

SECTION 7.2 IONIC BONDS AND IONIC COMPOUNDS

- Use electron dot structures to predict the formula of the ionic compounds formed when the following elements combine.
 - sodium and bromine NaBr
 - sodium and sulfur Na_2S
 - calcium and iodine CaI_2
 - aluminum and oxygen Al_2O_3
 - barium and chlorine BaCl_2
- Which of these combinations of elements are most likely to react to form ionic compounds?
 - sodium and magnesium
 - barium and sulfur
 - potassium and iodine
 - oxygen and argon
- What is the meaning of coordination number? *# of ions of opp charge surround ion in crystal*
- How is the coordination number determined? *x-ray diffraction crystallography*

SECTION 7.3 BONDING IN METALS

- What is a metallic bond? *Cations surrounded by mobile valence e^-*
- How is the electrical conductivity of a metal explained by metallic bonds? *Apply current, move to pole*
- Are metals crystalline? Explain. *Yes ordered pattern*
- Give three possible crystalline arrangements of metals. Describe each. *Body / Face / Hexagonal*
- What is an alloy? *2 or more elements mixed (1 metal)*
- Name the principal elements present in each of the following alloys.
 - brass Cu/Zn
 - bronze Cu/Sn
 - stainless steel Fe/Cr/C/Ni
 - sterling silver Ag/Cu
 - cast iron Fe/C
 - spring steel Fe/Cr/C

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