

CHEMISTRY - METALLIC BONDS

Metallic bonds can be defined as the forces of attraction between the cations and sea of electrons in it.

All the atoms in a metal lattice are arranged in layers which can slide over each other.

These layers make the structures soft and can be molded into any shape.

This makes metals malleable

Metals are ductile because they can be beaten into thin wires and this is also because the layers of atoms have gaps in between them and they can be beaten up by applying pressure.

Metals can conduct electricity because of the presence of a sea of delocalised electrons.

ALLOYS

As the structure of a pure metal is soft, some other metals and nonmetals can be added to it in a percentage of mass.

This mixture is called an alloy

Alloys are harder and more useful than pure metals because they are durable, non rusty, and can be moulded into any shape.

EXAMPLES OF ALLOY

- a) Brass → copper + zinc
- b) Bronze → copper + tin
- c) Steel → iron + carbon
- d) Duralium → manganese + aluminum + magnesium + silver + copper