

period	group Ia											VIIa	0					
1	1 1.00797 H 1s ¹ hydrogen											1 1.00797 H 1s ¹ hydrogen	2 4.0026 He 1s ² helium					
2	3 6.939 Li 1s ² 2s ¹ lithium	IIa								4 9.0122 Be 1s ² 2s ² beryllium			6 10.811 B 1s ² 2s ² 2p ¹ boron	7 12.01115 C 1s ² 2s ² 2p ² carbon	8 14.0067 N 1s ² 2s ² 2p ³ nitrogen	9 15.9994 O 1s ² 2s ² 2p ⁴ oxygen	10 18.9984 F 1s ² 2s ² 2p ⁵ fluorine	11 20.183 Ne 1s ² 2s ² 2p ⁶ neon
3	11 22.9898 Na [Ne]3s ¹ sodium	12 24.312 Mg 3s ² magnesium											13 26.9815 Al 3s ² 3p ¹ aluminum	14 28.086 Si 3s ² 3p ² silicon	15 30.9738 P 3s ² 3p ³ phosphorus	16 32.064 S 3s ² 3p ⁴ sulfur	17 35.453 Cl 3s ² 3p ⁵ chlorine	18 39.948 Ar 3s ² 3p ⁶ argon
4	19 39.102 K [Ar]4s ¹ potassium	20 40.08 Ca 4s ² calcium	21 44.956 Sc 3d ¹ 4s ² scandium	22 47.90 Ti 3d ² 4s ² titanium	23 50.942 V 3d ³ 4s ² vanadium	24 51.996 Cr 3d ⁵ 4s ¹ chromium	25 54.938 Mn 3d ⁵ 4s ² manganese	26 55.847 Fe 3d ⁶ 4s ² iron	27 58.933 Co 3d ⁷ 4s ² cobalt	28 58.71 Ni 3d ⁸ 4s ² nickel	29 63.54 Cu 3d ¹⁰ 4s ¹ copper	30 65.37 Zn 3d ¹⁰ 4s ² zinc	31 69.72 Ga 3d ¹⁰ 4s ² 4p ¹ gallium	32 72.59 Ge 3d ¹⁰ 4s ² 4p ² germanium	33 74.922 As 3d ¹⁰ 4s ² 4p ³ arsenic	34 78.96 Se 3d ¹⁰ 4s ² 4p ⁴ selenium	35 79.909 Br 3d ¹⁰ 4s ² 4p ⁵ bromine	36 83.80 Kr 3d ¹⁰ 4s ² 4p ⁶ krypton
5	37 85.47 Rb [Kr]5s ¹ rubidium	38 87.62 Sr 5s ² strontium	39 88.905 Y 4d ¹ 5s ² yttrium	40 91.22 Zr 4d ² 5s ² zirconium	41 92.906 Nb 4d ⁴ 5s ¹ niobium	42 95.94 Mo 4d ⁵ 5s ¹ molybdenum	43 (98) Tc 4d ⁵ 5s ² technetium	44 101.07 Ru 4d ⁷ 5s ¹ ruthenium	45 102.905 Rh 4d ⁸ 5s ¹ rhodium	46 106.4 Pd 4d ¹⁰ 5s ⁰ palladium	47 107.870 Ag 4d ¹⁰ 5s ¹ silver	48 112.40 Cd 4d ¹⁰ 5s ² cadmium	49 114.82 In 4d ¹⁰ 5s ² 5p ¹ indium	50 118.69 Sn 4d ¹⁰ 5s ² 5p ² tin	51 121.75 Sb 4d ¹⁰ 5s ² 5p ³ antimony	52 127.60 Te 4d ¹⁰ 5s ² 5p ⁴ tellurium	53 126.904 I 4d ¹⁰ 5s ² 5p ⁵ iodine	54 131.30 Xe 4d ¹⁰ 5s ² 5p ⁶ xenon
6	55 132.905 Cs [Xe]6s ¹ cesium	56 137.34 Ba 6s ² barium	57 138.91 La 5d ¹ 6s ² lanthanum	72 178.49 Hf 4f ¹⁴ 5d ² 6s ² hafnium	73 180.948 Ta 4f ¹⁴ 5d ³ 6s ² tantalum	74 183.85 W 4f ¹⁴ 5d ⁴ 6s ² tungsten	75 186.2 Re 4f ¹⁴ 5d ⁵ 6s ² rhenium	76 190.2 Os 4f ¹⁴ 5d ⁶ 6s ² osmium	77 192.2 Ir 4f ¹⁴ 5d ⁷ 6s ² iridium	78 195.09 Pt 4f ¹⁴ 5d ⁹ 6s ¹ platinum	79 196.967 Au 4f ¹⁴ 5d ¹⁰ 6s ¹ gold	80 200.59 Hg 4f ¹⁴ 5d ¹⁰ 6s ² mercury	81 204.37 Tl 4f ¹⁴ 5d ¹⁰ 6s ² 6p ¹ thallium	82 207.19 Pb 4f ¹⁴ 5d ¹⁰ 6s ² 6p ² lead	83 208.980 Bi 4f ¹⁴ 5d ¹⁰ 6s ² 6p ³ bismuth	84 (210) Po 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁴ polonium	85 (210) At 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵ astatine	86 (222) Rn 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁶ radon
7	87 (223) Fr [Rn]7s ¹ francium	88 (226) Ra 7s ² radium	89 (227) Ac 6d ¹ 7s ² actinium	104 *** Rf ***	105 *** Ha ***													

6 *	58 140.12 Ce [Xe]4f ¹ 5d ⁰ 6s ² cerium	59 140.907 Pr 4f ³ 5d ⁰ 6s ² praseodymium	60 144.24 Nd 4f ⁴ 5d ⁰ 6s ² neodymium	61 (147) Pm 4f ⁵ 5d ⁰ 6s ² promethium	62 150.35 Sm 4f ⁶ 5d ⁰ 6s ² samarium	63 151.96 Eu 4f ⁷ 5d ⁰ 6s ² europium	64 157.25 Gd 4f ⁷ 5d ¹ 6s ² gadolinium	65 158.924 Tb 4f ⁹ 5d ⁰ 6s ² terbium	66 162.50 Dy 4f ¹⁰ 5d ⁰ 6s ² dysprosium	67 164.930 Ho 4f ¹¹ 5d ⁰ 6s ² holmium	68 167.26 Er 4f ¹² 5d ⁰ 6s ² erbium	69 168.934 Tm 4f ¹³ 5d ⁰ 6s ² thulium	70 173.04 Yb 4f ¹⁴ 5d ⁰ 6s ² ytterbium	71 174.97 Lu 4f ¹⁴ 5d ¹ 6s ² lutetium
7 *	90 232.038 Th [Rn]5f ¹⁴ 6d ² 7s ² thorium	91 (231) Pa 5f ² 6d ¹ 7s ² protactinium	92 238.03 U 5f ³ 6d ¹ 7s ² uranium	93 (237) Np 5f ⁴ 6d ¹ 7s ² neptunium	94 (242) Pu 5f ⁶ 6d ⁰ 7s ² plutonium	95 (243) Am 5f ⁷ 6d ⁰ 7s ² americium	96 (247) Cm 5f ⁷ 6d ¹ 7s ² curium	97 (247) Bk 5f ⁹ 6d ⁰ 7s ² berkelium	98 (249) Cf 5f ¹⁰ 6d ⁰ 7s ² californium	99 (254) Es 5f ¹¹ 6d ⁰ 7s ² einsteinium	100 (253) Fm 5f ¹² 6d ⁰ 7s ² fermium	101 (256) Md 5f ¹³ 6d ⁰ 7s ² mendelevium	102 (254) No 5f ¹⁴ 6d ⁰ 7s ² nobelium	103 (257) Lr 5f ¹⁴ 6d ¹ 7s ² lawrencium

acid-base properties of higher-valence oxides: ● strongly basic ◐ weakly basic ◑ weakly acidic ◒ equal relative strength ◓ strongly acidic

◑ cubic, face centred; ◒ cubic, body centred; ◓ diamond; ◔ cubic; ◕ hexagonal; ◖ rhombohedral; ◗ tetragonal; ◘ orthorhombic; ◙ monoclinic

— solid under normal conditions ~~~ liquid under normal conditions gas under normal conditions = synthetically prepared *** data are currently in dispute