

5

Structure of materials

> 5.1 The structure of the atom

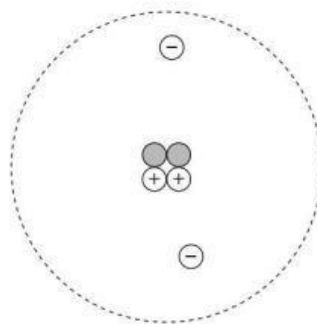
Exercise 5.1A Labelling the structure of the atom

Focus

In this exercise, you will label a diagram of the structure of an atom and identify facts about the particles in an atom.

- 1 Label the diagram showing the structure of the atom.
Use the labels given here.

proton neutron electron nucleus of the atom



- 2 What is the white area inside the circle in the diagram?
Label it.

5.1 The structure of the atom

- 3 Tick (✓) the statements that are correct.
- | | |
|---|--------------------------|
| Electrons have less mass than protons do. | ☐ |
| Protons have a negative electrical charge. | ☐ |
| Electrons have a negative electrical charge. | ☐ |
| Neutrons have an electrical charge. | ☐ |
| Neutrons have more mass than electrons do. | ☐ |
| Electrons are found in the nucleus of the atom. | ☐ |

Exercise 5.1B Models of the structure of the atom

Practice

In this exercise, you will compare models of the structure of the atom.

- 1 Draw and label **two** diagrams to show J.J. Thompson's and Rutherford's models of the structure of the atom.
- 2 Give a difference between J.J. Thompson's model and Rutherford's model of the structure of the atom.

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