CAIE Chemistry IGCSE

2.7 Metallic bonding (extended only)

Flashcards

Describe metallic bonding (extended only)

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Metallic bonding is the electrostatic attraction between the positive ions in a giant metallic lattice and a ‘sea’ of delocalised electrons

Explain why metals can conduct electricity (extended only)

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Metals have metallic bonding so can conduct electricity because the delocalised electrons in their structures can move around and carry charge

Explain why metals are malleable and ductile (extended only)

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Metals have metallic bonding so the layers of metal atoms are able to slide over each other so metals can be bent and shaped

Explain how alloys are formed and their properties (extended only)

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Metals are mixed with other metals/materials to become alloys. The different size of atoms means the layers cannot slide over each other so alloys are much harder and cannot be bent

Explain why metals have high melting and boiling points (extended only)

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Metals have high melting and boiling points due to strong electrostatic attraction between positive metal ions and delocalised electrons which require a lot of energy to overcome