

Periodensystem der Elemente

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Benennung mit Haupt- und Nebengruppen
IUPAC – Empfehlung
Von Chemical Abstracts Service bis 1986 verwendet

1 1. Hg IA 1,00794 2s ¹ 1 H -1,1 -259 -253 Wasserstoff	2 2. Hg IIA 9,012182 [He]2s ² 2 3Li 1 181 1317 Lithium	3 3. Ng 22,989770 [Ne]3s ¹ 3 11Na 1 98 892 Natrium	4 4. Ng IIB 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	5 5. Hg VB 22,989770 [Ne]3s ¹ 3 11Na 1 98 892 Natrium	6 6. Ng VIB 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	7 7. Ng VIIIB 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	8 8. Ng VIII 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	9 8. Ng VIII 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	10 8. Ng VIII 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	11 1. Ng IB 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	12 2. Ng IIA 24,3050 [He]2s ² 2 4Be 2 1278 2970 Beryllium	13 3. Hg IIIA 14,00674 [He]2s ² 2p ¹ 3 5B 3 2300 2550 Bor	14 4. Hg IVA 12,0107 [He]2s ² 2p ² 4 6C -4,2,4 2350 4827 Kohlenstoff	15 5. Hg VA 14,00674 [He]2s ² 2p ³ 5 7N -3,2,3,4,5 210 113 Stickstoff	16 6. Hg VIA 15,9994 [He]2s ² 2p ⁴ 6 8O -2,-1 196 145 Sauerstoff	17 7. Hg VIIA 18,9984032 [He]2s ² 2p ⁵ 7 9F -1 183 13,6 Fluor	18 8. Hg VIIIA 4,002602 1s ² 2 He -272 -269 Helium		
Relative Atommasse (Massenzahl des tangibelsten Isotops) 243,0614 [Rn]5f ⁷ 7s ² 95Am 3,4,5,6 Künstliches Element Elektronenkonfiguration Elementsymbol Oxidationszahlen (häufigste) Elektronegativität Erste Ionisierungsenergie [eV]		Elementensymbol: Tc = kein stabiles Isotop bekannt N = gasförmig Br = flüssig (bei 20 °C) Am = fest																	
39,0983 [Ar]4s ¹ 19K 1 64 774 Kalium	40,078 [Ar]4s ² 20Ca 2 839 1487 Calcium	44,955910 [Ar] 3d ⁴ 4s ² 21Sc 3 1539 2832 Scandium	47,867 [Ar] 3d ³ 4s ² 22Ti 3,4 1660 3260 Titan	50,9415 [Ar] 3d ³ 4s ² 23V 0,2,3,4,5 1890 3380 Vanadium	51,9961 [Ar]3d ⁴ 4s ¹ 24Cr 0,2,3,6 1857 2482 Chrom	54,938049 [Ar]3d ⁵ 4s ¹ 25Mn -1,0,2,3,4,6,7 1244 2097 Mangan	55,845 [Ar]3d ⁵ 4s ² 26Fe -2,0,2,3,6 1535 2750 Eisen	58,93320 [Ar]3d ⁶ 4s ² 27Co -1,0,2,3 1495 2870 Cobalt	58,6934 [Ar] 3d ⁶ 4s ² 28Ni 0,2,3 1453 2732 Nickel	63,546 [Ar] 3d ⁸ 4s ¹ 29Cu 1,2 1084 2595 Kupfer	65,39 [Ar]3d ¹⁰ 4s ² 30Zn 2 420 907 Zink	69,723 [Ar]3d ¹⁰ 4s ² 4p ¹ 31Ga 3 30 2403 Gallium	72,61 [Ar]3d ¹⁰ 4s ² 4p ² 32Ge 4 1410 2403 Germanium	74,92160 [Ar]3d ¹⁰ 4s ² 4p ³ 33As -3,3,5 613(subl.) 9,8 Arsen	78,96 [Ar]3d ¹⁰ 4s ² 4p ⁴ 34Se -2,4,6 217 685 Selen	79,904 [Ar]3d ¹⁰ 4s ² 4p ⁵ 35Br -1,1,3,5,7 59 118 Brom	83,80 [Ar]3d ¹⁰ 4s ² 4p ⁶ 36Kr 2 189 152 Krypton		
85,4678 [Kr]5s ¹ 37Rb 1 89 888 Rubidium	87,62 [Kr]5s ² 38Sr 2 769 1384 Strontium	88,90585 [Kr]4d ⁵ 5s ² 39Y 3 1523 3337 Yttrium	91,224 [Kr]4d ² 5s ² 40Zr 4 1852 4377 Zirkonium	92,90638 [Kr]4d ⁵ 5s ¹ 41Nb 3,5 1246 4927 Niobium	95,94 [Kr]4d ⁵ 5s ¹ 42Mo 0,2,3,4,5,6 1261 5560 Molybdän	[98] [Kr]4d ⁶ 5s ¹ 43Tc 7 2172 5030 Technetium	101,07 [Kr]4d ⁵ 5s ¹ 44Ru 0,2,3,4,6,8 1410 3900 Ruthenium	102,90550 [Kr]4d ⁶ 5s ¹ 45Rh 0,1,2,3,4,5 1966 5140 Rhodium	106,42 [Kr]4d ⁸ 46Pd 0,2,4 1552 3140 Palladium	107,8682 [Kr]4d ⁹ 5s ¹ 47Ag 1,2 962 2212 Silber	112,411 [Kr]4d ¹⁰ 5s ² 48Cd 2 321 765 Cadmium	114,818 [Kr]4d ¹⁰ 5s ² 5p ¹ 49In 3 157 2080 Indium	118,710 [Kr]4d ¹⁰ 5s ² 5p ² 50Sn 2,4 232 2270 Zinn	121,760 [Kr]4d ¹⁰ 5s ² 5p ³ 51Sb -3,3,5 631 1750 Antimon	127,60 [Kr]4d ¹⁰ 5s ² 5p ⁴ 52Te -2,4,6 450 8690 Tellur	126,90447 [Kr]4d ¹⁰ 5s ² 5p ⁵ 53I -1,1,5,7 114 184 Iod	131,29 [Kr]4d ¹⁰ 5s ² 5p ⁶ 54Xe 2,4,6 112 107 Xenon		
132,90545 [Xe]6s ¹ 55Cs 1 89 890 Cäsium	137,327 [Xe]6s ² 56Ba 2 725 1640 Barium	57 – 71 [Xe]4f ¹⁻¹⁴ 6s ² Lanthanoide	178,49 [Xe]4f ¹⁴ 5d ¹ 6s ² 72Hf 4 2150 5400 Hafnium	180,9479 [Xe]4f ¹⁴ 5d ² 6s ² 73Ta 5 2996 5425 Tantal	183,84 [Xe]4f ¹⁴ 5d ³ 6s ² 74W 0,2,3,4,5,6 3407 5927 Wolfram	186,207 [Xe]4f ¹⁴ 5d ⁵ 6s ² 75Re -1,2,4,6,7 3180 5627 Rhenium	190,23 [Xe]4f ¹⁴ 5d ⁶ 6s ² 76Os -2,0,2,3,4,6,8 2410 5027 Osmium	192,217 [Xe]4f ¹⁴ 5d ⁷ 6s ² 77Ir -1,0,1,2,3,4,6 1772 4130 Iridium	195,078 [Xe]4f ¹⁴ 5d ⁸ 6s ¹ 78Pt 0,2,4 1772 3827 Platin	196,96655 [Xe]4f ¹⁴ 5d ⁹ 6s ¹ 79Au 1,3 1064 2940 Gold	200,59 [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 80Hg 1,2 39 357 Quecksilber	204,3833 [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ¹ 81Tl 1,3 304 1457 Thallium	207,2 [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ² 82Pb 2,4 328 61 Blei	208,98038 [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ³ 83Bi 3,5 271 1560 Bismut	[209] [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁴ 84Po 2,4,6 271 73 Polonium	[210] [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵ 85At -1,1,3,5,7 302 337 Astat	[222] [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁶ 86Rn 2 71 62 Radon		
[223] [Rn]7s ¹ 87Fr 1 27 677 Francium	[226] [Rn]7s ² 88Ra 2 700 1140 Radium	89 – 103 [Rn]5f ¹⁻¹⁴ 6d ¹⁻¹⁰ 7s ² Ac-Lr Actinoide	[261] [Rn]5f ¹⁴ 6d ¹ 7s ² 104Rf	[262] [Rn]5f ¹⁴ 6d ² 7s ² 105Db	[263] [Rn]5f ¹⁴ 6d ³ 7s ² 106Sg	[264] [Rn]5f ¹⁴ 6d ⁴ 7s ² 107Bh	[265] [Rn]5f ¹⁴ 6d ⁵ 7s ² 108Hs	[268] [Rn]5f ¹⁴ 6d ⁷ 7s ² 109Mt	[269] [Rn]5f ¹⁴ 6d ⁸ 7s ¹ 110Uun	[272] [Rn]5f ¹⁴ 6d ⁹ 7s ¹ 111Uuu	[277] [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 112Uub	[289] [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 6p ¹ 113Uut	[289] [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 6p ² 114Uuq	[289] [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 6p ³ 115Uup	[289] [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 6p ⁴ 116Uuh	[210] [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 6p ⁵ 117Uus	[293] [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 6p ⁶ 118Uuo		

* Die Elemente mit den Ordnungszahlen 113, 115, 117 wurden noch nicht synthetisiert!

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138,9055 [Xe]4f ¹⁴ 6s ² 57La 3 920 3454 Lanthan	140,116 [Xe]4f ¹⁴ 6s ² 58Ce 3,4 798 3257 Cer	140,90765 [Xe]4f ¹⁴ 6s ² 59Pr 3,4 931 3212 Praseodym	144,24 [Xe]4f ¹⁴ 6s ² 60Nd 3 1010 3127 Neodym	[145] [Xe]4f ¹⁴ 6s ² 61Pm 3 1080 2730 Promethium	150,36 [Xe]4f ¹⁴ 6s ² 62Sm 2,3 1072 1778 Samarium	151,964 [Xe]4f ¹⁴ 6s ² 63Eu 2,3 822 1597 Europium	157,25 [Xe]4f ¹⁴ 5d ¹ 6s ² 64Gd 3 1311 3233 Gadolinium	158,92534 [Xe]4f ¹⁴ 6s ² 65Tb 3,4 1360 3041 Terbium	162,50 [Xe]4f ¹⁴ 6s ² 66Dy 3 1406 2335 Dysprosium	164,93032 [Xe]4f ¹⁴ 6s ² 67Ho 3 1470 2720 Holmium	167,26 [Xe]4f ¹⁴ 6s ² 68Er 3 1522 2510 Erbium	168,93421 [Xe]4f ¹⁴ 6s ² 69Tm 2,3 1545 1727 Thulium	173,04 [Xe]4f ¹⁴ 6s ² 70Yb 2,3 824 1193 Ytterbium	174,967 [Xe]4f ¹⁴ 5d ¹ 6s ² 71Lu 3 1656 3315 Lutetium
[227] [Rn]6d ¹ 7s ² 89Ac 3 1047 3197 Actinium	[232] [Rn]6d ² 7s ² 90Th 4 1750 4787 Thorium	[231] [Rn]5f ⁶ 6d ¹ 7s ² 91Pa 4,5 1554 4030 Protactinium	[238] [Rn]5f ⁶ 6d ¹ 7s ² 92U 3,4,5,6 1132 3902 Uran	[237] [Rn]5f ⁶ 6d ¹ 7s ² 93Np 3,4,5,6 640 3902 Neptunium	[244] [Rn]5f ⁷ 7s ² 94Pu 3,4,5,6 641 3327 Plutonium	[243] [Rn]5f ⁷ 7s ² 95Am 3,4,5,6 994 2607 Americium	[247] [Rn]5f ⁷ 6d ¹ 7s ² 96Cm 3,4 1340 3100 Curium	[247] [Rn]5f ⁷ 6d ¹ 7s ² 97Bk 3,4 986 -1,2 Berkelium	[251] [Rn]5f ⁹ 7s ² 98Cf 3,4 900 -1,2 Californium	[252] [Rn]5f ¹⁰ 7s ² 99Es 3 860 -1,2 Einsteinium	[257] [Rn]5f ¹⁰ 7s ² 100Fm 3 900 -1,2 Fermium	[258] [Rn]5f ¹⁰ 7s ² 101Md 3 1017 -1,2 Mendelevium	[259] [Rn]5f ¹⁰ 7s ² 102No 2,3 824 -1,2 Nobelium	[262] [Rn]5f ¹⁴ 6d ¹ 7s ² 103Lr 3 1656 -1,2 Lawrencium