

Chemistry Matters at Bangor

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News item

Chemistry UCAS open days

This years University Open Days are planned for:

Saturday 5th July 2008
Saturday 18th October 2008
Saturday 1st November 2008

We will also be holding UCAS open days which give you a chance to visit the School and engage in detailed discussions with all our staff. Check out our web site for the dates of these Open Days.
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£5000 Excellence Scholarships



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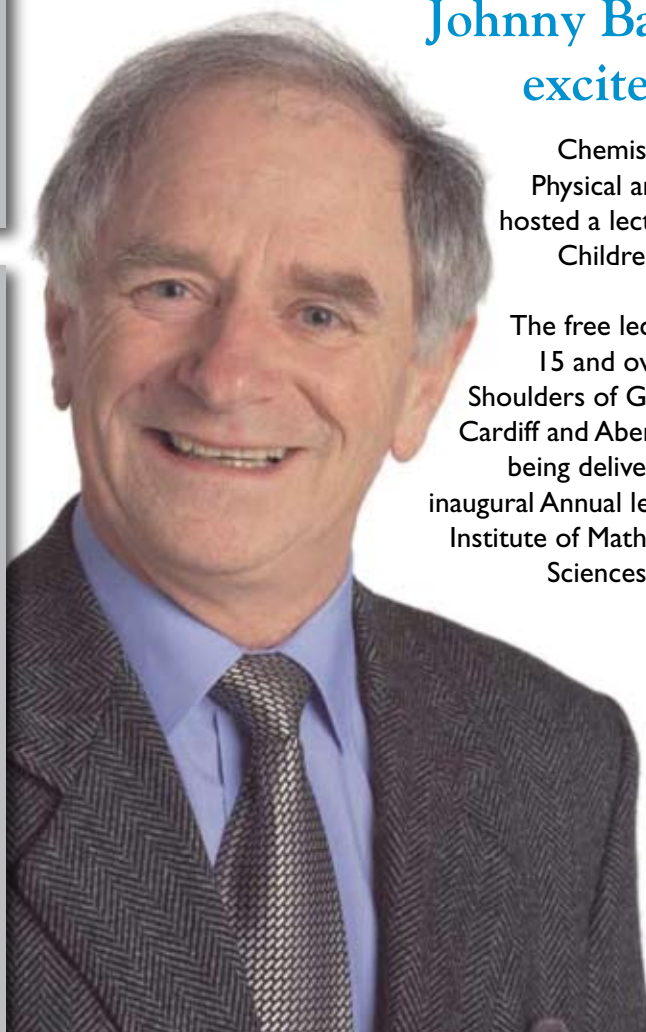
This year for the first time applicants to the College of Physical and Applied Sciences (Chemistry, Computer Science and Electronic Engineering) will be eligible for a scholarship of up to £5000. These scholarships which are non-means tested and payable in the first year only, will be awarded to UK/EU students coming to Bangor with the highest academic attainment in the relevant subject areas. The School of Chemistry offers a number of different Scholarships, for further information please contact the Undergraduate admissions tutor Dr Anna Croft on 01248 388433 or via email: chem.ucas@bangor.ac.uk.

Johnny Ball gets students excited about science

Chemistry as part of the College of Physical and Applied Sciences recently hosted a lecture by the well known BBC Children's TV presenter Johnny Ball.

The free lecture for Science pupils aged 15 and over, entitled Wobbling on the Shoulders of Giants, took place at Swansea, Cardiff and Aberystwyth Universities before being delivered at Bangor. This was the inaugural Annual lecture for WIMCS the Wales Institute of Mathematical and Computational Sciences, of which Bangor University is a member.

Throughout his career, Johnny Ball has inspired countless youngsters with his enthusiasm for Mathematics and Science, and Bangor was delighted to have secured such an exciting and motivational presenter to give the inaugural Annual Lecture.



<http://www.chemistry.bangor.ac.uk/>

E-mail: ch-news@bangor.ac.uk

Can we copy the way plants make energy?

Bangor scientists are investigating whether it is possible to replicate plant life's ability to turn sunlight into energy.



Left to right: Dr Udaya Ketipearachchi, Dr Graham Ormondroyd, Gwenda Davies, Dr Lorrie Murphy and Dr Holliman.

Dr Peter Holliman, Dr Lorrie Murphy and the team from the School of Chemistry, are set to begin a feasibility study into 'biosolar energy'- or harnessing the sun's energy potential - using the same methods as used by plant-life-photosynthesis in newly designed solar cells.

The potential for this type of technology is substantial-photosynthesis is sufficiently effective to support a huge range of plant-based life on earth. The technology would be substantially different in approach to current solar technologies, and has the potential to be more cost-effective. The question is how practical is it to replicate this process outside the plant cell and to scale-up to produce a 'super-leaf' that would produce more energy? Their research is funded by a one year grant from the UK's Engineering and Physical Sciences Research Council.

"We remember from our schooldays that photosynthesis operates by light being absorbed by the leaf. The process then captures

solar energy when water is split into oxygen, protons and electrons. This takes place in the chloroplast of cells which are held in plant leaves. Within these chloroplasts, lie membranes where photosynthesis takes place," explains Dr Peter Holliman.

The team aim to test the feasibility of extracting the membranes from within the cell and attaching them to electrodes to create efficient low cost solar energy harvesters. It is already known that such solar cells are capable of generating very small currents from sunlight. Here they are aiming to increase these currents in order to develop a viable commercial technology.

The Bangor project team involves experts in biological chemistry (Dr Lorrie Murphy -Chemistry) and Dr Graham Ormondroyd and Gwenda Davies (BC -- a research Centre within Bangor University) and in solar energy (Dr Holliman and a newly appointed post-doctoral researcher - Dr Udaya Ketipearachchi from Sri Lanka).

Professor Mark Baird w

Professor Mark Baird has been awarded a teaching fellowship by Bangor University. The fellowship is in recognition of excellence in teaching and student support. Professor Baird said "I am delighted to be nominated for this award – I think it reflects the great efforts of both academic and support staff in Chemistry to provide the highest quality education and pastoral care for our students" Staff and Students from

Bangor Chemists – the

Bangor University School of Chemistry recently held the first event of its kind "Chemists – The Future"

The School of Chemistry invited its' past students to a networking evening where students were given an insight into what life is like after University.

"We want our students to gain first hand knowledge of what it is like to work in the Chemicals Industry. We also want to engage our Alumni more as we feel that they and the companies they work for will benefit from stronger links with Bangor University. Our students will also benefit by gaining direct access to industry," said Professor Maher Kalaji, Head of the School of Chemistry.

The speakers were ex-Bangor Chemistry student Dr David Rowles, the COO of and Dr Haydn Boehm of global chemicals company, Sigma-Aldrich.



Dr Roy Hughes w
a current Chemist

Wins accolade

the School of Chemistry nominated Professor Baird for this fellowship to honour a man who has worked in education for over 38 years.



Future

The Orton Lecture theatre was packed out with current and past students.

The event was a huge success with many Alumni expressing an interest in assisting Bangor University Chemists with a mentoring programme as well as work experience and placement opportunities.

Event organiser Dr Anna Croft said "We were delighted to see so many Bangor Graduates at our event and hope to build on this success in the future. The plan is to produce an alumni web site for Chemistry students as well as putting a mentoring scheme into place."

Anyone who is interested in getting involved with Alumni activities at Bangor University should contact the Alumni office on 01248 388332.



who graduated in 1951 with David Knox
ry student.



ChemSoc, the society for chemists at Bangor University, provides enjoyable academic, sporting and social activities for undergraduates, postgraduates and staff. Our society, which is run by postgraduate students, has a full programme of events each year. Students find this a great way of settling into academic life.

All of the events they organise are designed to enrich the student experience at Bangor and the Society takes advantage of the beautiful North Wales surroundings by organising sporty days too. Activities range from cocktail parties to paintballing and from white water rafting to industrial talks and visits. Past events have included visiting the RSC's ChemCareers event in Birmingham and followed up with a CV clinic

and careers talk, as well as the annual black tie Christmas dinner.

Students also took a trip to 'Science and the Assembly' The Royal Society of Chemistry's annual event in Cardiff. The event is designed to develop closer links between the scientific community in Wales and the Welsh Assembly. The theme of this year's event was "Green Chemistry and the Environment" one of the school of Chemistry's main research areas and included a keynote speech from the Environment Minister, Jane Davidson AM and Professor Mark Baird from the School of Chemistry.

For more information on ChemSoc and forthcoming events check out their web site www.chemistry.bangor.ac.uk/chemsoc or email David Knox on chx405@bangor.ac.uk

Graduation 2008

Matthew Cude won the Eastman (Peboc) Medal & Prize for the best final year graduating student. Matthew's story is an exceptional one as he had to retake his second year due to illness. Thanks to hard work and dedication he graduated

with a first Class degree this year. When asked about what his lasting memory of Bangor would be Matthew said. "...the people I have met during my time there, from my first day onwards. The University is well integrated with the city, creating a student community throughout Bangor." Matthew will be returning to the School of Chemistry to continue his studies with a PhD. Many congratulations to you Matthew and all our 2008 Graduates for a fantastic achievement this year.



Matthew Cude accepting his prize from Mr Peter Roberts, Managing Director, Eastman and Professor Maher Kalaji



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<http://www.chemistry.bangor.ac.uk/>

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RSC Schools' Analyst National Final

The UK Final of the National Schools' Analyst Competition was held at Bangor on 23-24 June 2008. The School of Chemistry has been hosting the Royal Society of Chemistry North West Region Competition since 2003 and was delighted to host the UK Final for the first time.

The national competition for students studying AS level Chemistry or equivalent is run by the Royal Society of Chemistry's Analytical Division and is hosted by universities. Sixteen Regional Finalist teams of three students took part in the UK Finals at the School. "The School of Chemistry is



Loughborough Grammar School receiving the winners trophy from Katerina Patouchea from Gaia and Professor Maher Kalaji.

committed to encouraging school students' interest in chemistry at all levels. Hosting the UK Final of this prestigious Competition is a great honour and we were delighted to welcome the young chemists into our Laboratories," said Professor Maher Kalaji, Head of the School of Chemistry.

"The Competition introduced students to instrumental techniques they don't normally encounter in their secondary education. The competitors have an opportunity to apply these to analyse samples such

as wine, plastics, pharmaceuticals, oils and fats in realistic scenarios. The aim is to illustrate the important role that the chemists' skills play in everyday situations," he added.

The Final of the Competition saw the 16 teams competing for a Challenge Shield. First, Second and Third placed prizes of £750, £500 and £250 were awarded to Loughborough Grammar School, Bristol Grammar School and Manchester Grammar School. Other finalists received £100 each.

Funding secured to map bacterial receptors

A "seed corn" grant from the Royal Society designed to support creative new ideas in science has been awarded to Dr Martina Lahmann.

Dr Lahmann, a recently appointed lecturer in organic chemistry

at Bangor University, has been successful in securing £14k worth of funds to explore the "sticky zones" of bacteria.

Some disease-causing bacteria "stick" themselves to sugars they find on the tissues in our bodies. The aim of this project is to map these "sticky zones" with synthetic sugar - explorers. Eventually this could help to combat disease without the use of antibiotics.



Nano-Materials Group welcomes international collaborators.



Ben Robinson and Kym Ford with the magnetically controlled cantilever in Bangor.

Kym Ford from Australia has been working in Bangor as part of a long-term collaborative arrangement between the Bangor Nano-Materials group and Professor Ian Gentile's group at the University of Queensland in Brisbane, Australia. The group has won Collaborative EPSRC awards and is currently working on a project that is part of an Australian Research Council award.

Ben Robinson, a Post Doctoral Researcher is working on the project here at Bangor. Ben will be travelling to Brisbane to work at the University of Queensland later on in the year. This type of collaborative approach to projects is something that Bangor is keen on fostering as it assists all institutions involved in attaining international research funding for their projects and aids cross-continent exchange of information and expertise.