 2 Helium Helium $1s^2$ 4,002602(2) 0,95 / 4,216 K 0,1785 (273 K) – 12,3 eV
2	**Li** 3 Lithium Lithium [He] $2s^1$ [6,941(2)] 1 453,69 / 1.620 K 534 0,98 3,01 eV	**Be** 4 Beryllium Beryllium [He] $2s^2$ 9,012182(3) 2 1.551 / 3.243 K 1.847,7 1,57 4,9 eV	**B** 5 Boron Bor [He] $2s^2\ 2p^1$ 10,811(7) 3 2.573 / 3.931 K 2,04 4,29 eV	**C** 6 Carbon Kohlenstoff [He] $2s^2\ 2p^2$ 12,0107(8) -**4**,**2**,**4** 3.820 / 5.100 K subl. 3.513 (Diamant) 2,55 6,27 eV	**N** 7 Nitrogen Stickstoff [He] $2s^2\ 2p^3$ 14,0067(2) -**3**,-2,-1,0,2,3,4,5 63,29 / 77,4 K 1,2506 (273 K) 3,04 7,30 eV	**O** 8 Oxygen Sauerstoff [He] $2s^2\ 2p^4$ 15,9994(3) -2,-1,0,1,2 54,8 / 90,188 K 1,429 (273 K) 3,44 7,54 eV	**F** 9 Fluorine Fluor [He] $2s^2\ 2p^5$ 18,9984032(5) -1 53,53 / 85,01 K 1,696 (273 K) 3,98 10,41 eV	**Ne** 10 Neon Neon [He] $2s^2\ 2p^6$ 20,1797(6) 24,48 / 27,10 K 0,89994 (273 K) – 10,6 eV
3	**Na** 11 Sodium Natrium [Ne] $3s^1$ 22,98976928(2) 1 370,96 / 1.156,1 K 971 0,93 2,85 eV	**Mg** 12 Magnesium Magnesium [Ne] $3s^2$ 24,3050(6) 2 922,0 / 1.363 K 1.738 1,31 3,75 eV	**Al** 13 Aluminium Aluminium [Ne] $3s^2\ 3p^1$ 26,9815386(8) 3 933,52 / 2.740 K 2.698 1,61 3,23 eV	**Si** 14 Silicon Silicium [Ne] $3s^2\ 3p^2$ 28,0855(3) 2,**4** 1.683 / 2.628 K 2.329 1,9 4,77 eV	**P** 15 Phosphorus Phosphor [Ne] $3s^2\ 3p^3$ 30,973762(2) -3,-2,0,1,2,3,5 317,3 / 553 K 1.820 P4 2,19 5,62 eV	**S** 16 Sulfur Schwefel [Ne] $3s^2\ 3p^4$ 32,065(5) -2,-1,0,1,2,3,4,5,6 386 (α) / 717,824 K 2.070 (α) 2,58 6,22 eV	**Cl** 17 Chlorine Chlor [Ne] $3s^2\ 3p^5$ 35,453(2) -**1**,1,3,4,5,6,**7** 172,2 / 238,6 K 3,214 (273 K) 3,16 8,30 eV	**Ar** 18 Argon Argon [Ne] $3s^2\ 3p^6$ 39,948(1) 83,8 / 87,3 K 1,784 (273 K) – 7,70 eV
4	**K** 19 Potassium Kalium [Ar] $4s^1$ 39,0983(1) -1,1 336,8 / 1.047 K 862 0,82 2,42 eV	**Ca** 20 Calcium Calcium [Ar] $4s^2$ 40,078(4) 2 1.112 / 1.757 K 1.550 1 2,2 eV	**Sc** 21 Scandium Scandium [Ar] $3d^1\ 4s^2$ 44,955912(6) 2,**3** 1.814 / 3.104 K 2.989 1,36 3,34 eV	**Ti** 22 Titanium Titan [Ar] $3d^2\ 4s^2$ 47,867(1) -1,0,2,3,**4** 1.933 / 3.560 K 4.540 1,54 3,45 eV	**V** 23 Vanadium Vanadium [Ar] $3d^3\ 4s^2$ 50,9415(1) -3,-1,0,1,2,**3**,**4**,**5** 2.160 / 3.650 K 6.110 (292 K) 1,63 3,6 eV	**Cr** 24 Chromium Chrom [Ar] $3d^5\ 4s^1$ 51,9961(6) -2,-1,0,1,2,**3**,4,5,6 2.130 / 2.945 K 7.190 1,66 3,72 eV	**Mn** 25 Manganese Mangan [Ar] $3d^5\ 4s2$ 54,938045(5) -3,-2,-1,0,1,**2**,3,4,5,6,7 1.517 / 2.235 K 7.440 (α) 1,55 3,72 eV	**Fe** 26 Iron Eisen [Ar] $3d^6\ 4s^2$ 55,845(2) -2,-1,0,1,**2**,**3**,4,5,6 1.808 / 3.023 K 7.874 1,83 4,06 eV	**Co** 27 Cobalt Cobalt [Ar] $3d^7\ 4s^2$ 58,933195(5) -1,0,1,**2**,3,4,5 1.768 / 3.143 K 8.900 1,88 4,3 eV	**Ni** 28 Nickel Nickel [Ar] $3d^8\ 4s^2$ 58,6934(2) -1,0,1,**2**,3,4,6 1.726 / 3.005 K 8.902 (298 K) 1,91 4,40 eV	**Cu** 29 Copper Kupfer [Ar] $3d^{10}\ 4s^1$ 63,546(3) 0,1,**2**,3,4 1.356,6 / 2.840 K 8.960 1,9 4,48 eV	**Zn** 30 Zinc Zink [Ar] $3d^{10}\ 4s^2$ 65,409(4) 1,**2** 692,73 / 1.180 K 7.133 1,65 4,45 eV	**Ga** 31 Gallium Gallium [Ar] $3d^{10}\ 4s^2\ 4p^1$ 69,723(1) 1,2,**3** 302,93 / 2.676 K 5.907 1,81 3,2 eV	**Ge** 32 Germanium Germanium [Ar] $3d^{10}\ 4s^2\ 4p^2$ 72,64(1) 2,4 1.210,6 / 3.103 K 5.323 2,01 4,6 eV	**As** 33 Arsenic Arsen [Ar] $3d^{10}\ 4s^2\ 4p^3$ 74,92160(2) -3,3,5 1.090 / 889 K 5.780 (subl.) 2,18 5,3 eV	**Se** 34 Selenium Selen [Ar] $3d^{10}\ 4s^2\ 4p^4$ 78,96(3) -2,1,2,**4**,**6** 490 / 958,1 K 4.790 (grau) 2,55 5,89 eV	**Br** 35 Bromine Brom [Ar] $3d^{10}\ 4s^2\ 4p^5$ 79,904(1) -1,1,3,4,5,7 265,9 /331,9 K 3.122,6 2,96 7,59 eV	**Kr** 36 Krypton Krypton [Ar] $3d^{10}\ 4s^2\ 4p^6$ 83,798(2) 0,2 116,6 / 120,85 K 3,7493 3,00 6,8 eV
5	**Rb** 37 Rubidium Rubidium [Kr] $5s^1$ 85,4678(3) -1,1 312,2 / 961 K 1.532 0,82 2,34 eV	**Sr** 38 Strontium Strontium [Kr] $5s^2$ 87,62(1) 2 1.042 / 1.657 K 2.540 0,95 2,0 eV	**Y** 39 Yttrium Yttrium [Kr] $4d^1\ 5s^2$ 88,90585(2) **3** 1.795 / 3.611 K 4.469 1,22 3,19 eV	**Zr** 40 Zirconium Zirconium [Kr] $4d^2\ 5s^2$ 91,224(2) -2,0,1,2,3,4 2.125 / 4.650 K 6.506 1,33 3,64 eV	**Nb** 41 Niobium Niob [Kr] $4d^4\ 5s^1$ 92,90638(2) -3,-1,1,2,3,4,**5** 2.741 / 5.015 K 8.570 1,6 4,0 eV	**Mo** 42 Molybdenum Molybdän [Kr] $4d^5\ 5s^1$ 95,94(2) -2,0,1,2,3,4,5,**6** 2.890 / 4.885 K 10.220 2,16 3,9 eV	**Tc** 43 Technetium Technetium [Kr] $4d^6\ 5s^1$ [98] -1,0,**4**,**5**,6,**7** 2.445 / 5.150 K 11.500 * 1,9 3,91 eV	**Ru** 44 Ruthenium Ruthenium [Kr] $4d^7\ 5s^1$ 101,07(2) -2,0,1,2,**3**,4,5,6,7,8 2.583 / 4.173 K 12.370 2,2 4,5 eV	**Rh** 45 Rhodium Rhodium [Kr] $4d^8\ 5s^1$ 102,90550(2) -1,0,1,2,**3**,4,5,6 2.239 / 4.000 K 12.410 2,28 4,30 eV	**Pd** 46 Palladium Palladium [Kr] $4d^{10}$ 106,42(1) 0,**2**,4 1.825 / 3.413 K 12.020 2,20 4,45 eV	**Ag** 47 Silver Silber [Kr] $4d^{10}\ 5s^1$ 107,8682(2) 0,**1**,2,3 1.235,1 / 2.485 K 10.500 1,93 4,44 eV	**Cd** 48 Cadmium Cadmium [Kr] $4d^{10}\ 5s^2$ 112,411(8) 1,**2** 594,1 / 1.038 K 8.650 1,69 4,33 eV	**In** 49 Indium Indium [Kr] $4d^{10}\ 5s^2\ 5p^1$ 114,818(3) 1,2,**3** 429,32 / 2.353 K 7.310 (298 K) 1,78 3,1 eV	**Sn** 50 Tin Zinn [Kr] $4d^{10}\ 5s^2\ 5p^2$ 118,710(7) 2,4 505,118 / 2.543 K 5.750 (α) 1,96 4,30 eV	**Sb** 51 Antimony Antimon [Kr] $4d^{10}\ 5s^2\ 5p^3$ 121,760(1) -3,**3**,**5** 903,9 / 1.908 K 6.691 2,05 4,85 eV	**Te** 52 Tellurium Tellur [Kr] $4d^{10}\ 5s^2\ 5p^4$ 127,60(3) -2,-1,2,**4**,5,6 722,7 /1.263 K 6.240 2,1 5,49 eV	**I** 53 Iodine Iod [Kr] $4d^{10}\ 5s^2\ 5p^5$ 126,90447(3) -**1**,0,1,3,5,7 386,7 / 457,50 K 4.930 2,66 6,76 eV	**Xe** 54 Xenon Xenon [Kr] $4d^{10}\ 5s2\ 5p^6$ 131,293(6) 0,2,4,6,8 161,3 / 166,1 K 5,8971 (273 K) 2,6 5,85 eV
6	**Cs** 55 Caesium Cäsium [Xe] $6s^1$ 132,9054519(2) -1,1 301,6 / 951,6 K 1.873 0,79 2,18 eV	**Ba** 56 Barium Barium [Xe] $6s^2$ 137,327(7) 2 1.002 / 1.910 K 3.594 0,89 2,4 eV		**Hf** 72 Hafnium Hafnium [Xe] $4f^{14}\ 5d^2\ 6s^2$ 178,49(2) 1,2,3,4 2.503 / 5.470 K 13.310 1,3 3,8 eV	**Ta** 73 Tantalum Tantal [Xe] $4f^{14}\ 5d^3\ 6s^2$ 180,94788(2) -3,-1,1,2,3,4,**5** 3.269 / 5.698 K 16.654 1,5 4,11 eV	**W** 74 Tungsten Wolfram [Xe] $4f^{14}\ 5d^4\ 6s^2$ 183,84(1) -4,-2,-1,0,2,3,4,5,6 3.680 / 5.930 K 19.300 2,36 4,4 eV	**H** 75 Rhenium Rhenium [Xe] $4f^{14}\ 5d^5\ 6s^2$ 186,207(1) -3,-1,0,1,2,**3**,**4**,**5**,6,7 3.453 / 5.900 K 21.020 1,9 4,02 eV	**Os** 76 Osmium Osmium [Xe] $4f^{14}\ 5d^6\ 6s^2$ 190,23(3) -2,0,1,2,3,**4**,5,6,7,8 3.327 / 5.300 K 22.590 kg/m³ 2,2 4,9 eV	**Ir** 77 Iridium Iridium [Xe] $4f^{14}\ 5d^7\ 6s^2$ 192,217(3) -1,0,1,2,**3**,**4**,5,6 2.683 / 4.403 K 22.560 (290 K) 2,2 5,4 eV	**Pt** 78 Platinum Platin [Xe] $4f^{14}\ 5d^9\ 6s^1$ 195,084(9) 0,2,**4**,5,6 2.045 / 4.100 K 21.450 2,28 5,6 eV	**Au** 79 Gold Gold [Xe] $4f^{14}\ 5d^{10}\ 6s^1$ 196,966569(4) -1,0,1,2,3,5,7 1.337,58 / 3.080 K 19.320 2,54 5,77 eV	**Hg** 80 Mercury Quecksilber [Xe] $4f^{14}\ 5d^{10}\ 6s^2$ 200,59(2) 1,**2** 234,28 / 629,73 K 13.546 2,00 4,91 eV	**Tl** 81 Thallium Thallium [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^1$ 204,3833(2) -1,3 576,6 / 1.730 K 11.850 1,62 3,2 eV	**Pb** 82 Lead Blei [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^2$ 207,2(1) 2,4 600,65 /2.013 K 11.350 2,33 3,90 eV	**Bi** 83 Bismuth Bismut [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^3$ 208,98040(1) -3,1,**3**,5 544,5 / 1.833 K 9.747 2,02 4,69 eV	**Po** 84 Polonium Polonium [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^4$ [209] -2,2,**4**,6 527 / 1.235 K 9.320 2,0 5,16 eV	**At** 85 Astatine Astat [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^5$ [210] -1,1,3 575 / 610 K (gesch.) 1,96 2,2 6,2 eV	**Rn** 86 Radon Radon [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^6$ [222] 2 202 / 211,4 K 9,73 (273 K) k.A. 5,1 eV
7	**Fr** 87 Francium Francium [Rn] $7s^1$ [223] 1 300 / 950 K k.A. 0,7 k.A.	**Ra** 88 Radium Radium [Rn] $7s^2$ [226] 2 973 / 1.413 K -5.000 0,90 k.A.		**Rf** 104 Rutherfordium Rutherfordium [Rn] $5f^{14}\ 6d^2\ 7s^2$ [267] k.A. k.A. / k.A. k.A. k.A. k.A.	**Db** 105 Dubnium Dubnium [Rn] $5f^{14}\ 6d^3\ 7s^2$ [268] k.A. k.A. / k.A. k.A. k.A. k.A.	**Sg** 106 Seaborgium Seaborgium [Rn] $5f^{14}\ 6d^4\ 7s^2$ [271] k.A. k.A. / k.A. k.A. k.A. k.A.	**Bh** 107 Bohrium Bohrium [Rn] $5f^{14}\ 6d^5\ 7s^2$ [272] k.A. k.A. / k.A. k.A. k.A. k.A.	**Hs** 108 Hassium Hassium [Rn] $5f^{14}\ 6d^6\ 7s^2$ [270] k.A. k.A. / k.A. k.A. k.A. k.A.	**Mt** 109 Meitnerium Meitnerium [Rn] $5f^{14}\ 6d^7\ 7s^2$ [276] k.A. k.A. / k.A. k.A. k.A. k.A.	**Ds** 110 Darmstadtium Darmstadtium k.A. [281] k.A. k.A. / k.A. k.A. k.A. k.A.	**Rg** 111 Roentgenium Roentgenium k.A. [280] k.A. k.A. / k.A. k.A. k.A. k.A.	**Cn** 112 Copernicium Copernicium k.A. [285] k.A. k.A. / k.A. k.A. k.A. k.A.							

La 57 Lanthanum Lanthan [Xe] $5d^1\ 6s^2$ 138,90547(7) * 3 1.194 / 3.730 K 6.145 (298 K) 1,1 3,1 eV	**Ce** 58 Cerium Cer [Xe] $4f^2\ 6s^2$ 140,116(1) * 3,4 1.072 / 3.699 K 8.240 (α,298 K) 1,12 <=3,0 eV	**Pr** 59 Praseodymium Praseodym [Xe] $4f^3\ 6s^2$ 140,90765(2) **3**,4 1.204 / 3.785 K 6.773 1,13 <=3,0 eV	**Nd** 60 Neodymium Neodym [Xe] $4f^4\ 6s^2$ 144,242(3) * 2,**3**,4 1.294 / 3.341 K 7.007 (298 K) 1,14 <=3,0 eV	**Pm** 61 Promethium Promethium [Xe] $4f^5\ 6s^2$ [145] **3** 1.441 /~3.000 K 7.220 1,13 <=3,0 eV	**Sm** 62 Samarium Samarium [Xe] $4f^6\ 6s^2$ 150,36(2) 2,**3** 1.350 / 2.064 K 7.520 1,17 <=3,1 eV	**Eu** 63 Europium Europium [Xe] $4f^7\ 6s^2$ 151,964(1) 2,**3** 1.095 / 1.870 K 5.243 1,20 <=3,1 eV	**Gd** 64 Gadolinium Gadolinium [Xe] $4f^7\ 5d^1\ 6s^2$ 157,25(3) 2,3 1.586 / 3.539 K 7.900,4 (298 K) 1,20 <=3,3 eV	**Tb** 65 Terbium Terbium [Xe] $4f^9\ 6s^2$ 158,92535(2) 3,4 1.629 / 3.396 K 8.229 1,10 <=3,2 eV	**Dy** 66 Dysprosium Dysprosium [Xe] $4f^{10}\ 6s^2$ 162,500(1) 2,**3**,4 1.685 / 2.835 K 8.550 1,22 k.A.	**Ho** 67 Holmium Holmium [Xe] $4f^{11}\ 6s^2$ 164,93032(2) 3 1.747 / 2.968 K 8.795 (298 K) 1,23 <=3,3 eV	**Er** 68 Erbium Erbium [Xe] $4f^{12}\ 6s^2$ 167,259(3) 3 1.802 / 3.136 K 9066 (298 K) 1,24 <=3,3 eV	**Tm** 69 Thulium Thulium [Xe] $4f^{13}\ 6s^2$ 168,934211(2) 2,**3** 1.818 / 2.220 K 9.321 1,25 <=3,4 eV	**Yb** 70 Ytterbium Ytterbium [Xe] $4f^{14}\ 6s^2$ 173,04(3) 2,3 1.097 / 1.466 K 6.965 1,10 <=3,5 eV	**Lu** 71 Lutetium Lutetium [Xe] $4f^{14}\ 5d^1\ 6s^2$ 174,967(1) 3 1.936 / 3.668 K 9.840 (298 K) 1,27 <=3,0 eV
Ac 89 Actinium Actinium [Rn] $6d^1\ 7s^2$ [227] 0,3 1.320 / 3.470 K 10.060 (293 K) 1,1 k.A.	**Th** 90 Thorium Thorium [Rn] $6d^2\ 7s^2$ 232,03806(2) 2,3,**4** 2.023 / 5.060 K 11.720 1,3 k.A.	**Pa** 91 Protactinium Protactinium [Rn] $5f^2\ 6d^1\ 7s^2$ 231,03588(2) 3,4,**5** 2.113 /~4.300K * ~15.370 * 1,5 k.A.	**U** 92 Uranium Uran [Rn] $5f^3\ 6d^1\ 7s^2$ 238,02891(3) 2,3,4,5,**6** 1.405,5 / 4.018 K 18.950 1,38 k.A.	**Np** 93 Neptunium Neptunium [Rn] $5f^4\ 6d^1\ 7s^2$ [237] 2,3,4,**5**,6,7 913 / 4.175 K 20.250 1,36 k.A.	**Pu** 95 Plutonium Plutonium [Rn] $5f^6\ 7s^2$ [244] 2,3,**4**,5,6,7 914 / 3.505 K 19.840 (α,298 K) 1,28 k.A.	**Am** 95 Americium Americium [Rn] $5f^7\ 7s^2$ [243] 2,**3**,4,5,6 1.267 / 2.880 K 13.670 1,3 k.A.	**Cm** 96 Curium Curium [Rn] $5f^7\ 6d^1\ 7s^2$ [247] 2,**3**,4 k.A. / k.A. 13.300 1,3 k.A.	**Bk** 97 Berkelium Berkelium [Rn] $5f^9\ 7s^2$ [247] 2,3,4 k.A. / k.A. 14.790 1,3 k.A.	**Cf** 98 Californium Californium [Rn] $5f^{10}\ 7s^2$ [251] 2,3,4 k.A. / k.A. k.A 1,3 k.A.	**Es** 99 Einsteinium Einsteinium [Rn] $5f^{11}\ 7s^2$ [252] 2,3 k.A. / k.A. k.A. <=3,5 eV	**Fm** 100 Fermium Fermium [Rn] $5f^{12}\ 7s^2$ [257] 2,3 k.A. / k.A. k.A. 1,3 k.A.	**Md** 101 Mendelevium Mendelevium [Rn] $5f^{13}\ 7s^2$ [258] 2,**3** k.A. / k.A. k.A. 1,3 k.A.	**No** 102 Nobelium Nobelium [Rn] $5f^{14}\ 7s^2$ [259] 2,3 k.A. / k.A. k.A. 1,3 k.A.	**Lr** 103 Lawrencium Lawrencium [Rn] $5f^{14}\ 6d^1\ 7s^2$ [262] 3 k.A. / k.A. k.A. 1,3 k.A.

englischer Name
deutscher Name
Elektronenkonfiguration
rel. Atommasse in g/mol
wichtige Oxidationszahlen
Schmelz- / Siedepunkt in K
Dichte in kg/m³ (bei 293 K)
Elektronegativität Pauling
Elektronegativität Pearson

* = geschätzte Angaben

PERIODE

SCHALE K L M N O P Q

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