



## What's included:

\*definitions required by specification

1. ATOMIC STRUCTURE
2. FORMULAE & CALCULATIONS
3. BONDING
4. ENTHALPY
5. KINETICS
6. EQUILIBRIA
7. REDOX
8. ORGANIC FORMULAE
9. ISOMERISM
10. ALKANES
11. HALOGENOALKANES
12. ALKENES
13. ALCOHOLS
14. ORGANIC ANALYSIS

## ATOMIC STRUCTURE

Atomic Number	
Mass Number	
Isotope	
TOF Mass Spectrometer (Stages)	
First Ionisation Energy*	
Successive Ionisation Energies	
Relative Atomic Mass*	
Relative Isotopic Mass*	
Relative Molecular Mass*	
Relative Formula Mass*	

## FORMULAE &amp; CALCULATIONS

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Molecular Formula

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Empirical Formula

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A Mole\*

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Avogadro's Constant\*

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Molar Mass\*

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Molar Gas Volume\*

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% Atom Economy

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% Yield

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Ideal Gas Equation

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## BONDING

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Covalent Bond	
Co-ordinate Bond	
Electrostatic Attractions	
Ionic Bonding	
Metallic Bonding	
V.S.E.P.R.	
Electronegativity	
Permanent Dipole Force	
Induced Dipole Forces	
Hydrogen Bonding	

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## ENTHALPY I

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Enthalpy Change ( $\Delta H$ )

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Standard Conditions\*

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Standard States\*

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Standard Enthalpy of Reaction ( $\Delta^{\ominus}H_r$ )\*

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Standard Enthalpy of Formation ( $\Delta^{\ominus}H_f$ )\*

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Standard Enthalpy of Combustion ( $\Delta^{\ominus}H_c$ )\*

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Standard Enthalpy of Neutralisation ( $\Delta^{\ominus}H_{\text{neut}}$ )\*

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Heat Change ( $Q$ )

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Hess' Law

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Average Bond Enthalpy\*

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## KINETICS

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Collision Theory	
Catalyst	
Homogeneous Catalyst	
Heterogeneous Catalyst	
Activation Energy*	

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## EQUILIBRIA

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Dynamic Equilibrium

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Le Chatelier's Principle

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Homogeneous

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Equilibrium Constant -  $K_c$

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## REDOX

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Oxidation	
Reduction	
Oxidising Agent	
Reducing Agent	
Disproportionation*	

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## ORGANIC FORMULAE

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General Formula*	
Homologous Series*	
Molecular Formula	
Empirical Formula	
Structural Formula*	
Skeletal Formula*	
Displayed Formula*	
Aliphatic	
Alicyclic	
Aromatic	

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## ISOMERISM

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Structural Isomer*	
Chain Isomer	
Positional Isomer	
Functional Group Isomer	
Stereoisomer*	
E/Z Isomer*	
Cis-Trans isomer*	

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## ALKANES

Alkane

Fractional Distillation

Thermal Cracking

Catalytic Cracking

**Free Radical\***

Free Radical Substitution

## HALOGENOALKANES

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Halogenoalkane	
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<b>Nucleophile*</b>	
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Nucleophilic Substitution	
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Elimination Reaction	
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## ALKENES

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Alkene	
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C=C Double Bond	
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Electrophilic Addition	
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Addition Polymerisation	
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Test for an Alkene	
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## ALCOHOLS

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Alcohol	
Hydration of Alkenes	
Fermentation	
Oxidation of Alcohols	
Elimination Reaction	
Test for an Alcohol	
Test for a Carboxylic Acid	

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## ORGANIC ANALYSIS

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Mass Spectroscopy

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Molecular Ion Peak

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Fragmentation

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IR Spectroscopy

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