

Structure of the atom

Learning objectives

- 1 Describe the current accepted model of the atom.
- 2 Determine the number of subatomic particles in a neutral atom.
- 3 Recall the properties of the subatomic particles: protons, neutrons and electrons.

Introduction

Atomic structure is one of the most important topics in chemistry. Lots of other topics depend on understanding the structure of the atom and the properties of the subatomic particles.

Instructions

1. Stick the structure strip in the margin of your exercise book/paper.
2. Follow the prompts to write a summary of atomic structure. You might need to use a textbook, revision guide or website to help. Write in full sentences, rephrase the question within your answer and use appropriate keywords.
3. Answer the follow-up question below to apply your knowledge of atomic structure and subatomic particles to a new context.

Keywords

Use these key words in your responses:

- atom • matter • proton • electron • neutron • nucleus • orbit • atomic number
- mass number • ion • isotope

Follow-up question

Explain, with reference to subatomic particles, why an atom of potassium has an overall neutral charge.

Structure strip Atomic structure	Structure strip Atomic structure	Structure strip Atomic structure	Structure strip Atomic structure	Structure strip Atomic structure
Define the term atom.	Define the term atom.	Define the term atom.	Define the term atom.	Define the term atom.
Draw a labelled diagram of the current accepted model of the atom.	Draw a labelled diagram of the current accepted model of the atom.	Draw a labelled diagram of the current accepted model of the atom.	Draw a labelled diagram of the current accepted model of the atom.	Draw a labelled diagram of the current accepted model of the atom.
Draw a table to compare the three subatomic particles, their relative masses and charges and their location in the atomic model.	Draw a table to compare the three subatomic particles, their relative masses and charges and their location in the atomic model.	Draw a table to compare the three subatomic particles, their relative masses and charges and their location in the atomic model.	Draw a table to compare the three subatomic particles, their relative masses and charges and their location in the atomic model.	Draw a table to compare the three subatomic particles, their relative masses and charges and their location in the atomic model.
Find oxygen on the periodic table. Explain how to determine the number of: <ul style="list-style-type: none"> • protons • electrons • neutrons 	Find oxygen on the periodic table. Explain how to determine the number of: <ul style="list-style-type: none"> • protons • electrons • neutrons 	Find oxygen on the periodic table. Explain how to determine the number of: <ul style="list-style-type: none"> • protons • electrons • neutrons 	Find oxygen on the periodic table. Explain how to determine the number of: <ul style="list-style-type: none"> • protons • electrons • neutrons 	Find oxygen on the periodic table. Explain how to determine the number of: <ul style="list-style-type: none"> • protons • electrons • neutrons
With reference to their atomic structure, describe the similarities and differences between atoms of the same element.	With reference to their atomic structure, describe the similarities and differences between atoms of the same element.	With reference to their atomic structure, describe the similarities and differences between atoms of the same element.	With reference to their atomic structure, describe the similarities and differences between atoms of the same element.	With reference to their atomic structure, describe the similarities and differences between atoms of the same element.
With reference to their atomic structure, describe the similarities and differences between atoms of different elements.	With reference to their atomic structure, describe the similarities and differences between atoms of different elements.	With reference to their atomic structure, describe the similarities and differences between atoms of different elements.	With reference to their atomic structure, describe the similarities and differences between atoms of different elements.	With reference to their atomic structure, describe the similarities and differences between atoms of different elements.