

Organic Chemistry 212

Prof J. Walker

Notes: *Chapter One - Organic Chemistry*

Organic Chemistry is the chemistry of compounds of carbon.

What is the atomic number of carbon?

How many valence electrons does carbon have?

What is the electronegativity of carbon?

The properties of organic compounds:

Bonding is mostly covalent. What is the difference between the electronegativity of hydrogen and carbon?

Insoluble in water. Why?

Almost all organic compounds burn.

Write the structural formula for:

Ethane

Ethylene

Acetylene

Summarize the bonding properties of:

Name of atom	Number of covalent bonds	Number of unshared electron pairs
Carbon		
Nitrogen		
Oxygen		
Hydrogen		
Halogens		

Atoms or groups of atoms of an organic molecule that undergo predictable chemical reactions are called **functional groups**.

Draw the following functional groups:

Alcohol

Amine

Aldehyde

Ketone

Carboxylic Acid

Ester

Where do we obtain organic compounds?

1.

2.

Terminology: What do these terms mean? Give examples where appropriate...

structural formula

functional group

bond angle

Lewis dot structure

VSEPR Model

condensed structural formula

primary, secondary, tertiary amines