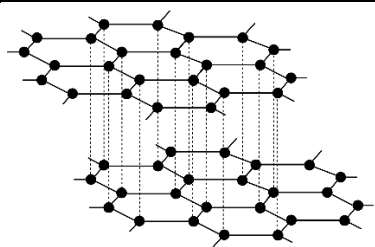


Name:

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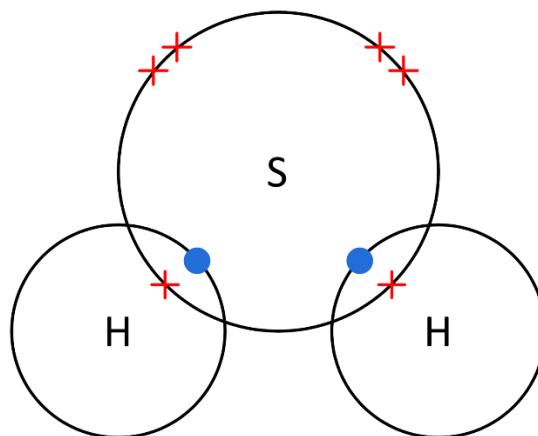


Name the allotrope of carbon above.

Graphite

This material can conduct electricity as it has **delocalised electrons** which can move between the **layers**.

Complete the dot and cross diagram to show the covalent bonding in a molecule of hydrogen sulfide.



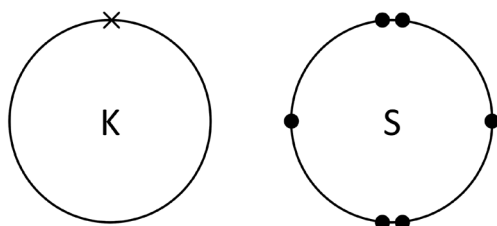
A tablet has a mass of 1.20 g and contains 700 mg of lithium carbonate.

Calculate the percentage by mass of lithium carbonate in this tablet.

$$0.70 \div 1.20 \times 100 = 58.3 \% \quad \text{or } 700 \div 1200 \times 100 = 58.3 \%$$

Percentage by mass of lithium carbonate = **58.3%**

The image below shows the outer electrons in an atom of the Group 1 element potassium and in an atom of the Group 6 element sulfur.



Give the formulae of the **ions** formed when two potassium ions react with one sulfur.



A compound is placed into a roaring Bunsen flame. **A yellow flame is seen.**

State the cation ion present.



The same compound is tested with nitric acid and then any gas is tested using limewater. **The limewater goes cloudy.** State the anion present.



Name and state the formula of the compound.

Name: sodium carbonate.

Formula: Na_2CO_3

Balance the following equations.

