

Covalent bonds

- ❖ Lewis's idea of sharing electrons to maintain filled orbitals
- ❖ Ionic bonding impossible, i.e., electron affinity and ionization potential comparable so that there is no tendency for ions to form
- ❖ Usually two electrons pair to form a bond (Pauli exclusion principle)
- ❖ Atomic orbitals must overlap
- ❖ For most molecules, there is a maximum of eight valence electrons
- ❖ Electron–electron repulsion is minimized