

Periodensystem der Elementarstoffe

1H Wasserstoff 1.0079 u 20.268 K 14.025 K 0.0899 g/l 1s ¹ 1 32 pm 79 pm 2.20												2He Helium 4.00260 u 4.215 K 1 K, 26 atm 0.1787 g/l 1s ² 93 pm 49 pm																													
3Li Lithium 6.941 u 1615 K 453.7 K 0.53 g/cm ³ 1s ² 2s ¹ 1 123 pm 205 pm 0.98		4Be Beryllium 9.01218 u 2745 K 1560 K 1.85 g/cm ³ 1s ² 2s ² 2 90 pm 140 pm 1.57		<p>< Name < Atommasse < Siedepunkt < Schmelzpunkt < Dichte < Elektronenkonfiguration < Oxidationszahlen < Kovalenter Radius < Atomradius < Elektronegativität</p> <p>Metalle Nichtmetalle Halbmetalle</p> <p>Hauptgruppenelemente Nebengruppenelemente Lanthaniden Actiniden</p> <table border="1"> <tr> <td></td> <td>Proton</td> <td>Neutron</td> <td>Elektron</td> </tr> <tr> <td>Masse</td> <td>1.673 · 10⁻²⁷ kg</td> <td>1.675 · 10⁻²⁷ kg</td> <td>9.110 · 10⁻³¹ kg</td> </tr> <tr> <td>Ladung</td> <td>+ 1.6 · 10⁻¹⁹ C</td> <td>0 C</td> <td>- 1.6 · 10⁻¹⁹ C</td> </tr> <tr> <td>Radius</td> <td>8 · 10⁻¹⁶ m</td> <td>8 · 10⁻¹⁶ m</td> <td>< 1 · 10⁻¹⁶ m</td> </tr> </table>											Proton	Neutron	Elektron	Masse	1.673 · 10 ⁻²⁷ kg	1.675 · 10 ⁻²⁷ kg	9.110 · 10 ⁻³¹ kg	Ladung	+ 1.6 · 10 ⁻¹⁹ C	0 C	- 1.6 · 10 ⁻¹⁹ C	Radius	8 · 10 ⁻¹⁶ m	8 · 10 ⁻¹⁶ m	< 1 · 10 ⁻¹⁶ m	5B Bor 10.81 u 4275 K 2300 K 2.34 g/cm ³ 1s ² 2s ² 2p ¹ 3 82 pm 117 pm 2.04		6C Kohlenstoff 12.011 u 4470 K 4100 K 2.62 g/cm ³ 1s ² 2s ² 2p ² 4 77 pm 91 pm 2.55		7N Stickstoff 14.0067 u 77.35 K 4100 K 1.251 g/l 1s ² 2s ² 2p ³ 5 75 pm 75 pm 3.04		8O Sauerstoff 15.9994 u 90.18 K 50.35 K 1.429 g/l 1s ² 2s ² 2p ⁴ -2 73 pm 65 pm 3.44		9F Fluor 18.998403 u 84.95 K 50.35 K 1.696 g/l 1s ² 2s ² 2p ⁵ -1 72 pm 57 pm 3.98		10Ne Neon 20.179 u 27.096 K 24.553 K 0.901 g/l 1s ² 2s ² 2p ⁶ 71 pm 51 pm	
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11Na Natrium 22.98977 u 1156 K 371.0 K 0.97 g/cm ³ [Ne]3s ¹ 1 154 pm 223 pm 0.93		12Mg Magnesium 24.305 u 1363 K 922 K 1.74 g/cm ³ [Ne]3s ² 2 136 pm 172 pm 1.31												13Al Aluminium 26.98154 u 2793 K 933.25 K 2.70 g/cm ³ [Ne]3s ² 3p ¹ 3 118 pm 182 pm 1.61		14Si Silicium 28.0855 u 3540 K 1685 K 2.33 g/cm ³ [Ne]3s ² 3p ² 4 111 pm 146 pm 1.90		15P Phosphor 30.97376 u 550 K 317.30 K 1.82 g/cm ³ [Ne]3s ² 3p ³ 3, 5, 4, 2 102 pm 123 pm 2.19		16S Schwefel 32.06 u 717.75 K 388.36 K 2.07 g/cm ³ [Ne]3s ² 3p ⁴ ±3, 5, 4, 6 102 pm 109 pm 2.58		17Cl Chlor 35.453 u 239.1 K 172.16 K 3.17 g/l [Ne]3s ² 3p ⁵ ±1, 3, 5, 7 99 pm 97 pm 3.16		18Ar Argon 39.948 u 87.30 K 83.81 K 1.784 g/l [Ne]3s ² 3p ⁶ 98 pm 88 pm																	
19K Kalium 39.0983 u 1032 K 336.35 K 0.86 g/cm ³ [Ar]4s ¹ 1 203 pm 277 pm 0.82	20Ca Calcium 40.08 u 1757 K 1112 K 1.55 g/cm ³ [Ar]4s ² 2 174 pm 223 pm 1.00	21Sc Scandium 44.9559 u 3104 K 1812 K 3.0 g/cm ³ [Ar]3d ¹ 4s ² 3 144 pm 209 pm 1.36	22Ti Titan 47.90 u 3562 K 1943 K 4.50 g/cm ³ [Ar]3d ² 4s ² 4, 3 132 pm 200 pm 1.54	23V Vanadium 50.9415 u 3682 K 2175 K 5.8 g/cm ³ [Ar]3d ³ 4s ² 5, 4, 3, 2 118 pm 185 pm 1.66	24Cr Chrom 51.996 u 2945 K 2130 K 7.19 g/cm ³ [Ar]3d ⁴ 4s ¹ 6, 3, 2 117 pm 179 pm 1.55	25Mn Mangan 54.9380 u 2335 K 1517 K 7.43 g/cm ³ [Ar]3d ⁵ 4s ² 7, 4, 2, 3 117 pm 172 pm 1.83	26Fe Eisen 55.847 u 3135 K 1809 K 7.86 g/cm ³ [Ar]3d ⁶ 4s ² 2, 3 116 pm 167 pm 1.91	27Co Kobalt 58.9332 u 3201 K 1768 K 8.90 g/cm ³ [Ar]3d ⁷ 4s ² 2, 3 115 pm 162 pm 1.88	28Ni Nickel 58.70 u 3187 K 1726 K 8.90 g/cm ³ [Ar]3d ⁸ 4s ² 2, 3 115 pm 162 pm 1.91	29Cu Kupfer 63.546 u 2836 K 1357.6 K 8.96 g/cm ³ [Ar]3d ¹⁰ 4s ¹ 2, 1 125 pm 153 pm 1.65	30Zn Zink 65.38 u 1180 K 692.73 K 7.14 g/cm ³ [Ar]3d ¹⁰ 4s ² 2 126 pm 181 pm 1.81	31Ga Gallium 69.72 u 2478 K 302.90 K 5.91 g/cm ³ [Ar]3d ¹⁰ 4s ² 4p ¹ 3 122 pm 181 pm 1.81	32Ge Germanium 72.64 u 3107 K 1210.4 K 5.32 g/cm ³ [Ar]3d ¹⁰ 4s ² 4p ² 4 120 pm 152 pm 2.01	33As Arsen 74.9216 u 876 K (subl) 1081 K, 28 atm 5.72 g/cm ³ [Ar]3d ¹⁰ 4s ² 4p ³ ±3, 5 120 pm 133 pm 2.18	34Se Selen 78.96 u 958 K 494 K 4.80 g/cm ³ [Ar]3d ¹⁰ 4s ² 4p ⁴ -2, 4, 6 116 pm 122 pm 2.55	35Br Brom 79.904 u 332.25 K 265.90 K 3.12 g/cm ³ [Ar]3d ¹⁰ 4s ² 4p ⁵ ±1, 5 114 pm 112 pm 2.96	36Kr Krypton 83.80 u 119.80 K 115.78 K 3.74 g/l [Ar]3d ¹⁰ 4s ² 4p ⁶ 112 pm 103 pm																								
37Rb Rubidium 85.4678 u 961 K 312.64 K 1.53 g/cm ³ [Kr]5s ¹ 1 216 pm 298 pm 0.82	38Sr Strontium 87.62 u 1650 K 1041 K 2.6 g/cm ³ [Kr]5s ² 2 191 pm 245 pm 0.95	39Y Yttrium 88.9059 u 3611 K 1799 K 4.5 g/cm ³ [Kr]4d ¹ 5s ² 3 162 pm 216 pm 1.22	40Zr Zirkonium 91.22 u 4682 K 2125 K 6.49 g/cm ³ [Kr]4d ² 5s ² 4 145 pm 216 pm 1.33	41Nb Niobium 92.9064 u 5017 K 2740 K 8.55 g/cm ³ [Kr]4d ⁴ 5s ¹ 5, 3 134 pm 202 pm 1.6	42Mo Molybdän 95.94 u 4912 K 2890 K 10.2 g/cm ³ [Kr]4d ⁵ 5s ¹ 6, 5, 4, 3, 2 130 pm 197 pm 2.16	43Tc Technetium 98 u 4538 K 2523 K 11.5 g/cm ³ [Kr]4d ⁵ 5s ² 7 127 pm 189 pm 1.9	44Ru Ruthenium 101.07 u 4423 K 2473 K 12.2 g/cm ³ [Kr]4d ⁷ 5s ¹ 8, 2, 3, 4, 6, 8 125 pm 189 pm 2.2	45Rh Rhodium 102.9055 u 3970 K 2236 K 12.4 g/cm ³ [Kr]4d ⁸ 5s ¹ 2, 3, 4 125 pm 183 pm 2.28	46Pd Palladium 106.4 u 3237 K 1825 K 12.0 g/cm ³ [Kr]4d ¹⁰ 2, 4 128 pm 179 pm 2.28	47Ag Silber 107.868 u 2436 K 1234 K 10.5 g/cm ³ [Kr]4d ¹⁰ 5s ¹ 1 134 pm 175 pm 1.93	48Cd Cadmium 112.41 u 1040 K 594.18 K 8.65 g/cm ³ [Kr]4d ¹⁰ 5s ² 2 144 pm 171 pm 1.78	49In Indium 114.82 u 2346 K 429.76 K 7.31 g/cm ³ [Kr]4d ¹⁰ 5s ² 4p ¹ 3 141 pm 200 pm 1.96	50Sn Zinn 118.69 u 2876 K 505.06 K 7.30 g/cm ³ [Kr]4d ¹⁰ 5s ² 4p ² 4, 3 140 pm 172 pm 2.05	51Sb Antimon 121.75 u 1860 K 904 K 6.68 g/cm ³ [Kr]4d ¹⁰ 5s ² 4p ³ ±3, 5 140 pm 142 pm 2.05	52Te Tellur 127.60 u 1261 K 722.65 K 6.24 g/cm ³ [Kr]4d ¹⁰ 5s ² 4p ⁴ -2, 4, 6 136 pm 142 pm 2.1	53I Iod 126.9045 u 458.4 K 386.7 K 4.92 g/cm ³ [Kr]4d ¹⁰ 5s ² 4p ⁵ ±1, 5, 7 133 pm 132 pm 2.66	54Xe Xenon 131.30 u 165.03 K 161.36 K 5.89 g/l [Kr]4d ¹⁰ 5s ² 4p ⁶ 131 pm 124 pm																								
55Cs Cäsium 132.9054 u 944 K 301.55 K 1.87 g/cm ³ [Xe]6s ¹ 1 235 pm 334 pm 0.79	56Ba Barium 137.33 u 2171 K 1002 K 3.5 g/cm ³ [Xe]6s ² 2 198 pm 278 pm 0.89	57La Lanthan 138.9055 u 4676 K 1193 K 6.7 g/cm ³ [Xe]5d ¹ 6s ² 3 169 pm 274 pm 1.1	72Hf Hafnium 178.49 u 4676 K 2500 K 13.1 g/cm ³ [Xe]4f ¹⁴ 5d ² 6s ² 4 144 pm 216 pm 1.3	73Ta Tantal 180.9479 u 5017 K 2740 K 16.6 g/cm ³ [Xe]4f ¹⁴ 5d ³ 6s ² 5 134 pm 202 pm 1.5	74W Wolfram 183.85 u 5028 K 3680 K 19.3 g/cm ³ [Xe]4f ¹⁴ 5d ⁴ 6s ² 6, 5, 4, 3, 2 130 pm 197 pm 2.36	75Re Rhenium 186.207 u 5028 K 3453 K 21.0 g/cm ³ [Xe]4f ¹⁴ 5d ⁵ 6s ² 7, 6, 4, 2, -1 128 pm 192 pm 1.9	76Os Osmium 190.2 u 5028 K 3300 K 22.4 g/cm ³ [Xe]4f ¹⁴ 5d ⁶ 6s ² 8, 2, 3, 4, 6, 8 126 pm 187 pm 2.2	77Ir Iridium 192.22 u 4100 K 2716 K 22.5 g/cm ³ [Xe]4f ¹⁴ 5d ⁷ 6s ² 2, 3, 4, 6 127 pm 183 pm 2.28	78Pt Platin 195.09 u 4100 K 2045 K 21.4 g/cm ³ [Xe]4f ¹⁴ 5d ⁸ 6s ¹ 2, 4 130 pm 179 pm 2.54	79Au Gold 196.9665 u 3130 K 1337.58 K 19.3 g/cm ³ [Xe]4f ¹⁴ 5d ¹⁰ 6s ¹ 3, 1 134 pm 179 pm 2	80Hg Quecksilber 200.59 u 630 K 234.28 K 13.53 g/cm ³ [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 2, 1 149 pm 176 pm 2.04	81Tl Thallium 204.37 u 1746 K 577 K 11.85 g/cm ³ [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 4p ¹ 3, 1 148 pm 208 pm 2.04	82Pb Blei 207.2 u 2023 K 600.6 K 11.4 g/cm ³ [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 4p ² 4, 2 147 pm 181 pm 2.33	83Bi Bismut 208.9804 u 1837 K 544.52 K 9.8 g/cm ³ [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 4p ³ 5, 3 146 pm 163 pm 2.02	84Po Polonium (209 u) 1837 K 1235 K 9.4 g/cm ³ [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 4p ⁴ 4, 2 146 pm 181 pm 2	85At Astat (210 u) 1837 K 575 K 9.4 g/cm ³ [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 4p ⁵ ±1, 3, 5, 7 145 pm 143 pm 2.2	86Rn Radon (222 u) 211 K 202 K 9.91 g/l [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 4p ⁶ 134 pm																								
87Fr Francium (223 u) 950 K 300 K [Rn]7s ¹ 1 0.7	88Ra Radium 226.0254 u 1809 K 973 K 5 g/cm ³ [Rn]7s ² 2 0.9	89Ac Actinium 227.0278 u 3473 K 1323 K 10.07 g/cm ³ [Rn]6d ¹ 7s ² 3 1.1	104Rf Rutherfordium	105Db Dubnium	106Sg Seaborgium	107Bh Bohrium	108Hs Hassium	109Mt Meitnerium	110	111	112	113	114	115	116	117	118																								

58Ce Cer	59Pr Praseodym	60Nd Neodym	61Pm Promethium	62Sm Samarium	63Eu Europium	64Gd Gadolinium	65Tb Terbium	66Dy Dysprosium	67Ho Holmium	68Er Erbium	69Tm Thulium	70Yb Ytterbium	71Lu Lutetium
90Th Thorium	91Pa Protaktinium	92U Uran	93Np Neptunium	94Pu Plutonium	95Am Americium	96Cm Curium	97Bk Berkelium	98Cf Californium	99Es Einsteinium	100Fm Fermium	101Md Mendelevium	102No Nobelium	103Lr Lawrencium