

# AS and A2 Chemistry Resources

## Flexible Learning Packs

**Alkanes  
& Alkenes**  
(AS)

**Moles**  
(AS)

**Redox**  
(AS, A2)

**Alcohols &  
Halogenoalkanes**  
(AS)

**Kinetics**  
(AS, A2)

**Acid - Base**  
(A2)

**Structure  
& Bonding**  
(AS)

**Equilibrium**  
(AS, A2)

**A2  
Aliphatics**  
(A2)

**Atomic  
Structure**  
(AS)

**Energetics**  
(AS, A2)

For **chemistry teachers**, *Flexible Learning Packs* deliver complete AS and A2 topics and are invaluable as revision materials. **NQTs**, **non-specialists** and those teaching chemistry in related disciplines will find them outstanding support packages.

Many of these packs are purchased from IT or Teaching Support budgets.

### Containing **AS** components only

- ♦ Alcohols & Halogenoalkanes
- ♦ Alkanes & Alkenes
- ♦ Structure & Bonding
- ♦ Moles
- ♦ Atomic Structure

### Containing both **AS** and **A2** components

- ♦ Energetics
- ♦ Equilibrium
- ♦ Kinetics
- ♦ Redox

### Containing **A2** components only

- ♦ Acid - Base
- ♦ A2 Aliphatics

### *Flexible Learning Packs* include

- ♦ **software** providing simulations and animations to illustrate difficult concepts
- ♦ **self-paced learning materials** linking software and specification via a clearly defined route
- ♦ where appropriate, **AS** and **A2** components of a topic are clearly separated
- ♦ a **summary** of the specification covered
- ♦ references to topics in new **2008 specifications**
- ♦ **exam questions** with **mark schemes**
- ♦ recommended and demonstration **experiments**
- ♦ **mind maps**
- ♦ **progress sheets**
- ♦ **key skills references**
- ♦ an **unlimited license**

## CIS

- ♦ **database** of 170+ organic compounds
- ♦ **spectroscopic data** (NMR, IR, MS, UV)
- ♦ **physical and safety data**
- ♦ **2D and 3D structures**
- ♦ **trend plotting** for compounds and elements

## MolView

- ♦ over 200 **organic, biological and giant structures**
- ♦ **line, ball & stick or space-fill** representations
- ♦ **geometry and energy** calculations for conformational analysis
- ♦ **editable information files** for each molecule

## Spectroscopy Suite

- ♦ **tutorials** explaining the fundamentals of NMR, MS and IR
- ♦ **interactive experimental simulations**

For the latest information on all IMPACT software including evaluation copies, screenshots and prices, please telephone or visit our web site.

**Tel:** 01483 68 9592  
**Fax:** 01483 68 6851 / 9592  
**Email:** [impact@surrey.ac.uk](mailto:impact@surrey.ac.uk)  
**Web:** <http://www.surrey.ac.uk/IMPACT/>

## Other Chemistry Resources Available from IMPACT

The screenshot shows the Chemical Information System (CIS) software interface. It features a menu bar with options like File, Compound, Spectra, Structure, Trends, Window, and Help. Below the menu is a toolbar with icons for various functions. The main window displays an IR spectrum plot with a y-axis from 0 to 100 and an x-axis from 4000 to 2000. A smaller window shows a 3D ball-and-stick model of a molecule, with a selection tool highlighting a carbon atom (C (Atom 25)).

◀ CIS

◀ MolView

Spectroscopy Suite ▶



Example 1  
Let's look at the IR spectra of three aliphatic compounds - an alcohol, an aldehyde and an acid.

Hexanoic acid

Select a compound

The functional groups in hexanoic acid are:

- an alkyl chain
- an acid O-H
- an acid C=O

Another 'top rocking' vibration of the hexanoic acid spectrum

## Flexible Learning Packs

† Alkanes & Alkenes <input type="radio"/>	Atomic Structure <input type="radio"/>	† Equilibrium <input type="radio"/>
† Alcohols & Halogenoalkanes <input type="radio"/>	Moles <input type="radio"/>	Energetics <input type="radio"/>
† A2 Aliphatics <input type="radio"/>	Structure & Bonding <input type="radio"/>	Acid - Base <input type="radio"/>
	Redox <input type="radio"/>	† Kinetics <input type="radio"/>

Each pack cost £40.25 (£35 + VAT) for an unlimited license. For all the latest information, see our website.

† These packs supersede older IMPACT resources. Therefore, *KineticSim* and *EQ* users may upgrade to *Kinetics* or *Equilibrium*, and *Organic* users may purchase any of our organic chemistry themed packs as an upgrade.

	1 user	5 user	10 user	20+ user
<b>CIS</b> <input type="radio"/>	<input type="radio"/> £63.25	<input type="radio"/> £120.75	<input type="radio"/> £178.25	<input type="radio"/> £293.25
<b>MolView</b> <input type="radio"/>	<input type="radio"/> £46	<input type="radio"/> £92	<input type="radio"/> £138	<input type="radio"/> £230
<b>Spectroscopy Suite</b> <input type="radio"/>	<input type="radio"/> £46	<input type="radio"/> £92	<input type="radio"/> £138	<input type="radio"/> £230

**Software Upgrades:** IMPACT members can get the latest up-to-date version of your software for just £11.50 per package.

(please state packages)

Name: \_\_\_\_\_  
 Institution: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Tel: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

I enclose a cheque / official order payable to **University of Surrey** for \_\_\_\_\_

## IMPACT

Joining IMPACT gives a life membership for your school or college.

Members get invitations to school lectures and information about INSET days. Members may also upgrade to the latest version of their existing software for just £11.50 per package, to cover the cost of disks, manuals and p&p.

**Membership @ £10**

### SOFTWARE PRICES ARE INCLUSIVE OF VAT @ 15% AND SUPERCEDE PREVIOUSLY PUBLISHED PRICES

**License Upgrades** are based on the *difference* between the two prices. Multiple licenses entitle you to have that number of copies running at any one time. You may install IMPACT software on, or have it accessible from, any number of machines.

**Software Upgrades** are priced as listed or are £11.50 (£10 + VAT) for IMPACT members.

**Non-EU** sales are VAT exempt.

The IMPACT Group  
 Chemistry  
 University of Surrey  
 Guildford  
 SURREY, GU2 7XH  
<http://www.surrey.ac.uk/IMPACT/>

Tel: 01483 68 9592  
 Fax: 01483 68 6851 / 9592  
 Email: [impact@surrey.ac.uk](mailto:impact@surrey.ac.uk)