# Structure 1.3 · Electron configurations

International Baccalaureate · IB Diploma · Chemistry · SL · Vocabulary in context

| Word | Example |
|---|---|
| **electromagnetic spectrum** /ɪˌlektrəʊməgˈnetɪk ˈspektrəm/ | Radio waves and X-rays are both in the **electromagnetic spectrum**. X |
| **photon** /ˈfəʊtɒn/ | A **photon** is a small packet of light energy. |
| **continuous spectrum** | A hot lamp gives a **continuous spectrum** of all colours. |
| **line emission spectrum** | A **line emission spectrum** shows separate bright lines. |
| **energy level** /ˈenədʒi ˈlevl/ | The electron jumps to a higher **energy level**. |
| **excited state** /ekˈsaɪtɪd steɪt/ | An atom in an **excited state** has extra energy. |
| **quantized** /ˈkwɒntaɪzd/ | Electron energies are **quantized**: only some values are allowed. |
| **converge** /kənˈvɜːdʒ/ | The lines **converge**: they get closer and closer together. |
| **convergence limit** | At the **convergence limit**, the lines meet. |
| **principal quantum number** /ˈprɪnsɪpl ˈkwɒntəm ˈnʌmbə/ | The **principal quantum number** n = 2 means the second shell. n = 2 |
| **sublevel** | The p **sublevel** contains three orbitals. p |
| **atomic orbital** | An **atomic orbital** shows where an electron is likely to be. |



exercises.lol exercises.com.cn

| Word | Example |
|---|---|
| **degenerate** /dɪˈdʒenəreɪt/ | Orbitals with the same energy are **degenerate**. |
| **Aufbau principle** | The **Aufbau principle** fills the lowest orbitals first. |
| **Pauli exclusion principle** | The **Pauli exclusion principle** allows two electrons in each orbital. |
| **opposite spins** | Two electrons sharing an orbital have **opposite spins**. |
| **Hund's rule** | **Hund's rule** puts one electron in each orbital before pairing them. |
| **full electron configuration** | A **full electron configuration** lists every sublevel, such as 1s2 2s2 2p6. 1s2 2s2 2p6 |
| **condensed configuration** | A **condensed configuration** starts with a noble gas, such as [Ne] 3s1. [Ne] 3s1 |
| **orbital diagram** | An **orbital diagram** uses boxes and arrows. |
| **negative ion** | An atom gains electrons to form a **negative ion**. |
| **positive ion** /ˈpɒzɪtɪv ˈaɪɒn/ | An atom loses electrons to form a **positive ion**. |
| **transition element** /trænˈsɪʃn ˈelɪmənt/ | Iron is a **transition element**. |