# Full list of all the articles published in Volumes 1-29 of Chemistry Review, arranged by feature

## 100 years ago

Title	Vol.	Issue
Robert Wilhelm Bunsen (1811-1899)	8	3
Edward Frankland (1825-1899)	9	2
Henry Moseley: understanding atomic numbers	23	1
Niels Bohr and atomic structure	23	2

#### 200 years ago

Title	Vol.	Issue
Joseph Black (1728-1799)	9	1

## **Answer back**

Title	Exam Board	Vol.	Issue
The main features of the atomic spectrum of	JMB	1	1
hydrogen			
A question of organic reactions	JMB	1	2
Chemistry from group V	University of London Schools	1	3
	Examinations 1989		
A question of ideality	JMB	1	4
Rates and orders of reaction	Oxford and Cambridge	1	5
	Examinations Board		
Acids and equilibria	JMB	2	1
Testing and estimating ions	JMB	2	2
Alternative fuels	Salters' Advanced Chemistry	2	3
Have you got redox potential	JMB	2	4
A question of applying knowledge	Salters' Advanced Chemistry	2	5
Silicone polymers	University of London	3	1
	Examinations and Assessment		
	Council, 1992 Nuffield A-level		
	examination		
Distinguishing between pairs of organic compounds	JMB Syllabus B paper 2, Section B, 1990	3	2
The Chemistry of Life	Nuffield Chemistry Special Study 1989	3	3
Social Economic, Environmental and Technological	Oxford & Cambridge, Paper 3	3	4
aspects of Chemistry	1992		
Born-Haber cycle and lattice energies	Nuffield Paper 2, ULEAC 1988	3	5
A Balancing Act	JMB 1991, paper IIB	4	1
Petroleum technology	Salters' Advanced Level	4	2
	Chemistry		
The importance of revision	Salters' Paper 1, 1992	4	3
Directing aromatic substitution	JMB Syllabus A and Syllabus B 1991	4	4
Mr Midgeley's discovery CFCs	Salters A level examinations 1994	4	5
Tackling calculations	Nuffield Chemistry 1993, Paper 1	5	1
The mystery of the dead deer	Salters A-level 1994	5	2
Ammonia	Oxford and Cambridge Paper 3, Section A 1992	5	3
Transition Metals	NEAB Paper B Section IIA, 1995	5	4
An Unusual Beetle	Salter A level Paper 1 1995	5	5
Reactions of Halogenoalkanes with Potassium	NEAB	6	1
Hydroxide			
A Potentially Dangerous Fertiliser	Salters (OCR)	6	2
Knocking Your Organic Chemistry into Shape	Oxford & Cambridge	6	3
An Organic Whodunit	WJEC	6	4
Copper Chemistry	Salters (OCR)	6	5
Structures Equations & Mechanisms	NEAB	7	1
Kinetics	NEAB	7	2
Planning Your Chemistry	Nuffield	7	3
Periodic Pattern	NEAB	7	4

Chromatography & Structure of Dipeptide	Nuffield	7	5
Complex Information	OCSEB	8	1
Does faster mean further?	WJEC	8	2
Organic Chemistry	NEAB	8	3
Energy, bonding and haloalkanes	Nuffield	8	4
Obtaining Marks from obtaining Methods	NEAB	8	5
Ethanol as a Fuel	Salters (OCR)	9	1
Solving a chemical jigsaw puzzle	NEAB	9	2
Structure and bonding	NEAB	9	3
Phosphorus and friends	EdExcel	9	4
Testing Halide Ions	AEB	9	5
Testing much more than fertilizers	EdExcel	10	1
Knowledge and how to apply it	NEAB	10	2
Assorted Alcohols	AQA	10	3
Correcting Fluid correct?	NEAB	10	4
Redox rights and wrongs	Edexcel	11	1
Sniffing for extra marks	WJEB	11	2
Patterns in the periodic table	Scottish Higher	11	3
Oxidation and reduction at AS and A2	AQA	11	4
Electronic Structure and Chemical Bonding	Edexcel	12	1
Familiar and less familiar acids	WJEC	12	2
Fuelling the Fire	OCR	12	3
Particles, bonding and shapes	AQA	12	4
Get in the Right Group	OCR	13	1
Organic Synthesis	AQA	13	2
Synoptic Papers and Synoptic Questions	Edexcel	13	3
Longer Responses	AQA	13	4
Halons and the demise of the ozone	OCR	14	1
Tales of the Unexpected June 2003	WJEC	14	2
Acids, bases, pH and buffers	AQA	14	3
Any Old Ion?	Salters (OCR) – A2	14	4
Equilibrium, Enthalpy, Entropy and Extras	Salters (OCR) – A2	15	1
Photochemical smog	Salters - Advanced	15	2
Keep in Contact	Edexcel - AS	15	3
Why do endothermic reactions happen?	AQA - A2	15	4
Driven by Enthalpy	Edexcel - AS	16	1
Ironing out the problem	Edexcel - A2	16	2
A synoptic organic question	AQA - A2	16	3
Extracting chemistry with a metal	Salters (OCR) - AS	16	4
A weighty problem?	Salters (OCR) - A2	17	1
Genning up on nitrogen	AQA	17	2
Changing gear to AS	Salters (OCR) - AS	17	3
Glorious glycerol	Salters (OCR) - A2	17	4
Getting into shape with isomers	AQA - AS	18	1
Communicating chemistry	Salters (OCR) - AS	18	2
Watch your language	AQA	18	3
Sulfuric acid	Edexcel	18	4
Vitamin C	Salters (OCR) – A2	19	1
Chemistry and fireworks	Salters (OCR) – AS	19	3
Rates and catalysis	AQA	19	4

Fun with phenylethene	Salters (OCR) – AS	20	1
Calculations	Salters (OCR) – AS & A2	20	2
What comes out of your kettle?	AQA	20	4
It ain't what you do (it's the way you do it)	AQA	21	1
Structure and spectroscopy	Salters (OCR) – A2	21	2
Folic acid	Salters (OCR) – A2	21	3
Controversial chlorine	Salters (OCR) – AS	22	1
Chemistry from a natural product	Salters (OCR) – AS	22	2
Tricky transition metals	IB – Higher level	22	3
Planning for success in extended-answer questions	Salters (OCR) - AS	23	1
Absinthe: Lessons from the green fairy	Salters (OCR) – AS	23	3
Alkenes and clean screens	Salters (OCR) – AS	24	1
Examining equilibrium	Salters (OCR) – A2	24	3
Indications of change	IB – Higher level	24	4
All hail the halogens	AQA	25	3
A complex way to find nickel compounds	Salters (OCR) – A2	25	4
Focus on the basics	Salters (OCR) – A2	26	1
Wrack your brains	Salters (OCR) – AS	26	2
Not-so stainless steel	Salters (OCR) – A2	26	3
Concentrate for first-rate answers	AQA	26	4
Acids, alkalis and pH	AQA	27	1
Acetals and hemiacetals	AQA	27	3
Polymers and azo dyes	OCR – A2	28	1
Synthesis and analysis	Edexcel	28	2
Concentrate on sulfuric acid	AQA	29	1

# Back page

Crystal gardens         4         1           Horse doping         4         2           Watercycle         4         3           Column chromatography         4         4           Mixing colours         4         5           The flame test         5         1           Growing a crystal tree         5         2           Chemiluminescence         5         3           Pyrrole pigments         5         4           Stained glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock in roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Dr	Title	Vol.	Issue
Watercycle         4         3           Column chromatography         4         4         4         4         5           Mixing colours         4         5         1         6         5         1         6         1         5         1         1         6         1         5         1         1         6         1         5         1         6         1         7         3         7         1         4         5         3         7         7         4         8         7         3         4         8         3         5         5         3         8         7         4         8         4         8         3         5         5         3         8         4         8         3         4         8         4         8         4         8         4         8         4         8         4         8         4         4         8         4         8         4         4         8         4         4         8         4         4         8         4         4         8         4         4         8         4         2         2         4         8         4 <td>Crystal gardens</td> <td>4</td> <td>1</td>	Crystal gardens	4	1
Watercycle         4         3           Column chromatography         4         4         4         4         5           Mixing colours         4         5         1         6         5         1         6         1         5         1         1         6         1         5         1         1         6         1         5         1         6         1         7         3         7         1         4         5         3         7         7         4         8         7         3         4         8         3         5         5         3         8         7         4         8         4         8         3         5         5         3         8         4         8         3         4         8         4         8         4         8         4         8         4         8         4         8         4         4         8         4         8         4         4         8         4         4         8         4         4         8         4         4         8         4         4         8         4         2         2         4         8         4 <td>, ,</td> <td>4</td> <td>2</td>	, ,	4	2
Column chromatography         4         4           Mixing colours         4         5           The flame test         5         1           Growing a crystal tree         5         2           Chemiluminescence         5         3           Pyrrole pigments         5         4           Stained glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         2           Women of achievement         7         3           Black smokers         7         1           Up in smoke         7         2           Women of achievement         7         5           Black smokers         7         4           Something lost in the translation         7         5           The welding toreh         8         1	<u> </u>	4	3
Mixing colours         4         5           The flame test         5         1           Growing a crystal tree         5         2           Chemiluminescence         5         3           Pyrrole pigments         5         4           Stained glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8		4	4
The flame test         5         1           Growing a crystal tree         5         2           Chemiluminescence         5         3           Pyrrole pigments         5         4           Stained glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the bay         8         2           The Meissner effect (collagen/gelatin)         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9		4	5
Growing a crystal tree         5         2           Chemiluminescence         5         3           Pyrrole pigments         5         4           Statined glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Welding torch         8         3           Wobbly chemistry         8         2           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           He Dome         9         3           Gali			
Chemiluminescence         5         3           Pyrrole pigments         5         4           Stained glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n 'roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in snoke         7         2           Women of achievement         7         3           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1	Growing a crystal tree		2
Pyrrole pigments         5         4           Stained glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Neferiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         3           Hydrogen car         9         5			
Stained glass         5         5           Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         3           Lac         8         5           Egyptian Blue & Neferiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         3           Hydrogen car         9         5           Reaching for the sky         10         1			_
Winning crystals         6         1           Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2			
Salt mining         6         2           The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         3           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         4           A different slant on DNA         10         3			
The island that time forgot         6         3           Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4 </td <td></td> <td></td> <td>_</td>			_
Rock 'n' roll eggs         6         4           Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         3           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1     <			
Virtual reality         6         5           Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1           Glowing fireflies         11         2     <	· · · · · · · · · · · · · · · · · · ·		
Oceans of mercury         7         1           Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1           Glowing fireflies         11         2			
Up in smoke         7         2           Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1           Glowing fireflies         11         2           Where there's smoke there's gravity         11         3           Displaying vision: LEP         11 <td>•</td> <td></td> <td></td>	•		
Women of achievement         7         3           Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1           Glowing fireflies         11         2           Where there's smoke there's gravity         11         3           Displaying vision: LEP         11         4           Beyond the molecules	<u> </u>		_
Black smokers         7         4           Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1           Glowing fireflies         11         2           Where there's smoke there's gravity         11         3           Displaying vision: LEP         11         4           Beyond the molecules         12         1           Microdiamonds         1			
Something lost in the translation         7         5           The welding torch         8         1           Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1           Glowing fireflies         11         2           Where there's smoke there's gravity         11         3           Displaying vision: LEP         11         4           Beyond the molecules         12         1           Microdiamonds         12         2           Sniffing for trouble			_
The welding torch       8       1         Drugs in the hay       8       2         The Meissner effect (collagen/gelatin)       8       3         Wobbly chemistry       8       4         Lac       8       5         Egyptian Blue & Nefertiti       9       1         Spiders superfibre       9       2         The Dome       9       3         Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1      <			
Drugs in the hay         8         2           The Meissner effect (collagen/gelatin)         8         3           Wobbly chemistry         8         4           Lac         8         5           Egyptian Blue & Nefertiti         9         1           Spiders superfibre         9         2           The Dome         9         3           Galileo thermometer         9         4           Hydrogen car         9         5           Reaching for the sky         10         1           Fire-blocking gel         10         2           A different slant on DNA         10         3           A close encounter         10         4           Thread of science         11         1           Glowing fireflies         11         2           Where there's smoke there's gravity         11         3           Displaying vision: LEP         11         4           Beyond the molecules         12         1           Microdiamonds         12         2           Sniffing for trouble         12         3           Airbags         12         4           Graphite polyhedral crystals         13 <td></td> <td></td> <td></td>			
The Meissner effect (collagen/gelatin)       8       3         Wobbly chemistry       8       4         Lac       8       5         Egyptian Blue & Nefertiti       9       1         Spiders superfibre       9       2         The Dome       9       3         Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2			
Wobbly chemistry       8       4         Lac       8       5         Egyptian Blue & Nefertiti       9       1         Spiders superfibre       9       2         The Dome       9       3         Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2	The Meissner effect (collagen/gelatin)		
Lac       8       5         Egyptian Blue & Nefertiti       9       1         Spiders superfibre       9       2         The Dome       9       3         Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2			
Egyptian Blue & Nefertiti       9       1         Spiders superfibre       9       2         The Dome       9       3         Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2			
Spiders superfibre       9       2         The Dome       9       3         Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2	Egyptian Blue & Nefertiti		_
The Dome       9       3         Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2			
Galileo thermometer       9       4         Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2	• •		
Hydrogen car       9       5         Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2	Galileo thermometer	9	4
Reaching for the sky       10       1         Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2			5
Fire-blocking gel       10       2         A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2		10	1
A different slant on DNA       10       3         A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2			
A close encounter       10       4         Thread of science       11       1         Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2		10	3
Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2			
Glowing fireflies       11       2         Where there's smoke there's gravity       11       3         Displaying vision: LEP       11       4         Beyond the molecules       12       1         Microdiamonds       12       2         Sniffing for trouble       12       3         Airbags       12       4         Graphite polyhedral crystals       13       1         Life under ice       13       2		11	1
Where there's smoke there's gravity113Displaying vision: LEP114Beyond the molecules121Microdiamonds122Sniffing for trouble123Airbags124Graphite polyhedral crystals131Life under ice132	Glowing fireflies		
Displaying vision: LEP114Beyond the molecules121Microdiamonds122Sniffing for trouble123Airbags124Graphite polyhedral crystals131Life under ice132	<u> </u>	11	3
Beyond the molecules121Microdiamonds122Sniffing for trouble123Airbags124Graphite polyhedral crystals131Life under ice132		11	4
Microdiamonds122Sniffing for trouble123Airbags124Graphite polyhedral crystals131Life under ice132			
Sniffing for trouble123Airbags124Graphite polyhedral crystals131Life under ice132			
Airbags 12 4 Graphite polyhedral crystals 13 1 Life under ice 13 2			
Graphite polyhedral crystals131Life under ice132		12	4
Life under ice 13 2	<u> </u>		
Molecules that grow on trees! 13 3			
Three forms of elemental carbon 13 4			
Like a diamond in the sky 14 1			_

Geothermal energy	14	2
Swimming in a nano sea	14	3
Brightening the future	14	4
The world's smallest test tube	15	1
Little Dragon	15	2
Iron meteorites on Mars	15	3
I'm forever blowing colourful bubbles	15	4
DNA origami	16	1
A trip to the apothecary's	16	2
Sniffer bees	16	3
Raindrops on Titan	16	4
Dragon's breath	17	1
Fireflies: a postcard from Sri Lanka	17	2
and then the heav'n espy	17	3
Wonderful woad and incredible indigo	17	4
Chemistry detectives	18	1
Why do onions make you cry?	18	2
Dinosaur mummy	18	3
Periodic table	18	4
Face the truth	19	1
Viral DNA packaging	19	2
Quinine	19	3
PET imaging of tumours	19	4
The PET that got away	20	1
Science beats food fraud	20	2
Feeling the heat	20	3
Polymers, plastics and superglue	20	4
Gecko glue	21	1
Chemistree: food dyes	21	2
Perilous poisons	21	3
The smell of success	21	4
How hot is your chemistry?	22	1
Rat wars	22	2
You can't beat beetroot	22	3
Celebrating the double helix	22	4
Hydrogen fuel cells: Harnessing explosive energy	23	1
Burning blue	23	2
Feeling blue: Lobster rarities	23	3
Super foods	23	4
Follicle forensics	24	1
Cracking down on chemical weapons	24	2
Wake up and smell the coffee	24	3
Can we grow gold on plants?	24	4
3, 2, 1, liftoff!	25	1
Spectroscopy: At the heart of art	25	2
Colouring the dinosaurs	25	3
Lights in the deep	25	4
Seeing with chemistry	26	1
Back to Sherlock's crime scene	26	2
Life-saving viper	26	3

The two sides of thalidomide	26	4
Fuelling Formula 1	27	1
Botulinum toxin: Killer of cure?	27	2
Molecular cars	27	3
Sunshine and vitamin D	27	4
Conservation and cyclododecane	28	1
Spectroscopy of space	28	2
Valentine chemistry	28	3
The chemistry of coral bleaching	28	4
Radical clean-up	29	1
Endangered elements	29	2
For the fake of auld lang syne	29	3
Creating the lunar seas	29	4

## **Chemical Heroes**

Title	Vol.	Issue
A tough mistake	11	1

# **Chemistry in medicine**

Title	Vol.	Issue
Photochemistry and drug synthesis	28	2

# Chemistry on the web / Chemistry online

Title	Vol.	Issue
Webelements	6	1
Finding information about degree courses	6	2
Molecule of the Month	6	3
Chemystery	6	4
Buckminsterfullerenes	7	1
Green pages	7	2
Ring the changes with <i>Chime</i>	7	3
Life, the universe and the electron	7	4
Poison	8	1
Fire!	8	2
Green sites	9	1
The Nobel prize	9	2
A world of virtual chemistry	9	3
A site for you	9	4
Surf 'n' learn	9	5
To boldly go	10	1
Chemistry in the shed!	10	2
Virtually isomeric	10	3
No worries!	10	4
Chocolate gingers	11	1
The virtual library	11	2
Plastastic!	11	4
Find your way with the web index	12	2
Catalysis for success!	12	3
The double helix 50 years on	12	4
Analyse this!	13	1
British Antarctic Survey	13	2
Transition metals in organic chemistry	13	4
Light: the fuel of life	14	1
Chemistry by numbers	14	2
A greener industry	14	3
Chemical role models	15	1
The science of surfing	15	2
Spectroscopy, mechanisms and calculations online	15	3
A world of science just a click away	15	4
The nano-world wide web	16	1
Practical internet	16	2
Extreme internet	16	3
Bright sites: in search of the most useful chemistry websites	16	4
Molecule of the month	17	1
The great communicator	17	2
Internet dating	17	3
Chemistry in car engines	17	4
iExperiment	18	1
Professor Dave: Youtube chemist	20	1
ChemSpider	20	4
Envirocrew.org: sustainability works	23	4

Picture itChemistry	24	4
Massive open online courses (Moocs)	27	1

## Chemystery

Title	Vol.	Issue
The case of the missing scientist: part 1	18	1
The case of the missing scientist: part 2	18	2
The case of the missing scientist: part 3	18	3
The case of the missing scientist: part 4	18	4

## Did you know?

Title	Vol.	Issue
Optical isomers and penicillin	27	1
Photoswitching isomers	28	1
Knock knock	28	3
Scrambled scientists	29	1

## Encounter

Title	Vol.	Issue
Chemical landmarks of the twentieth century	9	3
Chemistry in slow motion	9	5
A date with the high and mighty of science	10	2
Malcolm Cunnington: the man in the white coat!	10	4
How snails could help repair broken bones	12	1
Showcase Science 2005	15	2
Tracking your degree application	15	4
Fruity electricity: Grätzel solar cells	16	3
Extremophiles in New York	16	4
Two pyrones and beyond	17	1
Call to A-level students: preparations begin for Showcase Science 2009	18	2
Rainforest chemistry: investigating the atmosphere	19	3
Cutting-edge chemistry	20	3
Polymers and tulips: a year in industry	21	1
AAAS Conference	21	2
SeXeY chemistry	22	4
Food waste: beyond the bin	23	4
The life of a first-year chemistry student	24	1
Three years or four? Completing a chemistry degree	24	3
Revising 25 years of chemistry	25	1
Preventing catastrophic climate change	25	2
Treating the AIDS epidemic	25	3
Feeding the world with chemistry	25	4
Life in undergraduate labs	26	3
Atmospheric camp at York	26	4
Science Down Under	27	2
Interview with Nobel prizewinner Bernard Feringa	27	3
Solving climate change in a week	27	4
Chemistry with altitude	28	4
The elephant in the lab	29	2
Chemistry in China	29	4

# **Focus on industry**

Title	Vol.	Issue
Salt	6	2
Making inks stick	9	4
The perfect solution: taking catalyst recycling to a new level	17	2
Phenol	19	3
Polyamides	20	1
Kevlar and composites	20	2
Calcium carbonate (CaCO <sub>3</sub> )	21	1
Biotechnology	21	3
Applications in agriculture: fertilisers	22	1
Applications in agriculture: fungicides	22	2
Applications in agriculture: herbicides	22	3
Applications in agriculture: insecticides	22	4
Catalysis: heterogeneous catalysts	23	1
Applications of heterogeneous catalysts	23	2
Catalysis: homogeneous catalysts	23	3
Biotechnology in the chemical industry: biodegradable polymers	24	1
Biotechnology in the chemical industry: biofuels	24	2
Recent advances in biofuel production	24	3
Biorefineries	24	4
Copper	25	1
Titanium	25	2
Zinc	25	3
Magnesium	25	4
Colourants: Where does colour come from?	26	1
Classifying colourants by method of application	26	2
Pigments and high-tech colourants: What are the technical applications of	26	3
colour?		
Making paint	26	4
Squeaky clean with surfactants	27	2
Soap and other surfactants	27	3
Chemicals in cleaning	27	4
Extracting oil and gas	28	1
What happens in an oil refinery?	28	2
Cracking and related refinery processes	28	3
Fracking	28	4
Aluminium	29	1
Iron	29	1
Steel	29	ļ
Lead	29	

# How chemistry works / How science works

Title	Vol.	Issue
Modelling the atom	17	1
The noble gases: not so unreactive after all	17	3
How the periodic table was born	17	4
What is everything made from?	18	3
Boyle's and Charles' laws: a load of hot air?	19	1
Peer review: avoiding media scare stories	19	2
To err is scientific	20	4
Patents: protecting your ideas	22	4
Making alkenes: the Wittig reaction	23	2
Nuclear Magnetic Resonance	24	4
Investigating the structure of nucleic acids	28	2
The future of the periodic table	28	4
Energy	29	1
The f-block elements	29	3
Fighting fallacies in chemistry communication	29	3
Myth busting	29	4

# In pictures

Title	Vol.	Issue
Structure of insulin	1	1
A closer look at clay	1	2
A hydrogen plant	1	3
The work of a conservator	1	4
Models of atoms	1	5
Different forms of carbon	2	1
The Periodic Table	2	2
What happens in a Bunsen flame?	2	3
Fast & fresh (sandwiches)	2	4
From dolomite to magnesium oxide	2	5
Versatile silicones	3	1
Infrared spectrometry	3	2
Gold, frankincense and myrrh	3	3
History of the atmosphere	3	4
Chemistry can detect faulty genes	3	5
A prize collection (Nobel prize winners & stamps)	4	1
Gas chromatography	4	2
Water	4	3
Molecular fossils	4	4
The rocaglamide story	4	5
Getting your pinta from the cow	5	1
Salt of the earth	5	2
Fractional Distillation	5	3
Nobel	5	4
Nuclear magnetic resonance	5	5
First class organic chemistry	6	1
Ways of representing proteins	6	2
Chemistry in the open air	6	3
Mass spectrometry	6	4
Water treatment	6	5
A breath of fresh air	7	1
Chocolate	7	2
Challenge of materials	7	3
Thermal analysis	7	4
Seeing atoms	7	5
pH: Who needs to know	8	1
Medicines in the garden	8	2
Chemistry under the microscope	8	3
Chemistry on track	8	4
The brewer's art	8	5
Gemstones	9	1
Fireworks	9	2
Molecules of the millennium	9	3
Generating electricity	9	4
Testing air quality	9	5
Visual elements	10	1
Phosphorus	10	2

Chemistry colour & light         10         4           Food to dye for         11         1           Antioxidants         11         2           Biodiesel         11         3           Polymer protected professionals         11         4           Dyeing hair         12         1           The barking dog         12         2           Around the world with chemistry         12         3           Modelling the double helix         12         4           Machair         13         1           The heart is on         13         3           Molecules in a virtual world         13         4           The Magnificent Seven: magic bullets of 21st century         14         1           Science is art         14         2           Antiffereze         14         3           Magnetic resonance imaging         14         4           Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2 <th>It's a chiral world!</th> <th>10</th> <th>3</th>	It's a chiral world!	10	3
Food to dye for			
Antioxidants         11         2           Biodiesel         11         3           Polymer protected professionals         11         4           Dyeing hair         12         1           The barking dog         12         2           Around the world with chemistry         12         3           Modelling the double helix         12         4           Machair         13         1           The heat is on         13         3           Molecules in a virtual world         13         4           The Magnificent Seven: magic bullets of 21st century         14         1           Science is at         14         2           Antifreeze         14         3           Magnetic resonance imaging         14         4           Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered	•		
Biodiese    11			
Polymer protected professionals			
Dyeing hair			
The barking dog		ļ	
Around the world with chemistry  Modelling the double helix  12 4  Modelling the double helix  13 1  The heat is on  13 3  Molecules in a virtual world  The Magnificent Seven: magic bullets of 21st century  Science is art  14 2  Antifreeze  Antifreeze  14 3  Magnetic resonance imaging  Probably the most important reactions in the world  15 2  Camping with chemistry  15 3  Rocks that glow in the dark  Stimulating chemistry  16 1  Copper on tap?  Seeing the nanoworld: atomic structures and reaction dynamics  17 2  Getting plastered  17 4  Hydrogen bonds: holding the world together  The Martian poles  19 1  Atoms to patterns  19 2  Chemistry in the atmosphere  19 3  Magnetic marvel  Chemistry of the cosmos  Decoding skeletal secrets  22 1  Kevlar: miracle material  Hair-raising chemistry  23 1  Medicinal or murderous: Analysing a Victorian medicine cabinet  25 3  Periodic table updated  Raku pottery: Redox in action  27 3  Saving SS Great Britain: Redox in action  28 4  Periodic table completed?  Periodic table completed?  What shape is my molecule?  28 4  Periodic table completed?  What shape is my molecule?  29 2  Priodelipant's toothpaste experiment  29 2  Priodelipant's toothpaste experiment  29 2  Priodelic table completed?  Priodelic table completed?  Priode chemistry  Priodelic table completed?  Priode chemistry  Priodelic table c			
Modelling the double helix         12         4           Machair         13         1           The heat is on         13         3           Molecules in a virtual world         13         4           The Magnificent Seven: magic bullets of 21sl century         14         1           Science is art         14         1           Antifreeze         14         3           Magnetic resonance imaging         14         4           Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         1           Seeing the annoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry of the cosmos         21         3	<u> </u>		
Machair         13         1           The heat is on         13         3           Molecules in a virtual world         13         4           The Magnificent Seven: magic bullets of 21st century         14         1           Science is art         14         2           Antifreeze         14         3           Magnetic resonance imaging         14         4           Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         1           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2 <td< td=""><td></td><td></td><td></td></td<>			
The heat is on   13   3   Molecules in a virtual world   13   4   4   1   1   1   1   1   1   1   1			
Molecules in a virtual world			
The Magnificent Seven: magic bullets of 21st century         14         1           Science is art         14         2           Antifreeze         14         3           Magnetic resonance imaging         14         4           Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4         4           The disguises of carbon         18         1         1           Hydrogen bonds: holding the world together         18         1           The Martian poles         19         1         4           Atoms to patterns         19         2         1         3           Chemistry in the atmosphere         19         3         3         1         3         1         3         1         3         1         4         4         4         4         4         4         4         4			_
Science is art         14         2           Antifreeze         14         3           Magnetic resonance imaging         14         4           Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         1           The Martian poles         19         1           Atoms to patterns         19         1           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray		ļ	1
Antifreeze       14       3         Magnetic resonance imaging       14       4         Probably the most important reactions in the world       15       2         Camping with chemistry       15       3         Rocks that glow in the dark       15       4         Stimulating chemistry       16       1         Copper on tap?       16       2         Seeing the nanoworld: atomic structures and reaction dynamics       17       2         Getting plastered       17       4         The disguises of carbon       18       1         Hydrogen bonds: holding the world together       18       4         The Martian poles       19       1         Atoms to patterns       19       2         Chemistry in the atmosphere       19       3         Magnetic marvel       20       2         Chemistry of the cosmos       21       3         Decoding skeletal secrets       22       1         Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3 <td></td> <td>ļ</td> <td></td>		ļ	
Magnetic resonance imaging         14         4           Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet		ļ	
Probably the most important reactions in the world         15         2           Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         1           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         26         2           Mass, moles and gas equations			
Camping with chemistry         15         3           Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         21         3           Kevlar: miracle material         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         25         3           Periodic table updated         26         1 <td></td> <td></td> <td></td>			
Rocks that glow in the dark         15         4           Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         25         3           Periodic table updated         26         1           Is every snowflake unique?         26         2           Mass, moles and gas equations         26			
Stimulating chemistry         16         1           Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         21         3           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         25         3           Periodic table updated         26         1           Is every snowflake unique?         26         2           Mass, moles and gas equations         26         3           Know your glassware         26         4 <td></td> <td></td> <td></td>			
Copper on tap?         16         2           Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         25         3           Periodic table updated         26         1           Is every snowflake unique?         26         2           Mass, moles and gas equations         26         3           Know your glassware         26         4           The chemistry behind baking         27 <t< td=""><td></td><td>ļ</td><td>1</td></t<>		ļ	1
Seeing the nanoworld: atomic structures and reaction dynamics         17         2           Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         25         3           Periodic table updated         26         1           Is every snowflake unique?         26         2           Mass, moles and gas equations         26         2           Know your glassware         26         4           The chemistry behind baking         27         1           Raku pottery: Redox in action         27<			
Getting plastered         17         4           The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         25         3           Periodic table updated         26         1           Is every snowflake unique?         26         2           Mass, moles and gas equations         26         2           Know your glassware         26         4           The chemistry behind baking         27         1           Raku pottery: Redox in action         27         3           Saving SS Great Britain: Redox in action         27         4 <td></td> <td>ļ</td> <td></td>		ļ	
The disguises of carbon         18         1           Hydrogen bonds: holding the world together         18         4           The Martian poles         19         1           Atoms to patterns         19         2           Chemistry in the atmosphere         19         3           Magnetic marvel         20         2           Chemistry of the cosmos         21         3           Decoding skeletal secrets         22         1           Kevlar: miracle material         22         4           Hair-raising chemistry         23         1           X-ray eyes on a molecular world         25         1           Medicinal or murderous: Analysing a Victorian medicine cabinet         25         3           Periodic table updated         26         1           Is every snowflake unique?         26         2           Mass, moles and gas equations         26         2           Know your glassware         26         3           Know your glassware         26         4           The chemistry behind baking         27         1           Raku pottery: Redox in action         27         3           Saving SS Great Britain: Redox in action         27         4<		-	
Hydrogen bonds: holding the world together  The Martian poles  19 1 Atoms to patterns  Chemistry in the atmosphere  19 3 Magnetic marvel  Chemistry of the cosmos  21 3 Decoding skeletal secrets  22 1 Kevlar: miracle material  42 4 Hair-raising chemistry  23 1 X-ray eyes on a molecular world  Medicinal or murderous: Analysing a Victorian medicine cabinet  25 1 Is every snowflake unique?  Ass, moles and gas equations  Know your glassware  26 1 The chemistry behind baking  27 1 Raku pottery: Redox in action  27 3 Saving SS Great Britain: Redox in action  27 4 Elements of smartphones  28 1 Flying over fires  28 2 Periodic table completed?  28 3 What shape is my molecule?  29 1 The elephant's toothpaste experiment	0.1	ļ	
The Martian poles       19       1         Atoms to patterns       19       2         Chemistry in the atmosphere       19       3         Magnetic marvel       20       2         Chemistry of the cosmos       21       3         Decoding skeletal secrets       22       1         Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3         Periodic table updated       26       1         Is every snowflake unique?       26       2         Mass, moles and gas equations       26       2         Mass, moles and gas equations       26       3         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3	<u>v</u>		4
Atoms to patterns       19       2         Chemistry in the atmosphere       19       3         Magnetic marvel       20       2         Chemistry of the cosmos       21       3         Decoding skeletal secrets       22       1         Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3         Periodic table updated       26       1         Is every snowflake unique?       26       2         Mass, moles and gas equations       26       3         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3         What shape is my molecule?       28       4         Cave chemistry       29       1         Th			
Chemistry in the atmosphere       19       3         Magnetic marvel       20       2         Chemistry of the cosmos       21       3         Decoding skeletal secrets       22       1         Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3         Periodic table updated       26       1         Is every snowflake unique?       26       2         Mass, moles and gas equations       26       2         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3         What shape is my molecule?       28       4         Cave chemistry       29       1         The elephant's toothpaste experiment       29       2		19	2
Magnetic marvel       20       2         Chemistry of the cosmos       21       3         Decoding skeletal secrets       22       1         Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3         Periodic table updated       26       1         Is every snowflake unique?       26       2         Mass, moles and gas equations       26       3         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3         What shape is my molecule?       28       4         Cave chemistry       29       1         The elephant's toothpaste experiment       29       2			
Chemistry of the cosmos       21       3         Decoding skeletal secrets       22       1         Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3         Periodic table updated       26       1         Is every snowflake unique?       26       2         Mass, moles and gas equations       26       3         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3         What shape is my molecule?       28       4         Cave chemistry       29       1         The elephant's toothpaste experiment       29       2			2
Decoding skeletal secrets       22       1         Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3         Periodic table updated       26       1         Is every snowflake unique?       26       2         Mass, moles and gas equations       26       3         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3         What shape is my molecule?       28       4         Cave chemistry       29       1         The elephant's toothpaste experiment       29       2			3
Kevlar: miracle material       22       4         Hair-raising chemistry       23       1         X-ray eyes on a molecular world       25       1         Medicinal or murderous: Analysing a Victorian medicine cabinet       25       3         Periodic table updated       26       1         Is every snowflake unique?       26       2         Mass, moles and gas equations       26       3         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3         What shape is my molecule?       28       4         Cave chemistry       29       1         The elephant's toothpaste experiment       29       2	, , , , , , , , , , , , , , , , , , ,	22	1
Hair-raising chemistry231X-ray eyes on a molecular world251Medicinal or murderous: Analysing a Victorian medicine cabinet253Periodic table updated261Is every snowflake unique?262Mass, moles and gas equations263Know your glassware264The chemistry behind baking271Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292	<u> </u>		
X-ray eyes on a molecular world251Medicinal or murderous: Analysing a Victorian medicine cabinet253Periodic table updated261Is every snowflake unique?262Mass, moles and gas equations263Know your glassware264The chemistry behind baking271Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292			1
Medicinal or murderous: Analysing a Victorian medicine cabinet253Periodic table updated261Is every snowflake unique?262Mass, moles and gas equations263Know your glassware264The chemistry behind baking271Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292			1
Periodic table updated261Is every snowflake unique?262Mass, moles and gas equations263Know your glassware264The chemistry behind baking271Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292			3
Is every snowflake unique?       26       2         Mass, moles and gas equations       26       3         Know your glassware       26       4         The chemistry behind baking       27       1         Raku pottery: Redox in action       27       3         Saving SS Great Britain: Redox in action       27       4         Elements of smartphones       28       1         Flying over fires       28       2         Periodic table completed?       28       3         What shape is my molecule?       28       4         Cave chemistry       29       1         The elephant's toothpaste experiment       29       2		26	1
Mass, moles and gas equations263Know your glassware264The chemistry behind baking271Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292	1		2
Know your glassware264The chemistry behind baking271Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292	· · ·		3
The chemistry behind baking271Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292			4
Raku pottery: Redox in action273Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292	• •		-
Saving SS Great Britain: Redox in action274Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292		27	3
Elements of smartphones281Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292			
Flying over fires282Periodic table completed?283What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292			1
Periodic table completed? 28 3 What shape is my molecule? 28 4 Cave chemistry 29 1 The elephant's toothpaste experiment 29 2	1		
What shape is my molecule?284Cave chemistry291The elephant's toothpaste experiment292			
Cave chemistry291The elephant's toothpaste experiment292			-
The elephant's toothpaste experiment 29 2		1	
	Do you know your functional groups?	29	3

ACIUS AIIU IIICII USCS	29	4	ı
------------------------	----	---	---

## Lab page

Title	Vol.	Issue
Recrystallisation - purification of solids	2	5
Thin-layer chromatography TLC	3	1
Making standard solutions	3	2
Using a separating funnel	3	3
Distillation	3	4
Melting point determination	3	5
Measuring pH	4	1
Extracting and studying enzymes	4	2
Measuring volume	4	3
Solvent extraction	4	4
Colorimeters	4	5
Growing crystals	5	1
Safe heating	5	2
Observing	5	3
Electrochemical cells	5	4
Steam distillation	5	5
Volumetric analysis	6	1
Testing for metal ions	6	2
Separating solids from liquids	6	4
Handling gases	6	5
Testing for gases	7	1
Measuring the boiling point of a liquid	7	5
Measuring pH	8	1
What is chromatography?	8	2
Recrystallisation	8	4
Refluxing and distillation	9	2
Calorimetry	9	4
Assessing the risks in practical work	10	1
Oxidation of alcohols	10	4
Experimental error and error analysis	11	2
Making a standard solution	12	2
Colorimetry	12	3
Observing and recording	13	1
Distillation	14	1
Not all indicators are equal	14	2
Thin layer chromatography	14	3
Melting points and boiling points	14	4
Electrode potentials	15	3
How to be a lab success: using QuickFit apparatus	16	1
How to be a lab success: titrations, crystals, separating and mixing	16	4
Identifying an unknown organic compound	17	3
Planning your own experiment	19	3
Heating under reflux	20	2
Infrared spectrometers	21	2
Flame tests and emission spectra	21	4
Recrystallisation	22	2
Determining the yield of a reaction	22	3

Performing the perfect titration	23	2
Steam distillation	23	3
Chromatography	24	3
Extracting caffeine from tea leaves	25	1
How to make skin cream	25	2
Esterification	25	3
Synthesising aspirin	26	1
Nitration of an arene	26	2
Make your own dye	26	3
Volumetric analysis	27	2
Testing turmeric	27	4
Constructing an electrochemical cell	28	4
Analysing limescale remover by acid-base titration	29	2

# Making and doing

Title	Vol.	Issue
Model of buckminsterfullerene	1	1
Models of Clay	1	2
Elementary crossword	1	3
Asymmetric crystals of tartaric acid salts	1	4
Spreadsheets for calculations	1	5
Gas testing crossword	2	1
Models of zeolites	2	2
Wordsearch	2	3
Cooking with dough	2	4
Crossword	3	1
Puzzle page	3	2
Solid liquid	3	4
Model of DNA molecule	3	5
Elementary spelling	4	1
History of the Bunsen burner	4	3
Using natural dyes	4	5
Chemical definitions	5	1
Crystal-growing challenge	5	2
The sweet smell of danger	5	3
Quiz	5	4
Chemical dingbats	5	5
Polymer word search	6	1
Anagrams	6	2
Dr Beaker	6	5
Element search	7	1
Chemistry is fun	7	2
Surface tension	7	3
Logical chemistry	8	1
Neils Bohr puzzle	8	2
Gakistuf	9	1
Dr Beaker	9	2
Dr Beaker	9	4
Fun with hydrogels	10	2
3D models	10	3
Fizz: making sherbet	11	1
Calculating carbon dioxide	11	2
Popcorn explosions	12	1
Bubbles	12	3
DIY DNA	12	4
Chemical dingbats	14	1
More chemical dingbats	14	2
Inkvestigation	15	1
Chemical crossword	15	2
Chemical sudoku	15	3
Elemental sudoku	15	4
Poetic chemistry	16	1
Elementary crossword	17	1

7 8 9 .0 .0	3 4 2 1
9 .0 .0	2
0.0	1
.0	
	2
	3
1	4
2	1
.3	1
4	1
4	2
.5	1
5	2
5	3
6	1
6	2
.7	2
.7	3
.7	4
.8	3
.9	1
.9	1
.9	3
.9	3
.9	4
	1 2 2 3 3 4 4 4 4 5 5 5 5 5 6 6 6 7 7 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9

# People / All in a day's work / Careers in chemistry

Name	Job	Vol.	Issue
Hart, Judith	Freelance Journalist	1	3
Knight, Barry	Ancient Monument Laboratories (English Heritage)	1	4
Gregory, Peter	Senior Scientist (ICI Specialty Colours Group)	2	3
Hamer, Pam	Forensic Scientist	2	5
Senior, Clare	Analytical Chemist in Packaging Research	3	4
Crawley, Frank	Chemical Engineer (ICI, BP), Authority on safety of industrial processes	4	3
Tarasova, Natalia	Radiation Chemist, Professor of Industrial Ecology, Mendeleev University of Chemical Technology, Moscow	4	4
Hutchinson, Ann	Process Chemist (Rhone-Poulenc Agriculture)	5	1
Sutton, Jane	Press and Publicity Officer (Royal Society of Chemistry)	5	2
Osman, Robert	Plant Manager, Pigment Dispersion Plant, Yorkshire Chemicals	5	3
Owen, Nick	Innovations Marketing Manager, Hickson & Welch	5	4
Hewitt, Chris	Brand Manager, Aldrich UK	5	5
Hazel, Nick	Issues Manager, BP Chemicals	6	1
Hodgson, Anne	University Chemistry Department	6	3
Levitt, Melissa	Commissioning Editor	6	5
Hockley, Sian	Patent Agent	7	5
Julie Hall	Antarctic Research	8	2
Louise Scarry	Granular Detergent Technology	8	5
O'Brien, Peter	University Lecturer	9	3
Walker, Karen	Agrochemical Registration Specialist	9	5
Tinkler, Suzanne	Confectionery product developer	11	4
Wevill, Dave	Antarctic Survey	13	2
Barnham, Rachel	Forensic Scientist	14	3
Macdonald, Anthony	Biomedical researcher	18	4
Hardy, Jeff	UK Energy Research Centre	19	4
Davison, Rachael	Cosmetic scientist	29	2

# Project page

Title	Vol.	Issue
Decomposing hydrogen peroxide	5	1
What's in water?	5	2
The reactions of metals with acids	5	3
Making light of Project work	5	4
There's more to Vitamin C than Brussels	5	5
Reactions that don't add up	6	1
Clock reactions	6	2
Aspirin	6	3
Investigating enzymes	6	4
How accurate are titrations?	7	1
What's in wine	7	3
Ion exchange resins	7	4
Oscillating reactions	8	3
Adsorption and inclusion	8	4
Concentration of copper ions	9	1
Dyes and dyeing	10	1
A Reaction that speeds itself up	11	3
Anyone for spaghetti and peas?	11	4
How quickly does bleach deteriorate?	16	3

## Remember remember

Title	Vol.	Issue
Using mnemonic methods	8	1
The story system	8	2
The loci system	8	3
The peg method	8	4

## Research team

Title	Vol.	Issue
Are you part of a research team?	8	1
Naphthazarin, PDT and the fight against cancer	8	2
The problem with PET	8	4
Are you part of a research team?	9	1
Nitric oxide as a synthetic reagent	9	5
Pushing back the frontiers	10	1

## **Revision note**

Title	Vol.	Issue
Bonding between molecules	1	1
Spectroscopy	1	2
Electrolysis	1	3
Shapes of molecules and electron pair repulsion theory	1	4
Interpreting mass spectra	1	5
What makes a reaction go?	2	1
Redox (and oxidation numbers)	2	2
Energy profiles	2	3
An overview of organic reactions	2	4
Acids	2	5
The Periodic Table	3	1
Testing for functional groups	3	2
A new angle on bonding	3	3
Solidification of solutions	3	4
Melting point determination	3	5
The transition metals	4	1
Naming aliphatic organic compounds	4	2
Keeping track of energy changes	4	5
Drawing organic compounds	5	1
Born-Haber cycles and lattice energies	5	2
Melting and boiling points	5	3
Keeping things short	5	4
Acids & bases	5	5
Acid-base indicators and buffer solutions	6	1
Ultraviolet and visible spectra	6	2
Kinetics	6	4
Group 4	6	5
Identifying gasses	7	1
Intermolecular bonds	7	2
Isomerism	7	3
	8	1
Halogens Spider diagrams	8	2
Spider diagrams The alkanes	8	3
	9	1
Changing state Exam tactics	9	
	9	3
Transition metal complexes I	9	
Transition metal complexes II	-	4
Organic synthetic pathways	9	5
What is isomerism?	10	3
Amines	10	4
Gases Part 1	11	1
Calculations involving masses	11	2
Gases Part 2	11	3
Trends in period 3 elements	11	4
The elements in group 2	12	2
Titrations	12	3
Nucleophiles	12	4

Moles – the basics	13	1
Calculating pH	13	2
Carboxylic acids	13	3
Establishing a rate equation	14	2
Aliphatic organic compounds	15	1
Summary of reactions for benzene/aromatic compounds	15	2
From creaking joints to saving a steamship	15	3
Bonding: sticking atoms together	16	1
Interpreting infrared spectra	16	2
Classifying organic reactions	16	3
Trends in ionisation energy	17	3
Acids and bases: a whistle-stop tour	18	2
Acids and bases: developing ideas further	18	3
Oxides of carbon	20	1
Solid foundations: part 1	21	3
Solid foundations: part 2	21	4
Tackling stretch and challenge questions	22	4
Copper sulfate and ammonia: stretch and challenge question	23	4
Understanding NMR spectra	24	4
Nucleophilic substitution	26	3
Electrophilic substitution of aromatic rings	26	4
Know your units	27	3
The continuum of bonding	28	1
Disentangling polarity	28	2
Maxwell-Boltzmann distribution curves	29	4

## **Scientists of substance**

Title	Vol.	Issue
Mendeleev, creator of the chemists' logo	13	1
John Newlands	13	2
Harry Moseley	13	3
Fritz Haber	13	4
John Priestly	14	1
Sir William Ramsay	14	2
Sir Humphry Davy	14	4
Linus Pauling	15	1
Thomas Midgely	15	2
Gilbert N. Lewis: his acids and bases	15	3
Glenn T. Seaborg: creator of elements	15	4
Lise Meitner: radiochemist, physicist and co-discoverer of nuclear fission	16	1
Ida Tacke-Noddack: co-discoverer of rhenium and nuclear fission	16	2
Rosalind Franklin: physical chemist, X-ray crystallographer and DNA pioneer	16	3
Marguerite Perey: discoverer of francium	16	4
Organic growth from Deutsche Chemiker	17	1
More organic growth from Deutsche Chemiker: Liebig and Wöhler	17	2
Seeds of structural organic chemistry: August Kekulé	17	3
Adolf von Baeyer and Victor Meyer	17	4
Avogadro: count and counting chemist	18	1
John Dalton: Quaker scientist and law maker	18	2
van der Waals: famous for recognising feeble forces	18	3
Michael Faraday	18	4
Dorothy Crowfoot Hodgkin: great discoveries in X-ray crystallography	19	4
Carothers: inventor of nylon	20	1
Kwolek: creator of Kevlar	20	2
Benerito: the chemist who banished ironing		3
Marie Curie: probing the atom		2
The fascinating Fenton reaction	22	1
Rachel Louise Carson: Environmental champion	27	2

## Substances

Title	Vol.	Issue
Tin and lead	4	1
Iodine	4	2
Methyl mercaptan	4	3
Sodium carbonate	4	4
Argon - in the spotlight	4	5
Helium	5	1
Platinum	5	2
Nitric Acid	5	3
Propanone	5	4
Iodine	5	5
Hydrogen peroxide	6	1
Alumina	6	2
Silica	6	3
Nitric oxide	6	4
Mixed oxides	6	5
Chlorides	7	1
Potassium chloride	7	2
Aluminium chloride	7	3
Cl <sub>4</sub> and SiCl <sub>4+</sub>	7	4
HCl	7	5
Butane	8	3
Ethanoic acid	8	4
Phenol	8	5
Aluminium	9	2
Caesium	9	3
Sulfur	9	4
Cyanides	10	1
Chlorine	10	2
A bitter isomerisation	10	3
Carbon monoxide	10	4
Strontium	11	1
Gallium	11	2
Selenium	11	3
Hydrogen	12	1
Chromium	12	3
Bromine	12	4
Hydrogen sulfide	13	1
Titanium	13	3
Nitrogen oxides	14	1
Ozone	14	2
Carbohydrates	14	4
Carboxylic acids	15	1
Hydrogen: alkali metal or halogen?	15	2
Lithium	15	3
Supercritical carbon dioxide	16	3
Silicones and silanes	16	4
Platinum: not just for jewellery	17	4

The fight against bacteria: every cloud has a silver lining	18	1
Deadly beauty	18	3
Finding a fix	19	1
Graphene	19	2
Vanadium	19	4
Calcium carbonate	20	3
Water water everywhere	20	4
Iridium: life-saving transition element	21	2
Cocaine: atoms of addiction	21	3
Aerogel: 'frozen smoke'	21	4
Tetrodotoxin: famously deadly poison	22	2
All things ice	22	3
Iodine in medicine	23	1
Magnesium	23	3
Looking into glass	23	4
Hydrogen cyanide: Poison and precursor	25	2
Barium	25	4
Analgesics	27	1
Turmeric: Medicinal applications	27	4
Sugar: A bittersweet tale?	29	4

# Top tips

Title	Vol.	Issue
Getting the language right	7	1
Oxidation states	7	2
The shapes of molecules	7	3
Calculations involving amounts	8	1
Identifying reactions (1)	8	4
Identifying reactions (2)	8	5
Calculating yields in chemical reactions	9	2
Drawing enthalpy cycles	9	3
Interpreting mass spectra	10	1
Interpreting NMR spectra	10	2
Writing structural isomers using stick formulae	10	3
Tackling chemical calculations	10	4
Know your Ks	11	4
Understanding electrode potentials	12	1
Using electrode potentials	12	2
Balancing equations	12	3
Using oxidation states	12	4
Van der Waals Forces	13	1
Classifying organic reactions	13	2
Measuring the rate of a chemical reaction	14	1
Born Haber Cycles	14	4
What's in a word?	15	1
Watch your language!	15	2
Hess's Law	15	4
Guidelines for drawing organic structures	16	1
Shapes in inorganic chemistry	16	2
Drawing lab diagrams	16	4
Representing chemical reactions	17	1
Drawing reaction mechanisms	18	1
Drawing radical reaction mechanisms	18	2
Atom economy: avoiding chemical waste	19	2
Naming esters	19	3
Tracking your degree application	19	4
Making use of electrode potentials	22	3
Hess cycles and the MASK check	24	2
Amino acids in chemistry	25	2
Succeeding in chemistry without A-level maths	25	4
Dealing with significant figures	26	1
Esterification mechanisms	27	3
Naming $(R/S)$ isomers	29	3

# Wonders of chemistry

Title	Vol.	Issue
Liquid breathing	11	1
Paved with titanium	11	2
Saving reefs from grief	11	3
Self-healing plastic	11	4
Windows that clean themselves	12	2
Twenty-first century batteries	12	4
Seeing with selenium	13	2
Solution to a sticky problem: non-drip ice-lollies	13	3
Tougher than a speeding bullet	13	4
The future's bright, the future'stritium	14	2
Luminol: shedding the light on 'hidden' evidence	14	3
Potty power: microbial fuel cells	14	4
Cracking concrete heals itself	21	1
Molybdenite Valley? The search for new semiconductors	22	2
Won't you step into my parlourspider silk	23	2
Molecules of revision	23	4
Graphene and carbon nanotubes	24	1
The jeans that eat pollution	24	2
Lyotropic liquid crystals: essential for life	24	3
X-rays reveal a lost treasure	25	2
Solar power: nature does it better	28	1
Elements old and new	28	3
Chameleon colour changes	29	2
Recharging the batteries	29	3

# Worth reading

Title	Vol.	Issue
Molecules at an Exhibition	8	4
Nitroglycerine	9	2
The Shocking History of Phosphorus: a biography of the Devil's element	10	2
The X-ray detective	11	1
Science, not art: ten scientists' diaries	14	1
Uncle Tungsten	14	4
Better Looking, Better Living, Better Loving: How chemistry can help you	17	2
achieve life's goals		
Eurekas and Euphorias: The Oxford Book of Scientific Anecdotes	18	3
Max Perutz and the Secret of Life	18	4
Chemistry <sup>3</sup> : introducing inorganic, organic and physical chemistry	19	2
A Healthy, Wealthy, Sustainable World	20	4
The Elements – a very short introduction	21	1
Nature's Building Blocks (2 <sup>nd</sup> edition)	21	2
Molecules with Silly or Unusual Names	21	4
Breverton's Encyclopedia of Inventions	22	2
30-Second Elements	22	3
Every Molecule Tells a Story	24	2
Molecules That Amaze Us	25	3
The Sun and moons	27	1
The Disappearing Spoon	28	1
Periodic Tales: the Curious Lives of the Elements	28	3
Reactions: the Private Life of Atoms	28	4

# Themed articles (one-off series)

Title		Vol.	Issue
Chemistry and the	Nitrogen and phosphorus in estuaries	7	1
environment			
	Mountains of waste	7	2
	SO <sub>2</sub> and acid rain	7	3
	Climate change and CO <sub>2</sub>	7	4
	Tracing oil spills at sea	7	5
Chemistry and health	Quinine – one of the great molecules	8	1
	Metals in medicine	8	2
	Body parts from the polymer lab	8	3
	The discovery of Ventolin	8	4
Green chemistry	Catalysts	9	1
	Green beans?	9	2
	Environmental solutions	9	3
	Plants of the future	9	4
	Atom efficiency and catalysis	9	5
Chemistry in space	DIBs: a great unsolved mystery	10	1
спенияну иг врасс	What a dusty universe!	10	2
	Space: the first and last great brewery	10	3
	Beagle 2: looking to explore a blurred vision of life	10	4
	on Mars		'
A taste for chemistry	Cool chemistry: what's in an ice cream?	11	1
11 tuste for enemistry	Cooked to a turn! Non-enzymic browning in food	11	2
	A root to white sugar: how to turn a plant into	11	3
	something sweet	11	
	Understanding cocoa flavour	11	4
Chemistry everywhere	Curly locks	12	1
Shemistry everywhere	Roast beef and ashes to vegetarian shampoo	12	2
	All you should know about dough	12	3
	The ultra-blue: the story of ultramarine	12	4
Forensic chemistry	The chemistry of fingerprints	13	1
1 orensie enemistry	Resurrecting the past	13	2
	Behind the scenes at the National Gallery	13	3
	Drugs on money	13	4
Fuelling the future	Electricity generation	14	1
T defining the future	Electricity, the next generation	14	2
	Driving towards a cleaner future	14	3
	Global impact of fuels	14	4
Sporting chemistry	Performance fuel for people	15	1
Sporting chemistry	Chemistry has the right fibre for sporting glory	15	2
	Designer magic sponges	15	3
	Catching the cheats: detecting drugs in sport	15	4
Nanotechnology	Nanochemistry: delivering new medicines?	16	1
Nanotechnology	Nanotechnologists inspired by nature: building new	16	2
	model enzymes	10	
	Liquid crystals: the fourth state of matter	16	3
	When superconductors get crabby	16	4
Chamietry and alimete		17	1
Chemistry and climate	Natural climate variability	1/	1

	The Antarctic ozone hole	17	2
	The benefits of bracing sea air		3
	The chemistry of indoor air	17	4
Medicinal chemistry	Precious medicines	18	1
1/10/01/01/01/01/01/01/01/01/01/01/01/01	Don't hold your breath: the diagnostic potential of	18	2
	breath analysis		
	Curing cancer with chemistry	18	3
	Salbutamol: saving your breath	18	4
Design for the future	The polymer predicament: making plastics from	19	1
· ·	plants		
	Biocatalysis	19	2
	Lab on a chip	19	3
	LEDs: light fantastic	19	4
Out of thin air	From volcanoes to sea salt: atmospheric sulfur	20	1
	Atmospheric nitrogen	20	2
	Poison in the air: atmospheric carbon monoxide	20	3
	Do ants destroy the ozone layer?	20	4
What's your poison?	Cuppa chemistry	21	1
	Chemistry of wine	21	2
	Biochemistry, brewing and beery scientists	21	3
	A mug of coffee and chemistry	21	4
Lifestyle chemistry	Chemistry's calling: mobile phones and touchscreen	22	1
	technology		
	Curried chemistry	22	2
	Two in one: the chemistry of shampoo and	22	3
	conditioner		
	Shades of chemistry	22	4
Greener and cleaner	Artificial photosynthesis: putting sunshine in the tank	23	1
	Reclaiming plastic waste	23	2
	What can we make from carbon dioxide?	23	3
	Biocatalysis in biosolvents	23	4
Chemistry in medicine	Developing and delivering drugs	24	1
	Mind-numbing drugs	24	2
	Fighting mental illness	24	3
	Viral chemistry	24	4
25 years of	Gel chemistry: From jellies to 3D printing	25	1
	Retrosynthesis	25	2
	Carbene chemistry	25	3
	FT-NMR	25	4
Energy and efficiency	The chemistry of LEDs	26	1
	Shining a light on solar energy	26	2
	Batteries required: Advances in energy storage	26	3
	Fuel from sunshine	26	4
Wonder bugs	Landmine-detecting bacteria	27	1
	Plastic-eating bacteria	27	2
	Microbial medicine factories	27	3
	New fuels from nature	27	4
Animal chemistry	Bees, honey and venom	28	1
	Frogs and toads	28	2
	Cats and dogs	28	3

	Spiders	28	4
A brief history of	Atomic structure: Part 1	29	1
	Atomic structure: Part 2	29	2
	The chemistry of nuclear energy	29	4