Organic synthesis

A-Level Chemistry · Vocabulary in context

Word	Example
functional group /ˈfʌŋkʃənl gruːp/	The –OH **functional group** makes a compound an alcohol. –OH
acyl chloride /əˈkɪl ˈklɔːraɪd/	Ethanoyl chloride is an **acyl chloride**.
phenol /ˈfiːnɒl/	**Phenol** is more acidic than ethanol.
arene /ˈæriːn/	Benzene is an **arene**.
electrophilic substitution /ɪˌlektrəʊˈfɪlɪk ˌsʌbstɪˈtjuːʃn/	Benzene reacts by **electrophilic substitution**.
reduction /rɪˈdʌkʃn/	**Reduction** is the gain of electrons.
oxidation /ˌɒksɪˈdeɪʃn/	**Oxidation** is the loss of electrons.
carboxylic acid /ˌkɑːbɒkˈsɪlɪk ˈæsɪd/	Ethanoic acid is a **carboxylic acid**.
ester /ˈestə/	Fruity smells often come from an **ester**.
amine /ˈæmaɪn/	Methylamine is an **amine**.
amide /əˈmaɪd/	Ethanamide is an **amide**.
nitrile /ˈnaɪtraɪl/	Ethanenitrile is a **nitrile**: it has a C≡N group. C≡N
synthetic route /sɪnˈθetɪk ruːt/	The **synthetic route** has three steps from ethene to the product.
reagent /rɪˈeɪdʒənt/	Acidified dichromate is a **reagent** that oxidises alcohols.

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addition–elimination /əˈdɪʃn ɪˌlɪmɪˈneɪʃn/	Acyl chlorides react by **addition–elimination**.
by-product /baɪ ˈprɒdʌkt/	Water is a **by-product** of this reaction.