

Metallic Bonding

Ch 8 and 9

1

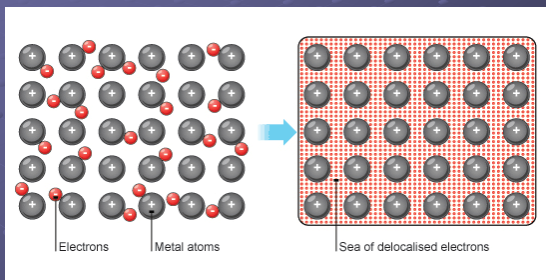
Objectives

- Understand metallic bonding
- Relate metallic properties to bonding characteristics

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Metallic Bonding

- Sea of electrons



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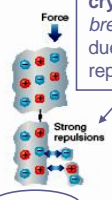
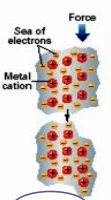
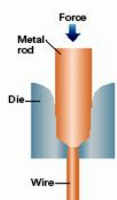
- Properties of metals:
 - Malleable
 - Ductile
 - Conduct electricity
- Metal alloys—mixture of metals

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Figure 7.12 - Page 201
Metal Rod Forced Through Die

Due to the mobility of the valence electrons, metals have:

1) Ductility and 2) Malleability



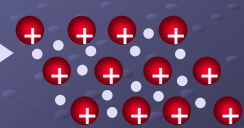
Notice that the ionic crystal breaks due to ion repulsion!

☑ Metal

☑ Ionic crystal

Malleable

Force



Malleable

- Mobile electrons allow atoms to slide by, sort of like ball bearings in oil.

