

Periodic Table of the Elements

Ground State Electron Configurations

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About Chemistry

1A												3A 4A 5A 6A 7A						8A
1 H 1s ¹	2A											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	
3 Li 1s ² 2s ¹	4 Be 1s ² 2s ²											13 Al 1s ² 3s ² 3p ¹	14 Si 1s ² 3s ² 3p ²	15 P 1s ² 3s ² 3p ³	16 S 1s ² 3s ² 3p ⁴	17 Cl 1s ² 3s ² 3p ⁵	18 Ar 1s ² 3s ² 3p ⁶	
11 Na [Ne] 3s ¹	12 Mg [Ne] 3s ²	3B	4B	5B	6B	7B	8B			1B	2B	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	
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 5p ¹	50 Sn [Kr] 4d ¹⁰ 5s ² 5p ²	51 Sb [Kr] 4d ¹⁰ 5s ² 5p ³	52 Te [Kr] 4d ¹⁰ 5s ² 5p ⁴	53 I [Kr] 4d ¹⁰ 5s ² 5p ⁵	54 Xe [Kr] 4d ¹⁰ 5s ² 5p 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 ⁸ 7s ²	111 Rg [Rn] 5f ¹⁴ 6d ⁹ 7s ²	112 Cn [Rn] 5f ¹⁴ 6d ¹⁰ 7s ²	113 Uut [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ¹	114 Fl [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ²	115 Uup [Rn] 5f ¹⁴ 6d ¹⁰ 7s ² 7p ³	116 Lv [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] 5d ¹ 6s ²	58 Ce [Xe] 4f ¹ 6s ²	59 Pr [Xe] 4f ² 6s ²	60 Nd [Xe] 4f ³ 6s ²	61 Pm [Xe] 4f ⁴ 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 6d ¹ 7s ²	95 Am [Rn] 5f ⁷ 7s ²	96 Cm [Rn] 5f ⁷ 6d ¹ 7s ²	97 Bk [Rn] 5f ⁹ 6d ¹ 7s ²	98 Cf [Rn] 5f ¹⁰ 6d ¹ 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 6d ¹ 7s ²	103 Lr [Rn] 5f ¹⁴ 6d ¹ 7s ²

* values are based on theory and are not verified