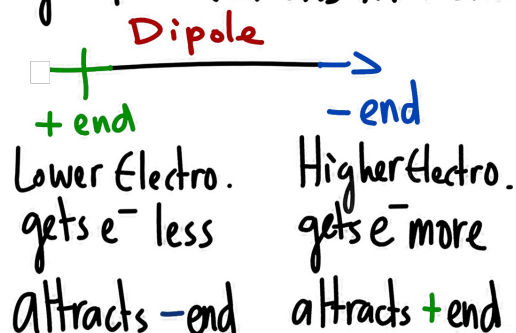
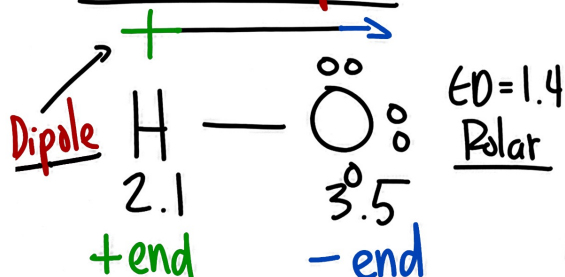


Bond Dipoles

Dipole is an uneven sharing of electrons in bond

Polar = Dipole

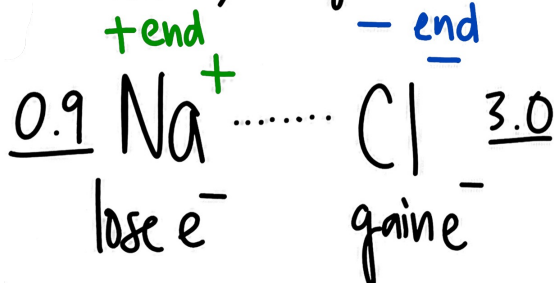


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Ionic vs Covalent Bonds

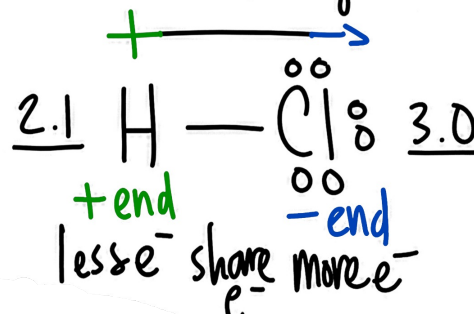
Ionic: Transfer of e^-

Metal / High ED



Polar Covalent

Unequal sharing of e^-
No Metals / High ED

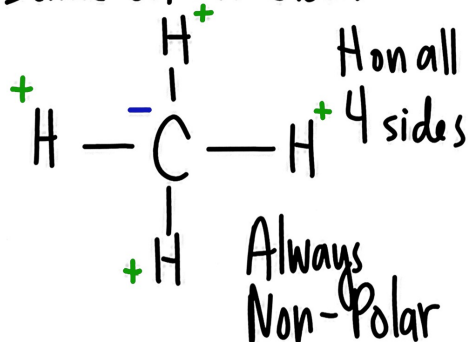


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Molecule Symmetry

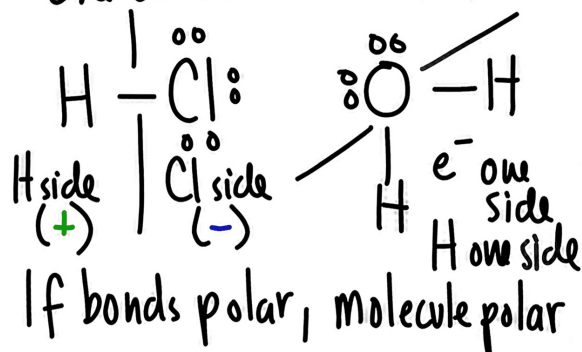
Symmetrical molecule

Same on all sides



Asymmetric Molecule

one or more sides different



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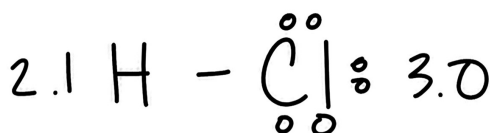
Determining Polarity of Molecules

Molecule Polarity

- ① Find bond ϵD
- ② NonPolar = NonPolar
Bond Molecule

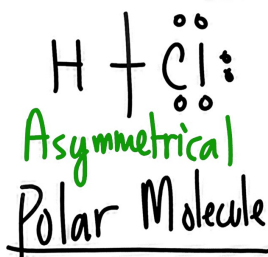
- ③ For Polar Bond

symmetrical molecule : NonPolar Molecule
 asymmetrical molecule : Polar Molecule



$$\epsilon D = 3.0 - 2.1 = 0.9$$

Bond is Polar Covalent Bond



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