

Quiz (Giant Metallic Structure)

Tungsten is commonly used to make filaments for tungsten light bulbs. By passing an electric current through the filament, it can emit light when it reaches an extremely high temperature.

- (a) Apart from the light emitting property, suggest another physical property that makes tungsten, but not other metals, suitable for making filaments.
- (b) Explain why tungsten can conduct electricity.
- (c) Explain why tungsten can be drawn into wires.

Suggested Answer

- (a) Tungsten has a very high melting point.
- (b) This is because there are delocalized electrons in the structure.
- (c) When a force is applied to a piece of tungsten metal, the layers of tungsten ions can slide over one another without breaking the metallic bonds.