Periodensystem der Elemente 1.008 4.0026 0.00(1) 2 20 5.50 -259 / -253 - / -269 He н Wasserstoff Helium Ordnungszahl Relative Atommasse influher amu) 6.94 4 12,011 14,007 8 15,999 9 -3,040(1) 0,97 -1,79(2) Normal potential-Elektronegativitätach Allred / Rochow) 0,206(4) -0.890(3) 2.01 2.50 1.45(3) 3.07 1.229(-2) 3.50 3.053(-1) [Ha] 2c [Ha] 2c (Reduktionspotential) [He] 25 2n1 [Ha] 2c2 2n2 [He] 2s2 2p3 [He] 2s2 2p4 [He] 2s2 2p5 [He] 2s2 2p6 Elektronenkonfiguration 1278 / 2470 2180 B / 3650 3750 G / 4830 181 / 1347 -210 / -196 -219 / -183 -220 / -188 F in V mit Oxidationsstufen (n) -249 / -24 Schmelz- / Siedetemperatur in °C Be В Ne Lithium Bor Kohlenstoff Stickstoff Fluor Beryllium Sauerstoff Neon Symbol 35,45 18 11 22,990 12 24,305 13 26,982 14 28,085 15 30,974 16 32,06 17 39,948 -2,356(2) -0,909(4) -0,502(3) 0,144(-2) 1,358(-1) 1,01 Name -1,676(3) [Ne] 3s2 3p3 1278 / 2470 113 / 445 B Mg Na Natrium Magnesium Aluminium Silicium Phosphor Schwefel Chlor Argon 19 39.098 20 40.078 21 44.956 22 47.867 23 50,942 24 51,996 25 54,938 26 55,845 27 58,933 28 58.693 29 63.546 30 65,38 31 69,723 72,63 3 74,922 78.96 35 79.904 36 (2) 1,45 -0,913(2) [Ar] 3d³ 4s² (2) 1,56 [Ar] 3d⁶ 4s² [Ar] 1,64 -0,277(2) 1,70 3s⁶ 4s² [Ar] 3d⁷ 4s² (2) 1,66 [Ar] 3d¹⁰4s² 036(4) 2,02 0,240(3) [Ar] 3d¹⁰ 4s² 4p² [Ar] 3 -2,925(1) 0,91 -2,84(2) 1,04 -2,03(3) 1,20 -1,63(2) 1,32 -1,186(2) 1,60 -0,440(2) 1,70 -0,257(2) 1,75 0,340(2) 1.75 -0.763(2) -0.529(3) 1.82 -0.036(4) 2.20 -0,40(-2) 2,48 1,065(-1) [Ar] 3d° 4s² [Ar] 3s⁶ 4s² [Ar] 3d¹⁰4s²4p¹ [Ar] 3d¹⁰4s²4p⁴ [Ar] 3d10 4s2 4p3 [Ar] 3d10 4s2 4p6 839 / 1484 1541 / 2836 1668 / 3262 1668 / 3262 1890 / 2640 1244 / 2032 1535 / 2750 1495 / 2870 1453 / 2732 1083 / 2595 420 / 907 20 / 2403 937 / 2830 817 / 615 subl 217 / 685 6. 3. 2 Se Br Co ca Ge Kr Gа Scandium Mangan Kalium Calcium Titan Vanadium Chrom Eisen Cobalt Nickel Kupfer Zink Galium Selen Brom Krypton Germanium 37 85.468 38 87.62||39 88.906|| 40 91.224 41 92.906 42 95.962 43 98.906 44 101.07 45 102.91 46 106.42 47 107.87 48 112.41 49 114.82 50 118.71 51 121.76 52 127.60 53 126.90 (1) 1,42 [Kr] 4d^a 5s² -2.924(1) 0.89 -2.89 0.99 -2.37(3) 1.11 -1.55(4) 1.22 -1.099(3) 1.23 -0.20(3) 1.30 0.28(4) 1.36 0.623(3) 1.42 -0.76(3) 1.45 0.915(2) 0.779(1) -0.403(2) 1.46 -0.343(3) 1.49 -0.137(2) 1.72 0.150(3) 1.82 -0.69(-2) 2.01 0.536(-1) [Kr] 4d¹ 5s² [Kr] 4d² 5s² [Kr] 4d³ 5s² [Kr] 4d⁴ 5s² [Kr] 4d° 5s² [Kr] 4d° 5s² [Kr] 4d' 5s' [Kr] 4d^a 5s² [Kr] 4d¹⁰5s² [Kr] 4d105s25p1 [Kr] 4d¹⁰5s²5p² [Kr] 4d¹⁰5s²5p³ [Kr] 4d105s25p4 [Kr] 4d10 5s2 5p6 39 / 688 769 / 1384 1522 / 3338 1852 / 4377 2468 / 4928 2617 / 4825 2172 / 4877 2310 / 3900 1966 / 2730 1554 / 3140 962 / 2163 321 / 765 157 / 2080 232 B / 2687 631 A / 1635 450 / 990 114 / 184 -112 / -108 Sr Rh Pd Rb Ru Nb Sn Sb Mo Cd Te Xe In Rubidium Strontium Yttrium Zirconium Niob Molybdän Technetium Ruthenium Rhodium Palladium Silber Cadmium Indium 7inn Antimon Tellur Xenon 72 178,94||73 180,95||74 183,84||75 186,21||76 190,23||77 192,22||78 195,08||79 196,97| 80 200,59 81 204,38 55 132,91 56 137,33 82 207,2 83 208,98 84 209,98 85 210,99 86 222,02 0.440(2) -0,440(2) -0,182(5) -0.199(4) 0.22(4) 0,687(4) 1,156(3) 1,188(2) 1,691(1) 0,860(2) -0,336(1) -0.125(2) 0.317(3) (Xe] 4f⁴5d⁴ 6s² [Xe] 4f⁴5d⁶6s² [Xe] 4f⁴5d¹⁰6s² [Xe] 4f⁴5d² 6s² [Xe] 4f 5d 6s [Xe] 4f⁴5d⁶6s² [Xe] 4f²⁴5d⁷ 6s² [Xe] 4f⁴5d⁸ 6s² [Xe] 4f⁴5d⁹ 6s² [Xe]4f⁴5d¹⁰6s²6p¹ [Xe]4f²⁴5d²⁰6s²6p² [Xe]4f²⁴5d²⁰6s²6p³ [Xe]4f⁴5d¹⁰6s²6p⁴ [Xe]4f¹⁴5d¹⁰6s²6p⁶ 2410 / 4530 303 / 1457 328 / 1740 1535 / 2750 1535 / 2750 227 / 4602 3410 / 5657 3180 / 5630 3054 / 5027 1772 / 3827 1064 / 2908 -39 / 357 271 / 1560 254 / 962 2996 / 5425 Bi Ва Re Po Rn Cs Ηt Au Hg ı a Caesium Barium Hafnium Tantal Worlfram Rhenium Osmium Iridium Platin Gold Quecksilber Thallium Rlei Bismut Polonium Astat Radon 106 271,13 109 276,15 110 281,16 111 280,16 112 285,17 114 289,19 115 288,19 116 292,20 117 118 223,02 88 228,03 104 267,12 105 268,13 107 267,13 108 277,15 113 284,18 -2,9(1) -2,916(2) [Rn] 5f46d2 7s2 [Rn] 5f46d107s27p1 [Rn]5f46d107s27p2 [Rn]5f46d107s27p3 [Rn] 5f46d3 4s3 [Rn] 5f46d4 7s2 [Rn] 5f*6d* 7s² [Rn] 5f*6d* 7s² [Rn] 5f46d7 7s [Rn] 5f46d1 7s [Rn] 5f46d9 7s [Rn] 5f46d107s [Rn15f46d107s27p4 [Rn15f⁴6d¹⁰7s²7p⁵ [Rn15f⁴6d¹⁰7s²7p 27 / 677 700 / 1140 Ra Bh HS Francium Radium Rutherfordium Dubnium Seaborgium Bohrium Hassium Meitnerium Darmstadtium Roentgenium Copernicium Ununtrium Flerovium Ununpentium Livermorium Ununseptium Ununoctium 57 138,91 | 58 140,12 | 59 140,91 | 60 144,24 | 61 146,92 | 62 150,36 | 63 151,96 | 64 157,25 | 65 158,93 | 66 162,50 67 164,93 68 167.26 69 168.93 70 173.05 71 174.97 1.01 -2.28(3) -2 38(3) 1.08 -1.33(4) 1.08 -0.96(4) 1.07 -2.29(3) 1.07 -2.29(3) 1.07 -2.67(2) 1.07 -2.80(2) 1.11 -2.31(3) 1.10 -2.29(3) 1 10 -2.33(3) 1 10 -2.32(3) 1 11 -2.32(3) 1 11 -2.22(3) 1.06 -2.30(3) [Xe15d16s2 [Xe] 4f 6s [Xe] 4f 6s [Xe] 4f 6s² [Xe] 4f 6s² [Xe] 4f 6s2 [Xe] 4f 6s² [Xe] 4f 5d 6s [Xe] 4f 6s2 [Xe] 4f¹⁰6s² [Xe] 4f¹6s² [Xe] 4f²6s² [Xe] 4f² 6s² [Xe] 4f²⁴6s² [Xe] 4f¹⁴5d¹ 6s² 920 / 3469 798 / 3443 931 / 3250 1024 / 3074 931 / 2730 1074 / 1794 826 / 1439 1312 / 3273 1356 / 3230 1407 / 2562 1474 / 2720 1497 / 2863 1545 / 1947 819 / 1196 1663 / 3395 Pm La Na ΙD ım Yр Lanthan Paseodym Neodym Promethium Samarium Europium Gadolinium Terbium Dysprosium Ytterhium Lutetium



244,06 95

1.22 -1.96(2)

641 / 3232

Plutonium

1.22 -1.25

[Rn] 5f 6d 7s

Neptunium

αN

630 / 3902

243,06

994 / 2607

Am

Americium

96

-2.06(3)

Curium

248,07

1340 / 3110

[Rn] 5f 6d¹ 7s²

97

-1.96(3)

Bk

Berkelium

249,08

986 / 2950

[Rn] 5f 7s

98

-1.91(3)

[Rn] 5f°7s

Californium

950 /

99

-1.98(3)

254,09

Einsteinium

860 /

100 257,1

900 /

-2.53(2)

Md

Medelivium

-2.5(2)

Fm

Fermium

101 260,10 102 259,10

-2.6(2)

No

Nobelium

-2.1(3)

[Rn] 5f46d1 4s

Lawrencium

232,04 91 231,04 92 238,05 93 237,05 94

[Rn] 5f 6d¹ 7s²

1132 / 3930

1.22 -1.01(5)

1.14 -0.836(3)

[Rn] 5f 6d¹ 7s²

Pa

1845 / 4027

Protactinium Uran

-2.13(3)

Ac

Actinium

1.00 -1.83(4)

1050 / 3200

1.11 -1.19(5)

1750 / 4788

I n Thorium