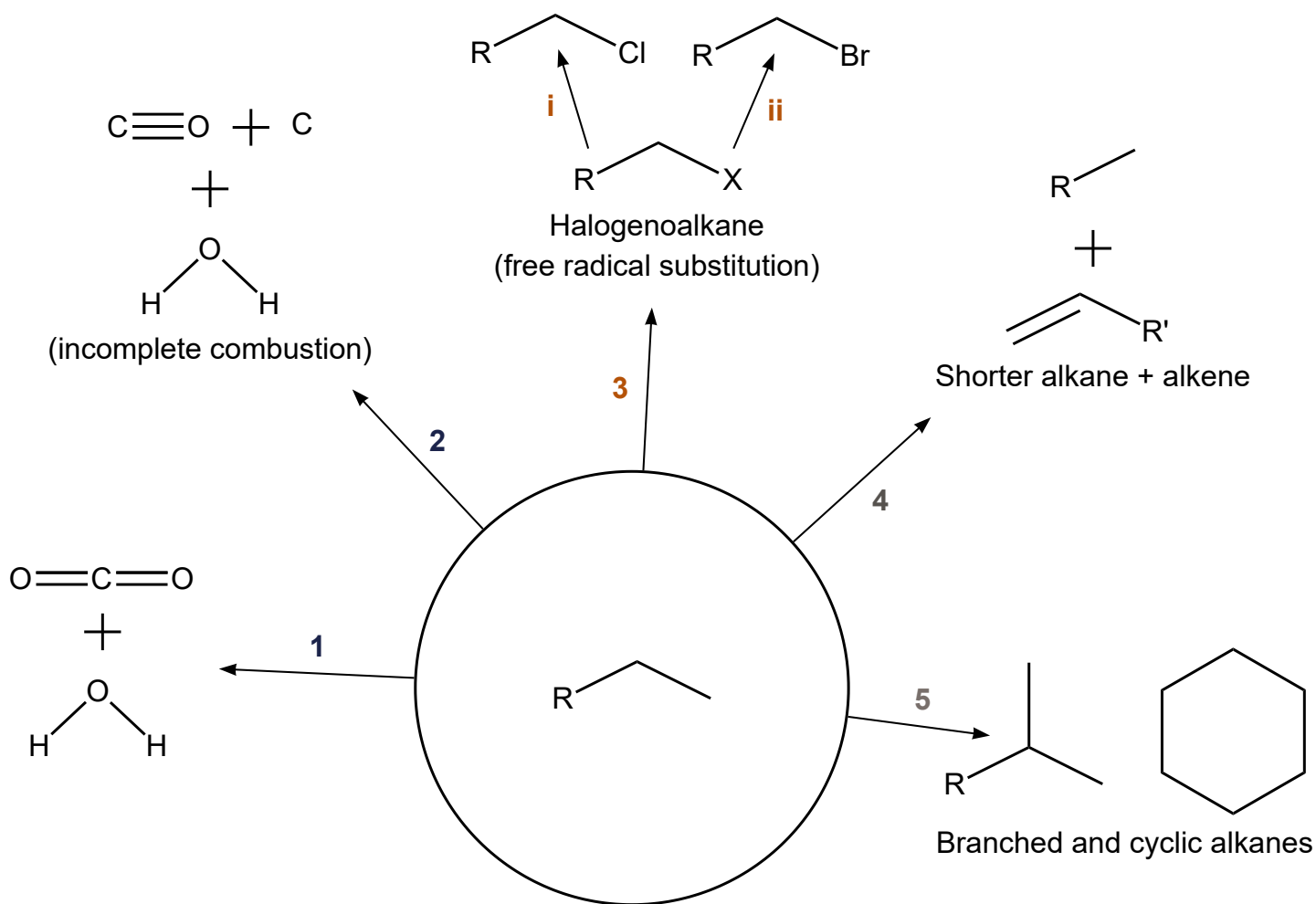


Alkanes Map

Edexcel A Level Chemistry · Topic 6B Alkanes



1 combustion: excess $\text{O}_2(\text{g})$, burn (complete combustion)

4 cracking: long-chain alkane, heat with a catalyst (e.g. zeolite or Al_2O_3)

2 combustion (incomplete): limited $\text{O}_2(\text{g})$, burn; CO is toxic, C forms soot (particulates)

5 reforming: straight-chain alkane, heat with a catalyst (e.g. Pt)

3 substitution (free radical): UV light

i Cl_2

ii Br_2

Radical substitution gives a mixture of products (further substitution), so it has limited use in synthesis.

Catalytic converters remove CO, NO_x and unburned hydrocarbons.

Reforming makes branched and cyclic hydrocarbons that burn more efficiently.

combustion substitution cracking reforming

