

Periodic Table of the Elements

Ground State Electron Configurations

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1A 1 H 1s ¹											2A 2 He 1s ²						
3 Li 1s ² 2s ¹	4 Be 1s ² 2s ²											5 B 1s ² 2s ² 2p ¹	6 C 1s ² 2s ² 2p ²	7 N 1s ² 2s ² 2p ³	8 O 1s ² 2s ² 2p ⁴	9 F 1s ² 2s ² 2p ⁵	10 Ne 1s ² 2s ² 2p ⁶
11 Na [Ne]3s ¹	12 Mg [Ne]3s ²	3B	4B	5B	6B	7B	8B			1B	2B	13 Al [Ne]3s ² 3p ¹	14 Si [Ne]3s ² 3p ²	15 P [Ne]3s ² 3p ³	16 S [Ne]3s ² 3p ⁴	17 Cl [Ne]3s ² 3p ⁵	18 Ar [Ne]3s ² 3p ⁶
19 K [Ar]4s ¹	20 Ca [Ar]4s ²	21 Sc [Ar]3d ¹ 4s ²	22 Ti [Ar]3d ² 4s ²	23 V [Ar]3d ³ 4s ²	24 Cr [Ar]3d ⁵ 4s ¹	25 Mn [Ar]3d ⁵ 4s ²	26 Fe [Ar]3d ⁶ 4s ²	27 Co [Ar]3d ⁷ 4s ²	28 Ni [Ar]3d ⁸ 4s ²	29 Cu [Ar]3d ¹⁰ 4s ¹	30 Zn [Ar]3d ¹⁰ 4s ²	31 Ga [Ar]3d ¹⁰ 4s ² 4p ¹	32 Ge [Ar]3d ¹⁰ 4s ² 4p ²	33 As [Ar]3d ¹⁰ 4s ² 4p ³	34 Se [Ar]3d ¹⁰ 4s ² 4p ⁴	35 Br [Ar]3d ¹⁰ 4s ² 4p ⁵	36 Kr [Ar]3d ¹⁰ 4s ² 4p ⁶
37 Rb [Kr]5s ¹	38 Sr [Kr]5s ²	39 Y [Kr]4d ¹ 5s ²	40 Zr [Kr]4d ² 5s ²	41 Nb [Kr]4d ⁴ 5s ¹	42 Mo [Kr]4d ⁵ 5s ¹	43 Tc [Kr]4d ⁵ 5s ²	44 Ru [Kr]4d ⁷ 5s ¹	45 Rh [Kr]4d ⁸ 5s ¹	46 Pd [Kr]4d ¹⁰	47 Ag [Kr]4d ¹⁰ 5s ¹	48 Cd [Kr]4d ¹⁰ 5s ²	49 In [Kr]4d ¹⁰ 5s ² 4p ¹	50 Sn [Kr]4d ¹⁰ 5s ² 4p ²	51 Sb [Kr]4d ¹⁰ 5s ² 4p ³	52 Te [Kr]4d ¹⁰ 5s ² 4p ⁴	53 I [Kr]4d ¹⁰ 5s ² 4p ⁵	54 Xe [Kr]4d ¹⁰ 5s ² 4p ⁶
55 Cs [Xe]6s ¹	56 Ba [Xe]6s ²	57-71 Lanthanides	72 Hf [Xe]4f ¹⁴ 5d ² 6s ²	73 Ta [Xe]4f ¹⁴ 5d ³ 6s ²	74 W [Xe]4f ¹⁴ 5d ⁴ 6s ²	75 Re [Xe]4f ¹⁴ 5d ⁵ 6s ²	76 Os [Xe]4f ¹⁴ 5d ⁶ 6s ²	77 Ir [Xe]4f ¹⁴ 5d ⁷ 6s ²	78 Pt [Xe]4f ¹⁴ 5d ⁹ 6s ¹	79 Au [Xe]4f ¹⁴ 5d ¹⁰ 6s ¹	80 Hg [Xe]4f ¹⁴ 5d ¹⁰ 6s ²	81 Tl [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ¹	82 Pb [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ²	83 Bi [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ³	84 Po [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁴	85 At [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵	86 Rn [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁶
87 Fr [Rn]7s ¹	88 Ra [Rn]7s ²	89-103 Actinides	104 Rf [Rn]5f ¹⁴ 6d ² 7s ^{2*}	105 Db [Rn]5f ¹⁴ 6d ³ 7s ^{2*}	106 Sg [Rn]5f ¹⁴ 6d ⁴ 7s ^{2*}	107 Bh [Rn]5f ¹⁴ 6d ⁵ 7s ^{2*}	108 Hs [Rn]5f ¹⁴ 6d ⁶ 7s ^{2*}	109 Mt [Rn]5f ¹⁴ 6d ⁷ 7s ^{2*}	110 Ds [Rn]5f ¹⁴ 6d ⁹ 7s ^{1*}	111 Rg [Rn]5f ¹⁴ 6d ¹⁰ 7s ^{1*}	112 Cn [Rn]5f ¹⁴ 6d ¹⁰ 7s ^{2*}	113 Uut [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ^{1*}	114 Uuq [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ^{2*}	115 Uup [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ^{3*}	116 Uuh [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ^{4*}	117 Uus [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ^{5*}	118 Uuo [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ^{6*}

Lanthanides	57 La [Xe]4f ¹ 6s ²	58 Ce [Xe]4f ² 5d ¹ 6s ²	59 Pr [Xe]4f ³ 6s ²	60 Nd [Xe]4f ⁴ 6s ²	61 Pm [Xe]4f ⁵ 6s ²	62 Sm [Xe]4f ⁶ 6s ²	63 Eu [Xe]4f ⁷ 6s ²	64 Gd [Xe]4f ⁷ 5d ¹ 6s ²	65 Tb [Xe]4f ⁹ 6s ²	66 Dy [Xe]4f ¹⁰ 6s ²	67 Ho [Xe]4f ¹¹ 6s ²	68 Er [Xe]4f ¹² 6s ²	69 Tm [Xe]4f ¹³ 6s ²	70 Yb [Xe]4f ¹⁴ 6s ²	71 Lu [Xe]4f ¹⁴ 5d ¹ 6s ²
Actinides	89 Ac [Rn]6d ¹ 7s ²	90 Th [Rn]6d ² 7s ²	91 Pa [Rn]5f ² 6d ¹ 7s ²	92 U [Rn]5f ³ 6d ¹ 7s ²	93 Np [Rn]5f ⁴ 6d ¹ 7s ²	94 Pu [Rn]5f ⁶ 7s ²	95 Am [Rn]5f ⁷ 7s ²	96 Cm [Rn]5f ⁷ 6d ¹ 7s ²	97 Bk [Rn]5f ⁹ 7s ²	98 Cf [Rn]5f ¹⁰ 7s ²	99 Es [Rn]5f ¹¹ 7s ²	100 Fm [Rn]5f ¹² 7s ²	101 Md [Rn]5f ¹³ 7s ²	102 No [Rn]5f ¹⁴ 7s ²	103 Lr [Rn]5f ¹⁴ 6d ¹ 7s ²

* values are based on theory and are not verified