

Table 2-2 Electronic configurations for atoms in the ground state.

Atomic number (Z)	Element	Number of electrons						Shorthand notation	
		$n=1$ $l=0$	2		3		4		
		1s	2s	2p	3s	3p	3d	4s	4p
1	H	1						1s ¹	
2	He	2						1s ²	
3	Li		1					1s ² 2s ¹	
4	Be		2					1s ² 2s ²	
5	B		2	1				1s ² 2s ² 2p ¹	
6	C		2	2				1s ² 2s ² 2p ²	
7	N		2	3				1s ² 2s ² 2p ³	
8	O		2	4				1s ² 2s ² 2p ⁴	
9	F		2	5				1s ² 2s ² 2p ⁵	
10	Ne		2	6				1s ² 2s ² 2p ⁶	
11	Na				1			[Ne] 3s ¹	
12	Mg				2			3s ²	
13	Al				2	1		3s ² 3p ¹	
14	Si				2	2		3s ² 3p ²	
15	P				2	3		3s ² 3p ³	
16	S				2	4		3s ² 3p ⁴	
17	Cl				2	5		3s ² 3p ⁵	
18	Ar				2	6		3s ² 3p ⁶	
19	K							[Ar] 4s ¹	
20	Ca							4s ²	
21	Sc				1			3d ¹ 4s ²	
22	Ti				2			3d ² 4s ²	
23	V				3			3d ³ 4s ²	
24	Cr				5	1		3d ⁵ 4s ¹	
25	Mn				5	2		3d ⁵ 4s ²	
26	Fe				6	2		3d ⁶ 4s ²	
27	Co				7	2		3d ⁷ 4s ²	
28	Ni				8	2		3d ⁸ 4s ²	
29	Cu				10	1		3d ¹⁰ 4s ¹	
30	Zn				10	2		3d ¹⁰ 4s ²	
31	Ga				10	2	1	3d ¹⁰ 4s ² 4p ¹	
32	Ge				10	2	2	3d ¹⁰ 4s ² 4p ²	
33	As				10	2	3	3d ¹⁰ 4s ² 4p ³	
34	Se				10	2	4	3d ¹⁰ 4s ² 4p ⁴	
35	Br				10	2	5	3d ¹⁰ 4s ² 4p ⁵	
36	Kr				10	2	6	3d ¹⁰ 4s ² 4p ⁶	