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PUBLIC AIRING FOR WONDERLAND

"Throwaway fashion" in the news

The first public display of four major exhibits arising from the Wonderland project took place at Sheffield in January 2007. A creative partnership between Prof Tony Ryan OBE, Chairman of the Polymer Centre at the University of Sheffield, and Prof Helen Storey, an award-winning fashion designer, this EPSRC-funded project aims to show how clever design incorporating smart polymer science can help address global environmental concerns and to highlight how really useful and elegant bits of science and technology are squandered in today's throwaway society.



Photo: Paul Grover

An especially eye-catching feature of the January event was the dissolving dress. This £6,000 piece of haute couture made of poly(vinyl alcohol) was slowly lowered into a giant bowl of water during the exhibition, whereupon it dissolved. Details on the dress incorporated reactive dyes which coloured the water as they dissolved, then ran into one

another to give "chemical explosions". This metaphor for how we squander the potential for smart engineering embodied in plastics every time we dispose of bits of packaging in the bin attracted mainstream media interest worldwide, with contributions appearing in the *Daily Telegraph* and on the *Chris Evans Show* on *BBC Radio 2*.

The event itself was a great success. Visitors ranged from schoolchildren to Council officials. Tony Ryan and his colleague, Colin Crook, gave scientific demonstrations, engaged visitors in dialogue and invited them to interact with the exhibits. All were invited to submit their "ideas that can change the world" - the best of these will be turned into a fifth exhibit.

For more information of future Wonderland events, contact Shelagh Cowley on s.h.cowley@sheffield.ac.uk

MAPPING THE FUTURE OF PACKAGING RESEARCH

Polymers and Packaging Workshop

As part of an ongoing mission to foster close links between academic and business leaders in materials science research, the Polymer Interdisciplinary Research Centre teamed up with the Faraday Packaging Partnership, building on a long established relationship, to hold a one day workshop on Polymers and Packaging. The aim was to identify strategic areas and specific opportunities where the academic expertise of the Polymer IRC might be brought to bear in the service of the packaging industry.

DSM, Procter & Gamble, Reckitt Benckiser, Unilever and Waitrose, amongst others.

There were two key note presentations:

- *Materials by Molecular Design* from Prof Tom McLeish, Director of the Polymer IRC
- *Sustainable Technologies for Plastic Packaging* from Dr Rudi Koopmans of Dow Benelux

- Consumer Driven Functionality
- Integrating Materials Technology with Recycling Systems
- Materials Design (short term) - current science solving current problems
- Materials Design (long term) - e.g. self assembling packs

The March event was attended by academics from around the Polymer IRC and representatives from many companies, including Arizona Chemical, Bayer, Coors Brewers, Crown Packaging,

These were followed by a group brainstorming session which identified four themes for small interest groups to debate and shape into a list of specific opportunities and projects:

The output of the day was a list of potential new projects to address the issues identified, supported by a wide range of industrial partners from across the supply chain. These will be worked up by smaller interest groups in the near future.

bringing UK polymer researchers together

For more information, please contact Helen Clancy at the Polymer IRC at h.e.clancy@leeds.ac.uk, or Faraday Packaging's Laurence Hogg at l.t.hogg@adm.leeds.ac.uk.

FOCUS : Conferences & Courses

"A FEAST OF POLYMER PHYSICS"

Wednesday 17th January 2007, University of Leeds



In celebration of the life time achievements of three distinguished physicists from the Polymer IRC, a one day symposium was held at the University of Leeds in January 2007. An international collection of speakers, many of whom worked with Geoff Davies, Alan Duckett and Mike Brereton over the years, was brought together to share their latest research fields.

Over their careers, Professor Geoff Davies, Dr Alan Duckett and Dr Mike Brereton have

contributed enormously to the success of the Polymers and Complex Fluids Group in the School of Physics and Astronomy at the University of Leeds and are all original members of the internationally renowned Polymer IRC.

The archive and gallery of the "Feast of Physics" can be explored further on: www.irc.leeds.ac.uk/feast/feast.htm

SKILLS IDENTIFICATION AND DEVELOPMENT WORKSHOP

On January 25th the IRC ran its first Skills Identification and Development Workshop. The event was organised by Lian Hutchings, was hosted by the Chemistry Department at Durham University and was attended by 15 post graduate and post doctoral researchers. Attendees were drawn from all four IRC sites.

The workshop was facilitated by three industrial friends of the IRC, Dr Robin Harrison (Arizona Chemical), Dr Ian Robinson (Lucite International) and Dr Mike Jeschke (Technical Fibre Products Ltd and covered subjects as


varied as the creation of personal development plans, CV writing and Myers Briggs personality profiles. The whole day was very informal with the emphasis on everyone making a contribution. Judging by the feedback from attendees they found the workshop to be thought provoking, fun and informative and the event was a positive experience for everyone including the organisers. It was suggested that the workshop be run again in the future, possibly every other year.



For more information, please contact Helen Clancy on h.e.clancy@leeds.ac.uk

WHAT'S GOING ON IN POLYMERS?

Polymer IRC Spring Club Meeting

 33 representatives of major companies in the polymers field gathered with IRC academics at the Polymer IRC's spring industrial club meeting. The meeting, hosted by Cytec Engineered Materials at their Wilton office, reviewed the latest developments in science and technology from both academic and industrial perspectives.

A major aim of the industrial club is to provide an informal forum where company representatives and academics can meet to discuss current trends, review interactions and discuss future common projects. As one club member recently commented, interactions through the IRC benefited his company by "Getting up to date with the frontiers of science and technology and making contacts with the outside world".

The 2007 meeting took a special interest in how Framework VII could be used to fund future collaborative research programmes

and increase support networks for industry. Club members will follow up the spring meeting discussions with a workshop dedicated to developing ideas for Framework VII projects.

The Polymer IRC Club is a key tool used by the network to interact with industry with a membership of large organisations side-by-side with smaller companies with focused interests. This is made possible by a graded subscription scheme that allows individual tailoring of benefits. Exchanges through the Club are two-way with the IRC providing access to a wide-range of academic expertise and specialist equipment and skills and industrialists providing the university members with valuable advice on the areas that are currently important to them.

More information on the Polymer IRC Club and how it can help you is available from Helen Clancy on h.e.clancy@leeds.ac.uk or +44 (0) 113 343 3810.

"FROM EDISON TO THE IPOD"

National Science & Engineering Week

Prof Tony Ryan of the University of Sheffield presented an enlightening and entertaining lecture to a full house on 13 March as part of the National Science and Engineering week. He took the audience on a journey from the very beginnings of sound and its early recordings to the very latest technology that we have today, the iPod. The audience ranged from children to academics; one gentleman in the audience clearly had an eclectic collection of music which could only be rivalled by Tony's!

NANOMICRO CLUB

Twenty-four delegates representing industry, regulatory bodies and universities attended a meeting of NanoMicroClub in Nottingham on March 8 focussing on regulatory and technical aspects of nano- and microtechnology affecting SMEs. Alongside senior figures from DEFRA, HSE and the Royal Commission on Environmental Pollution and managers of high-tech SMEs, Liam Sutton highlighted the activities of the Polymer Centre and FaraPack Polymers Ltd in "Nanotechnology transfer to SMEs from the University of Sheffield".

The meeting was one of a series organised by the European Nanotrading Alliance. Please visit www.euronanotrading.com for more information.

FOCUS : Conferences & Courses

NEW DIRECTIONS IN COMPLEX MOLECULE DELIVERY

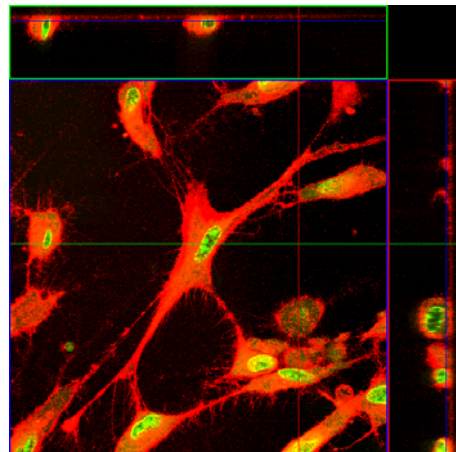
FSTG Conference 28 November 2007 at The Edge, University of Sheffield

The Formulation Science and Technology Group of the Royal Society of Chemistry and Sheffield's Polymer Centre invite you to a conference on the theme of complex molecule delivery. It is designed to bring together academics and industrialists involved in developing and exploiting novel ways of delivering complex molecules to specific sites within various environments, including agrochemical and pharmacological applications. Invitations for plenary papers from MIT and from Ghent University have been

offered to provide both an American and European perspective.

The FSTG and the Polymer Centre have pleasure in inviting you to participate in this conference by providing papers, posters or making use of one of our exhibition stands in the brand new conference centre in Sheffield known as "The Edge".

For more information, please visit the conference website at www.polymercentre.org.uk/fstg.



POLYMER PROCESS ENGINEERING 07

Leading edge polymer engineering, with key speakers from academe, industry and government 3 - 4 July 2007



Polymer Process Engineering is a series of biennial international meetings hosted at the Polymer IRC and Polymer CIC laboratories at Bradford University. It is very highly regarded - all papers are invited and an ISBN book of proceedings (typically around 400 pages) is published and available at the conference. A commercial exhibition complements the conference and exciting demonstrations are run in the laboratories late afternoon on each day - a really popular feature.

This year, PPE07 will be held in the iconic Norcroft Conference Centre, opened late last year, just across the road from the Polymer IRC laboratories.

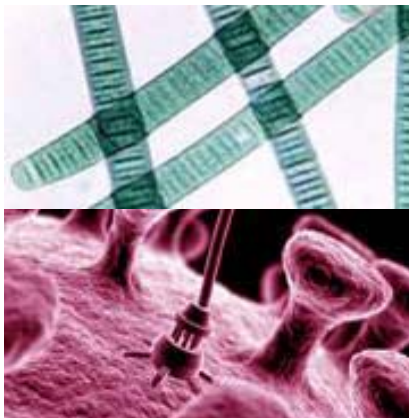
New build for the Polymer Micro & Nano Technology Centre is ongoing - this is due to complete in June and the official opening will be at PPE07 on July 3.

Special rates are available for SMEs and Polymer IRC Industry Club and collaborators. The conference web site, www.polyeng.com/ppe07, contains further information and Prof Phil Coates will be happy to answer enquiries via email: p.d.coates@bradford.ac.uk. We look forward to welcoming you to PPE07!

BIG COUNTY, SMALL SCIENCE The YSTN Science Showcase Event

This event was held in the beautiful School of Music in the Clothworkers' Centenary Hall at the University of Leeds on 15 March. The guest speakers were Prof Richard Williams from the University of Leeds and Prof Tony Ryan from the University of Sheffield, both leading experts in nanotechnology who gave complementary presentations of the emerging science and how it might impact on both local and global business markets.

Richard spoke of how nanotechnology is a primary driver for new business development and how the Yorkshire and Humberside region has an opportunity to play a leading role in this global agenda. Tony Ryan gave a presentation of cutting-edge science and the implications it will have on future medical and environmental technologies and the benefits to us all. His primary concern was to dispel the myths surrounding nanotechnology, such as



fears that the world may be overrun with "grey goo". Guests were invited from local industry and the region's universities, an excellent networking opportunity!

IN BRIEF...

As advertised in the last issue, the Polymer Centre is organising the RSC course *Nanotechnology 4 Chemists* in association with Yorkshire Forward, to be held in Sheffield over three days from 5 to 7 June. Places are still available to learn more about topics including soft nanotechnology, nanoscale semiconductor devices, magnetic nanoparticles and health and environmental risk assessment in the field from world-renowned academic experts. For more information, please email training@rsc.org or visit www.rsc.org/nanotech. Yorkshire Forward: www.yorkshire-forward.com.

Preparations for the Polymer IRC's *UK Polymer Showcase* are at an advanced stage. For the first time, this annual, free exhibition of IRC research to industrial sponsors both current and potential will be held in London at the London School of Fashion, from 5 to 7 September. Please contact Helen Clancy for more information. h.e.clancy@leeds.ac.uk

The Polymer IRC's annual modular training course in *Polymer Science and Technology* is taking shape. This year's course will last nine days, running from Monday 29 October to Thursday 8 November. In response to delegate feedback, the introductory-level components have been fully restructured as a two-module course in Basic Polymer Science, Characterisation and Analysis, to be offered at the outset of the comprehensive programme of nine modules. Delegates may attend as many or as few modules as they wish. For more information, please contact Shelagh Cowley: s.h.cowley@sheffield.ac.uk

FOCUS : Staff News

TOP RHEOLOGY AWARD FOR IRC DIRECTOR



Prof Tom McLeish has been presented with the award at the opening ceremony of the European Society of Rheology's Weissenberg Award. The award is bestowed biannually to a Europe-based rheologist for outstanding, long-term achievement in the field. Former winners include Hans-Martin Laun, Giuseppe Marrucci, Ken Walters and Roland Keunings. Tom will be presented with the award at the opening ceremony of the European Society of Rheology's Weissenberg Award 2007, where he will present the Weissenberg Award Lecture. For more information, visit the website of the European Society of rheology at www.rheology-esr.org.

NEW FACE AT LEEDS



Dr Xiaosong Wang has joined the department of Colour and Polymer Chemistry at the University of Leeds.

Dr Wang's research focuses on supramolecular functional nanomaterials through the synthesis and self-assembly of macromolecules.

His current interests include: well-defined polymers, synthesising polymers that have controlled, designed attributes using modern synthetic techniques; supramolecular chemistry to understand macromolecular self-assembly behaviour; functional nanomaterials, creating nanomaterials through supramolecular chemistry and to explore nano-size induced properties for application in modern technologies.

For further information you can contact Dr Wang on X.S.Wang@leeds.ac.uk

"SCIENCE" IN ACTION

On January 8th, EPSRC Advanced Media Fellow Prof Peter Styring was the guest at Café Scientifique in Sheffield. The Café meets regularly to provide an open and informal public forum for scientists and engineers to discuss their work, so Peter looked at how engineers are developing new ski technologies to make us go faster and further and to let us ski all year round. He also evaluated the environmental impact of these advances in a talk that used video imagery to explain this fascinating and ultimately fun area.

For more information on Café Scientifique, please contact Dr Sandrine Soubes on 0114 222 4220 or s.soubes@sheffield.ac.uk.

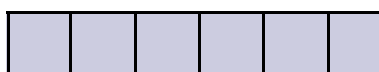


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HOW TO PLAY

Fill in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9 with no repetition!



E-mail the highlighted numbers to us and you will receive a mystery prize!

Jen.Harris@sheffield.ac.uk



CONTACT US

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