

CAIE Chemistry A-level

21: Organic Synthesis Definitions

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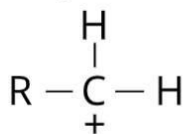
Definitions and Concepts for CAIE Chemistry A-level Organic Synthesis

By-product: A compound which is produced along with the desired product.

Functional group: An atom/group of atoms responsible for the characteristic reactions of a compound.

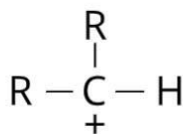
Major/minor products: Major and minor products are formed from electrophilic addition due to the relative stabilities of the primary/secondary/tertiary carbocation intermediates. The major product is formed from the most stable intermediate and the minor product is formed from the least stable intermediate.

Primary carbocation

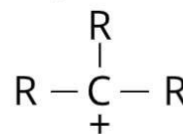


Least stable

Secondary carbocation



Tertiary carbocation



Most stable

Organic compound: A carbon-containing compound.

Synthesis: The process of combining different elements and compounds to build new molecules.

Synthesis maps: Provide a good summary of reactions in organic chemistry and show how multistep reactions can be used to get from one compound to another.

