

welcome to issue 17



Exciting news on the events front! Meet The Universities plans are shaping up nicely, we have a date and a venue, always a good place to start!

I can now give details of a chemistry taster day being held at Imperial on 24th June. This is being run in conjunction with one of their taster days which is open to everyone, but we have been able to reserve 30 places just for *ChemNet* members. This will give you unparalleled access to chemistry in one of London's top science universities.

Loads of good stuff for you this month, another "CD" with links to awesome video clips to download. We've also got a diary for you, handy for recording the dates of exams and important things like *ChemNet* events and mates birthdays. I hope those of you who had exams in January got on OK.

R. Bowles

Robert Bowles – Editor



Materials Chemist What's that made of?



Everything is made of something and whatever that something is, chances are that chemists made it in the first place.

Materials science is the understanding of what materials are made of, and why they are good at the particular job they are being used for. Want to design a new material for an aircraft wing to make it ultra-light (so the aircraft is more fuel efficient) yet extra strong (so it doesn't snap off and send hundreds to a fiery death)? You'll need a materials chemist. Want to design a carbon nanotubule to process information in the next generation of computer processors replacing silicon chips? Yep, you've guessed it, you'll need a materials chemist. Materials chemists are just the latest group to use

nanotech – but they also go in for some of the more traditional branches of chemistry too. e.g. metallurgy – (no, not flu-like symptoms found in metal workers), but instead the study of metals and their alloys, including their extraction, microstructure and processing; biomaterials and surface chemistry/catalysis. So a pretty physical bunch then - but very handy to have on your side. They don't just do high-tech though. Material chemists will identify and create new materials for use in just about anything – scratch proof resistant coating for your iPod – ask a materials scientist what to make it out of. Lightweight material for an outdoor waterproof coat for hikers to allow their skin to breathe – get it designed and researched by a materials chemist.

Website of the month

<http://www.bestchoice.net.nz>

I know some of you have had a crack at the online chemistry Olympiad, well here's another site for you to test your chemistry knowledge while you are online. Bestchoice offers online assessment and feedback for UK post-16 students. It's really easy to navigate using the specification used by the major exam boards. It tracks all the work done online and supports students all the way. It is so very much more than just

multiple choice questions. Schools can register and get their whole classes doing exercises, or individual students can use it as independent learners. There are over 5,000 students regularly using it at present and best of all... it's completely **free!** Register now by emailing Mike, thompsonm@rsc.org. to get all the info.

TEXT US
ON 07825
186 304

chemnet events

A unique event has been planned for *ChemNet* members on 24th June at Imperial College in London. We will have 30 places available for a chemistry taster day. There'll be a chance to do an experiment in the morning. This will be followed by a talk by their admissions tutor, handy if you are applying to Imperial, or pretty much anywhere else to do chemistry. We'll the finish off the day with a lecture, and a tour of the university with a chance to talk to undergrad and post-grad students about what life is like at one of the country's top science universities. Book your place by emailing chemnet@rsc.org

Meet the Universities 2008 is moving ahead. This will be bigger and better than last year and is confirmed for July 5th in the Royal Horticultural Halls in central London – more details soon but get it in your diaries now!

If you are considering a place at university to study any of the chemical sciences this is THE event to go to, with 20 universities brought together in one place for you to question on any aspect of their courses or life at their university. There will also be some smaller local industry visits in 2008. If these are in your area you'll be getting an invite so keep an eye out!

chemistry on the web

Chemistry in the news

free stuff!



Podcasts - do you listen to them?

The *Chemistry World* one obviously is un-missable, but there are more: try the Radio 4 Science in Action podcast: <http://www.bbc.co.uk/radio/podcasts/scia/> The Guardian also has a weekly science blog here: http://blogs.guardian.co.uk/science/2008/01/science_weekly_for_january_07.html

New service launched for *ChemNet* members.

Ask Lucy.... Lucy Miller was a *ChemNet* member last school year and started her chemistry degree in Manchester in October. She has very gallantly offered to answer ANY questions you may have about applying through UCAS, student life, how is life at university different from when you're doing you're A levels, choosing universities or any other aspect of the whole process you may have. Just post any questions you have for Lucy on the discussion board. The first questions have been asked, and so far we have learnt that Lucy is studying Chemistry with law as she wants to be a patent attorney. Let me know if you haven't signed up for a username for the discussion board yet – just email chemnet@rsc.org and I'll send you one.



People often ask about the value of studying chemistry. "Yeah, I like it but what do you use it for once you leave school or university?" Well now we have the perfect response. It's well known that chemistry can be used to heal through new drugs and treatments, and chemistry can be used to protect the environment. Don't get me wrong these are laudable aims - but if chemistry were ever to need a "Killer Ap" the one thing it can do that nothing else can, than surely there can be no finer testament to the power of chemistry than this.... making better ice cream! <http://technology.newscientist.com/article/dn13178-edible-antifreeze-promises-perfect-ice-cream.html>

This article on the New Scientist website explains how a US researcher has developed "edible antifreeze" used to keep ice cream tasty and smooth. I'm sure the more discerning ice cream officianos amongst you knew this was a problem right? Presently the thawing/re-freezing

process which ice cream can go through as you take it home from the shops can lead to the formulation of large ice crystals which affect the ice creams texture and therefore taste. By adding proteins from gelatine this problem can be reduced. Further analysis of the amino acids in these proteins showed them to be very similar to those found in snow fleas, which manage to stay active in freezing conditions all year around. Ironic that the proteins they produce to keep themselves free of ice can be used by us to make a ice based product more to our liking, although they both work for the same reason, keeping ice crystals from growing too big.

Chemistry World in the news:

Due to problems at our printers, you were sent a copy of our usual CW magazine in January, but also received a copy of our Chinese edition; sorry about that, the problem has been rectified and will not happen again.

If you want to register to use the discussion board email chemnet@rsc.org

“To book a place on a ChemNet event email: chemnet@rsc.org or call 01223 432340”



HAVE YOUR SAY!

Would you like to see your article in the next issue? If it's good enough we'll print it! Submit your article to chemnet@rsc.org

CHEMISTRY FACTS

Crocin is the name of the molecule responsible for saffron's glorious yellow colour. It's a very large, conjugated molecule with a similar structure to that of carotene. The name crocin derives from the fact that saffron is produced from the crushed stigma of autumn crocus flowers. Centuries ago, saffron was used to dye the robes of Irish royalty.



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