

Covalent bonding

Name _____ Date _____

Use the Foundational PowerPoint or your textbook to complete the following notes.

Covalent bonding occurs in molecular structures. In covalent substances,

- electrons are shared so that atoms have a complete valence shell of electrons.
- the bonding occurs between a nonmetal and a nonmetal
- bonding usually occurs between elements close to each other

A. Single Covalent Bonds –

Ex: H₂

B. Double Covalent Bonds –

Ex: O₂

C. Triple Covalent Bonds

Ex: N₂

# of bonds		<u>Bond Length</u>	<u>Dissociation Energy</u>
H ₂	single	1.43 x 10 ⁻¹⁰ m	159 KJ/ mole
O ₂	double	1.21 x 10 ⁻¹⁰ m	498 KJ/ mole
N ₂	triple	1.10 x 10 ⁻¹⁰ m	945 KJ/ mole

Trend: _____

D. Types of Bonds – Sigma and Pi

Sigma bonds

Pi bonds

The strength of the bond depends on...

High Oleic Oil

E: Prefixes to learn for Naming Covalent Compounds

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.