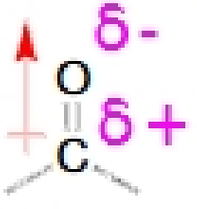
Chapter 17: Aldehydes and Ketones: Nucleophilic Addition to the Carbonyl Group

17.1: Nomenclature (please read)

17.2: Structure and Bonding: Carbonyl groups have a significant dipole moment



Aldehyde	2.72 D
Ketone	2.88
Carboxylic acid	1.74
Acid chloride	2.72
Ester	1.72
Amide	3.76
Nitrile	3.90
Water	1.85

Carbonyl carbons are electrophilic sites and can be attacked by nucleophiles. The carbonyl oxygen is a basic site.

17.3: Physical Properties (please read)

17.4: Sources of Aldehydes and Ketones (Table 17.1, p. 708)

1a. Oxidation of 1° and 2° alcohols (**15.10)**

1b. From carboxylic acids

1c. Ketones from aldehydes

2. Ozonolysis of alkenes (**6.20**)

3. Hydration of alkynes (**9.12**)

2. Friedel-Craft Acylation (**12.7**) - aryl ketones

5. Hydroformylation of alkenes (please read)