

Unit 1 - Organic Chemistry

- Characteristics of organic compounds
- Identifying and drawing isomers C_nH_{2n+2}
- General formulas of alkanes, alkenes, alkynes, and cyclic compounds
- Sigma vs. Pi bonding
- Draw and name hydrocarbons that have alkyl substituents
- Aromatic Compounds
- Name and draw the following hydrocarbon derivatives:

⇒ Organic Halides $R-X$

⇒ Alcohols $R-OH$

⇒ Ethers $R-O-R'$

$\begin{array}{c} O \\ || \\ C-H \end{array}$ ⇒ Aldehydes

⇒ Ketones $R_1-C(=O)-R_2$

$\begin{array}{c} O \\ || \\ -C-OH \end{array}$ ⇒ Carboxylic Acids

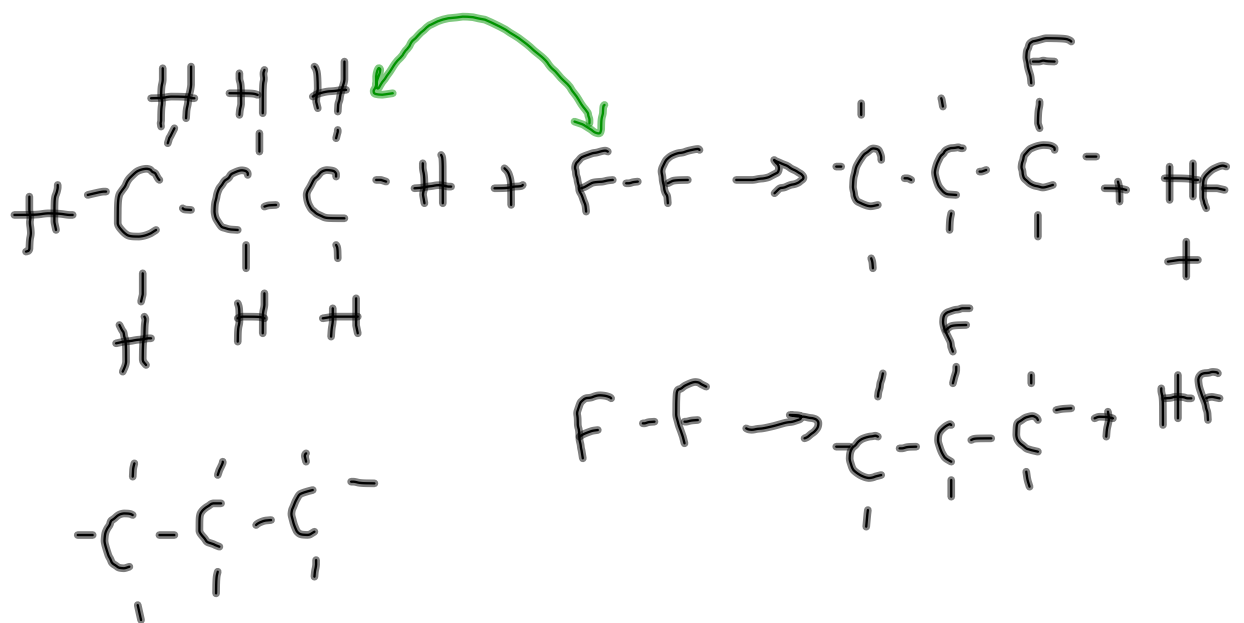
⇒ Esters $R(H)-C(=O)-O-R'$

- Reactions



Reactions

- Cracking (*break into pieces*)
- Reforming (*two small* → *one big*)
- Combustion (*burned, common oxides*)
- Addition (*breaking a pi bond(s)*)
- Substitution (*break a C-H bond and replace with halide*)
- Elimination (*adding a pi bond*)
- Esterification
(*carboxylic acid + alcohol* → *ester*)



p. 719-720 #37-46, 49, 50, 54-56, 59-61,
63, 64

p. 757-758 #26-35, 38, 40, 43-45

Reactions Worksheet