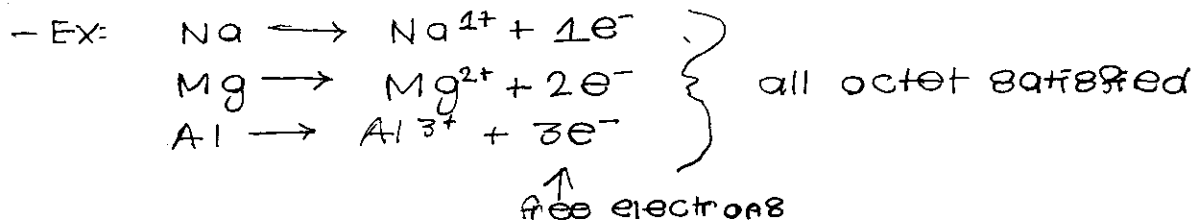


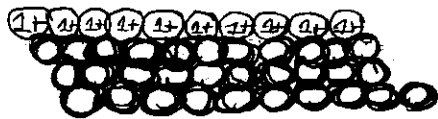
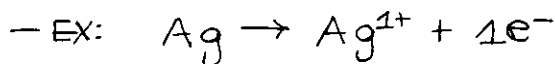
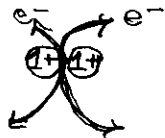
Nov. 1st, '11

Metallic Bonding

- uses metallic elements only
- metals are losers
 - ↳ low electronegativity (+ low ionization energy)
 - ↳ poor at keeping their electrons



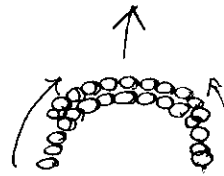
- bond can be thought of as a collection of ions held together by a soup of free moving electrons
- electrons wander through the empty valence shells of the ions
- mutual attractions between ions and wandering electrons creates the bond



- ions "gently" locked in a "crystal lattice" held together by the rapidly moving electrons

- conductivity: requires a freely moving charged particles;
electrons are free to move = conductive (not the ions)
the electron is called a charge carrier

- malleability: ability to bend or to draw into wires
ductility



ions have slipped past
each other without interrupting
the bond

- alloy is simply a combination of more than one
type of metal

↳ EX: stainless steel = $Fe_{0.90} Ni_{0.10}$