Welcome to the January 2011 bulletin. This issue welcomes Steve Eichhorn from the University of Manchester as the PPG Bulletin Editor, replacing James Sharp. We thank James for his hard work over the past years to co-edit the bulletin.

As well as the usual content announcing and reporting from recent conferences, we are delighted to be able to announce the award of the PPG Founders Prize to Prof. Tom McCleish (University of Durham) as well as the MGUK Medal to Prof. Ian Manners (University of Bristol) and the joint award of the MGUK Young Researchers Medal to Dr Jon Weaver (Imperial College London) and Dr Oren Scherman (University of Cambridge).

This issue also contains news from the polymer degradation discussion group (PDDG) and the Biological Physics Group. Finally we draw you attention to an excellent article detailing the application of polymers in home and personal care products.

We hope that you enjoy reading this issue of the bulletin. As ever, if you would like to contribute any articles please get in contact with either of us.

Andrew Dove
Steve Eichhorn
Bulletin Officers
From the Chairman of Macro Group

At the time of writing, it is a balmy 13°C in Nottingham and I was just thinking that I am sure there are a very large number of polymer products for which I should be very grateful for getting us through the cold period we have just all endured; from the vast range of different polymeric layers in our ski clothing, to the pour point depressants that kept my car moving when we reached -18°C. As polymer scientists, we do have a duty to emphasise to the general public that polymers are everywhere and are extremely useful, but perhaps we also need to do a little bit more. Certainly, MACRO Group over the last few years has been developing a significant body of very useful educational and fun materials. These have been prepared under a project known as the “polymer road show” and we are now working hard to see if they can be finished and distributed to every secondary school in the UK – watch this space!

The most recent MACRO Group committee meeting took place in early December and almost became a victim of the cold weather – a couple of our members were snow bound and the first two meeting rooms that we tried to use in the School of Chemistry at Nottingham were badly flooded because of the effects of frozen pipes. We discovered on the day that similar problems had been encountered around the country and we heard particularly of burst pipes in both Glasgow and Warwick. Clearly, better thermal lagging still needs to be developed in the UK. However, the meeting was a success and what was most pleasing was that from two very competitive lists of nominations, we were able to award the MACRO Group UK Medal for 2010 to Professor Ian Manners of Bristol University and the MACRO Group Young Researchers Medal for 2010 was awarded jointly to Dr Oren Scherman (Cambridge) and Dr Jon Weaver (Imperial College). Congratulations to all three recipients. A One Day Symposium celebrating these medal awards is likely to occur during the month of June and full details will be advertised shortly.

On the subject of younger researchers, I am also delighted to announce that the 2011 MACRO Group Young Researchers Meeting (YRM) will be held in Liverpool (July 11th/12th). This is a hugely important event for UK polymer science and is one that is well sponsored so that we can heavily subsidise and discount the attendance of our younger MACRO Group members – that’s a hint for you to join if you have not done so already!!

The event is particularly targeted at PhD students and PDRAs across polymer science in the UK and as another attraction, all the participants could win one of the annual Domino/MACRO Group YRM Awards which come with quite a significant cash prize. Further details can be found within this bulletin and on the MACRO Group website (http://www.macrogroup.org.uk).

I hope you enjoy reading this bulletin

With all best wishes

Steve Howdle
Chairman
Macro Group

Views from the Top

Thoughts from the PPG Chair

On researching and teaching polymer physics

Those of us who work in British universities certainly can’t complain that their lives are short of incident at the moment. We are about to see a momentous shift in the way teaching at universities is funded, with the bulk of government support being withdrawn and replaced by a substantially increased contribution from the students themselves. Many of the details remain to be worked out, and we can only speculate as to how the consequences of this may play out. So universities find themselves the objects of a somewhat poorly controlled experiment, whose outcome remains highly uncertain. What, though, will the impact of these changes be on our research?

The obvious answer is simply that, for those of us who work in University science and engineering departments, the finances of those departments are intimately tied up with the students they teach. If big shifts in student demand do take place, the effect of that may be to put in question the long-term viability of those departments. We have had many assurances from Government that they understand the importance of science and engineering, but it is difficult to be confident that there won’t be some unanticipated consequences from changes of this magnitude.

At a deeper level, we’re seeing a questioning of some of the fundamental assumptions about higher education that we’ve grown used to – in particular, the assumption that research and teaching must necessarily go together. With a focus on value for money from much increased tuition fees, we can expect more suggestions that university research is an indulgence, a distraction from academics’ proper jobs, doing lectures, labs and tutorials for their students. I believe that teaching in the most advanced areas of science and technology is immeasurably better when done by researchers who are contributing to those advances. But this is an argument that can’t be taken for granted.

Are we involving undergraduate students in the work going on in our research groups, through projects? Do we have advanced modules in our courses describing the most exciting new developments in polymer and soft matter physics? Do we illustrate and enliven our teaching of basic physics? Do we illustrate and enliven our teaching of basic physics?

As an educationist, I long ago decided that I can’t be the one to hold up the value of study and research by making a case for what is clearly the right thing to do, if it makes sense. It undoubtedly makes sense and it’s a moral case to be put. But it is difficult to be confident that we’ll see the momentum needed to make education properly understood by students and the general public. I think we can see a momentous shift in the way teaching at universities is funded, with the bulk of government support being withdrawn and replaced by a substantially increased contribution from the students themselves. Many of the details remain to be worked out, and we can only speculate as to how the consequences of this may play out. So universities find themselves the objects of a somewhat poorly controlled experiment, whose outcome remains highly uncertain. What, though, will the impact of these changes be on our research?

With all best wishes

Richard Jones
Chairman
Polymer Physics Group
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Representing Polymer Degradation Discussion Group:
Dr Mogon Patel (AWE)

Representing Polymer Colloids Forum:
Prof. Peter Lovell (University of Manchester)

Representing RAPS Network:
Dr Steve Edmundson (University of Loughborough)

Career Break Grants
The Institute’s Career Break Grants help members to stay in touch with the wider physics community. Contributions towards attendance and associated costs are available.
Members can apply by going to http://www.iop.org/activity/academia/Career_Break_Grants/page_5466.html or by emailing cbg@iop.org

Career Break Rates for Conferences
Members can attend all Institute of Physics conferences at a reduced rate.

Reduced Membership Subscription Rates
Members on a career break are entitled to a reduced membership subscription rate, which is currently just £10.
Email membership.iop.org, including your membership ID number in the text, to qualify for this rate.
Macro Group UK & Polymer Physics Group Bulletin No 75   January 2011 Page 4

MacroGroup UK/Polymer Physics Group Awards

Polymer Physics Group Founders’ Prize

The Polymer Physics Group Founders’ Prize was instigated to commemorate the work of Professor Andrew Keller. It is awarded biennially to a scientist who has made an outstanding contribution to Polymer Physics in the UK or Ireland. The next prize will be awarded at the 2011 biennial conference (see Forthcoming Meetings & Conferences, pg. 8).

The Founders’ prize this year is awarded to Prof. Tom McLeish (University of Durham), an immensely talented theoretical physicist whose career has been marked by the way he’s worked with experimentalists to apply the most sophisticated theory to real industrial problems.

Tom began his research career with a PhD from the Cavendish Laboratory in Cambridge, where he worked on molecular theories of rheology. After a period at the University of Sheffield, he took up a chair at the University of Leeds. Here he developed theories of the flow of non-linear polymers, and has led a large, UK-wide team of experimentalists and theorists to create experimentally verified molecular models of polymer flow and develop them to the stage where they are applicable to industrial situations. Interdisciplinarity has also characterised his work on biological physics, developing theoretical frameworks to peptide aggregation and new approaches to protein dynamics. In addition to his research achievements, he has been an articulate and charismatic spokesman for polymer and soft mater physics in particular, and science in general. He continues to champion interactions between all disciplines in his current role as Pro-Vice-Chancellor for Research at the University of Durham..

MACRO Group Medal Awards Announced

Macro Group UK Medal

The Macro Group UK Medal is awarded annually to a UK-based scientist who has made a significant and substantial contribution to the development of polymer science through his/her scientific achievements and/or services to the UK polymer science community.

This years award has been made to Prof. Ian Manners (University of Bristol) for his outstanding contribution to the UK polymers. Prof. Manners has made a key contribution to the field of metallo-polymers, being most well known for the synthesis and application of poly(ferrocenyl-silane)s and other related polymers. Amongst Prof. Manners most recent work is the development of ‘living’ supramolecular crystallization-driven self-assembly. Utilizing the highly crystalline nature of poly(ferrocenyl silane)s in block copolymers, solvent selective micellization has been shown to selectively produce cylindrical structures. The process has been perfected such that cylinders of highly controlled lengths can now be realized and a range of multifunctional, including multi-block cylindrical micelles can now be realized. This work has led to publication in several of the highest impacting scientific journals. Further work has focused on the application of poly(ferrocenyl silane)s in combination with colloidal silica particles to realize a photonic material that can tuned to any colour. Termed P-Ink (photonic ink) this work was developed in collaboration with Prof. Geoff Ozin and led to publication in Nature Photonics as well as the founding of a company, namely Opalux.

Despite beginning his academic career in Canada, Prof. Manners has always maintained excellent contact with the UK academic community. Indeed he has been presented with awards such as the RSC Corday-Morgan Medal in 1997. Since his return to the UK, assisted by an EU Marie Curie Chair in 2005, Prof. Manners has continued to be recognized for his achievements including Royal Society Wolfson Merit Award (2005), Royal Society of Chemistry Award in Main Group Chemistry (2005) and the Tilden Lectureship, Royal Society of Chemistry (2007). Prof. Manners has served on several journal editorial advisory boards including Angewandte Chemie International Edition, Journal of Inorganic and Organometallic Polymers and Advances in Polymer Science as well as recently completed service on the editorial advisory boards of Macromolecules, Macromolecular Chemistry and Physics and Macromolecular Rapid Communications. Since 2006 Prof Manners has also been an Associate Editor for the Journal of Organometallic Chemistry.

Continued over the page......
**Macro Group UK Young Researchers Medal**

The *Macro Group UK Young Researchers Medal* is awarded annually to a UK-based scientist, normally under the age of 36 on December 31st of the preceding year, whose contributions to polymer science show outstanding promise for the future. This year's award has been made jointly to Dr Jon Weaver (Imperial College, London) and Dr Oren Scherman (University of Cambridge).

Jon’s research activities span various aspects of synthetic polymer chemistry, polymer self-assembly mechanisms, (polymer) nanoparticle synthesis, colloidal chemistry, responsive materials and functional polymer-stabilised emulsions (see dedicated research pages for more details). An overarching aim is to understand the fundamental design rules and mechanisms operating in these systems to the point that it is possible retro-design high-level complexity and advanced function using simplified, generic and viable processes.

Oren’s research interests include the synthesis of functional nanosystems, controlled polymer architectures and dynamic supramolecular assemblies through molecular recognition processes. The underlying theme of his research lies at the interface between synthetic organic efforts on small molecules and macroscopic properties at the materials level, developing a macro-organic approach to chemistry. Dynamic supramolecular self-assembly of materials will be an area of great importance in the coming years, allowing for innovations in nanotechnology and at the biological and chemical interfaces.

The 2010 Macro Group medals will be awarded at a special 1 day symposium at the **RSC Burlington House** on the **28th June**, contact Rachel O'Reilly (r.k.o-reilly@warwick.ac.uk) for further details.

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**Macro Group UK Medal for Outstanding Achievement**

- 2010 C. J. Hawker
- 2008 M. Antoinetti
- 2006 J.M.J. Fréchet
- 2005 K. Matyjaszewski
- 2004 P. Hodge
- 2003 A.B. Holmes
- 2002 D.C. Sherrington
- 2001 J.M.G. Cowie
- 2000 J.C. Bevington
- 1999 E.W. Meijer
- 1998 W.J. Feast
- 1997 G. Wegner

**Macro Group UK Medal**

- 2010 I. A. Manners
- 2009 A. J. Ryan
- 2008 S.M. Howdle
- 2007 S.P. Armes
- 2006 D.M Haddleton

**Macro Group UK Young Researchers Medal**

- 2010 J.V.M. Weaver
- 2009 O.A. Scherman
- 2008 A.F. Miller
- 2007 R.K O’Reilly
- 2006 R.V. Ulijn
- 2005 S. Pérrier
- 2004 P.A.G. Cormack
- 2003 W.C. Hayes
- 2002 N.R. Cameron
- 2001 A.I. Cooper
- 2000 W. Huck
- 1999 A. Slark
- 1997 S. Rannard

* previously known as the Macro Group UK Lectureship and Medal (1997-2005)
The Importance of Polymers in Home and Personal Care Products

The multibillion dollar Home and Personal Care (HPC) market exceeded $65 billion in 2009! Broadly this covers market sectors which include laundry, hair, skin and oral care, deodorants, kitchen and bathroom care products and machine dish washing. There are many familiar products in these categories which include laundry detergents, shampoos and conditioners, hair fixatives, gels, creams, mousses nail polishes, deodorant sticks and tooth paste, to name a few.

Polymers represent the second largest class of ingredients in most of these products and generally play a very important role. Indeed, polymers play such a key role that most of these modern products will not function without them.

Originally naturally occurring polymers were exploited but nowadays a diverse range of both synthetic and naturally derived polymers are employed that perform various important functions. For example, they are used as film-formers in hair fixatives, mascara, nail enamels, skin-sensory, and transfer-resistant colour cosmetics; as thickeners and rheology modifiers in emulsions, gels, hair colorants and hair relaxers; as emulsifiers in lotions, sunscreens and hair colourants and as conditioners, moisturisers, emollients, dispersants and water-proofers.

Examples of functional polymers employed in Home and Personal Care products include certain polymeric poly(carboxylates), such as poly(acrylates) and soil release polymers such as hydrophilic poly(ethyleneterephthalates) to provide enhanced detergency; anti-dye transfer polymers such as poly(vinylpyrrolidone) or poly(vinyl imidazole) in colour brands to inhibit the transfer of fugitive dyes from one fabric to another during laundering (hence avoiding pink T-shirt syndrome) and polymeric encapsulates for delivery of long lasting perfume.

In the hair care area cationically modified guar gum, a polysaccharide composed of both galactose and mannose, is used in certain shampoo formulations as silicone deposition aid to provide enhanced conditioning benefits; hydrophilic poly(acrylates) or poly(urethanes) are used in hair sprays, mousses and gels for styling applications and lightly crosslinked, hyperbranched poly(acrylates) such as Carbopol (a hyperbranched poly(acrylic acid)) are employed as structuring agents in various hair gels.

In recent years more sophisticated polymers, for example, graft and block copolymers made by living radical polymerisation, hyperbranched polymers and dendrimers, Shell Crosslinked Knedels (SCK) and Janus particles have been examined by the industry in order to help develop advanced new products with desirable properties unattainable by other means. A key challenge here is how to scale up such complex polymers from gram or kilogram scale to multi-thousand ton scales at an affordable price. In addition the advent of REACH (1) in Europe, tougher global environmental regulations, new legislations and drive to move to more sustainable materials/processes pose huge challenges for polymer scientists and engineers alike. A potentially useful start would require novel polymer designs derived from sustainable routes obtained from natural sources and preferably from waste products, the use of efficient catalysts, biocatalysts and enzymatic routes, environmentally friendly medium, e.g. using supercritical carbon dioxide or water as solvent, using energy efficient processes and routes, etc, in other words applying the twelve principles of “Green Chemistry”.

In the 21st century, the outlook and the future of polymer science are exceedingly bright for young polymer scientists with strong ambitions to tackle these challenges by focusing on using resources in a sustainable manner and helping to save the environment and the planet. This large and important industry is seeking to utilise all new polymerisation methodology, is seeking to replace oil derived chemicals with renewable feedstocks and optimise existing processes. There is a genuine move towards an increasing use of polymers and as such increasing job opportunities for well trained polymer scientists in both synthetic methods and characterization and modelling.

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) is a European Union Regulation of 18 December 2006 which addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. An article dedicated to REACH will follow in the next issue.

Ezat Khosdel, Unilever R&D, Port Sunlight
POLYMER DEGRADATION DISCUSSION GROUP, PDDG
(A sub-group of Macro Group UK)

The PDDG is a Sub-Group of the UK Royal Society of Chemistry-Macro Group with the key function to provide an opportunity for researchers and scientists with similar interests to meet, and discuss the subject area, including latest advances on all aspects of degradation, ageing, stabilisation and modification of polymers, and to give early career researchers the opportunity to discuss/present, in many cases for the first time, their work to a mixed audience of young researchers and experts in the field.

This subject area has acquired increased importance in the current economic climate where many polymeric materials/components are expected to be multifunctional (smart) and require extended useful life. The group has also noted a general erosion of UK capability, expertise and interest within this subject area over the last decade or so. An important objective of the group is to communicate the importance of retaining and possibly re-acquiring UK capability/expertise.

A key activity of the group is to organise Biennial Polymer Degradation Discussion Group Conferences, giving researchers a forum for scientific and technical discussions, including the opportunity of strengthening links (networking) with academia and industry.

Traditionally, the group has held its meetings within the UK, however due to increased current research activities within Europe, our last meeting was organised in Italy and proved to be highly successful. Our next meeting is the 29th Biennial Polymer Degradation Discussion Group Conference, September 5-7, 2011, Sestri Levante, Italy (see picture below).

Hotel vis-à-vis, the venue for the 29th PDDG meeting, Sep 5-7, 2011

The activities of the group also generate the added benefit of increasing the international reputation and recognition of not only the PDDG, but also that of the RSC and the Macro Group UK. Further details of the activities of the group can be found at the PDDG website at www.PDDG.org.

Mogon Patel, AWE

Biological physics group

Dr. Matthew Harvey and Dr. Tom Waigh of the Biological Physics group based at the Photon Science Institute have built a new device that allows the velocity profiles of opaque materials to be measured as they are sheared. They have used it to study a range of soft matter systems under flow including colloids (polystyrene spheres in water), polyelectrolytes, margarine and plant cell suspensions (tomato ketchup). Unusual fluid mechanics/viscoelastic phenomena have been measured such as wall slip and shear banding. The apparatus uses optical fibres. It is built around a Michelson interferometer and functions at infrared wavelengths.

Figure. Two dimensional velocity profile of colloidal spheres measured across the gap of a plate-plate rheometer sheared at a constant rate.

Figure. Velocity profiles across a plate-plate rheometer as a function of gap separation. a) Shear banding with polyacrylamide solutions, b) wall slip with margarine.

Forthcoming Meetings & Conferences

Plans Announced for “Milestone” Biennial Meeting of the Polymer Physics Group

The next biennial meeting of the Polymer Physics Group (PPG) will be an historic milestone, because it will mark the 25th time the Group has met. Entitled “Physical Aspects of Polymer Science,” it will be held from September 12th to 14th, 2011 at the University of Surrey in Guildford.

A highlight of the meeting will be a lecture by the winner of the PPG Founders’ Prize, Professor Tom McLeish (University of Durham). Complementing the programme of contributed lectures, there will be presentations from four invited speakers:

- Prof. Bill Koros, Georgia Institute of Technology (USA)
- Prof. Dieter Richter, IFF- Jülich (Germany)
- Prof. Olli Ikkala, Helsinki University of Technology (Finland)
- Dr. Cait MacPhee, University of Edinburgh (UK)

The research of these speakers represents a wide range of topics within polymer physics, spanning from polymer structure and dynamics to molecular transport to biological physics. Diversity is ensured.

The American Physical Society (APS) Division of Polymer Physics (DPOLY) has awarded an exchange lectureship to Dr Bradley Olsen of the Massachusetts Institute of Technology (MIT), and so he will be contributing to the programme.

To mark the occasion of the 25th meeting, there will be a special conference dinner at Wotton House, near Dorking in Surrey. This venue will provide an excellent background for discussions along with a chance to get some fresh air. Wotton House was owned by the Evelyn family from 1579. In 1640, George Evelyn created an Italian garden around the house to the designs of his brother John Evelyn, the eminent garden designer, writer and diarist. John Evelyn was one of the forerunners of the English Landscape Garden Movement and it is for this reason that the gardens at Wotton are considered to be so significant. Wotton House, which is Grade II listed, was re-opened fully restored as a hotel and conference centre in September 2003.

Student presentations, both oral and poster, will make an important and valued contribution to the meeting. A prize will be presented at the meeting for the best student publication, and the prize winner will present a lecture. See the separate story in this Newsletter about this competition.

The fees for the meeting will be kept low because of the generous sponsorship from three sponsors (agreed to date):

- Gearing Scientific
- NT-MDT
- Stable MicroSystems

To submit an abstract and register for the meeting, go to the website at: www.paps10.iopconfs.org The deadline for abstract submission - for either poster or oral presentations - is Friday, May 6. Contact the local organiser, Prof. Joe Keddie (j.keddie@surrey.ac.uk), with any questions.

The venue for the conference dinner of the 25th Biennial Meeting will be Wotton House.
Condensed Matter and Materials Physics (CMMP) 2010. 14\textsuperscript{th}-16\textsuperscript{th} December, 2010.

This year’s CMMP will have a soft matter/biological physics theme including two Biological Physics symposia:

**Biological Physics at the cellular scale.**
*Invited Speakers Prof Ray Goldstein, University of Cambridge
Prof Ramin Golestanian, University of Oxford.*

**Biological Physics at the nanoscale**
*Invited Speakers Prof Suzi Jarvis, University College Dublin
Dr Mark Leake, University of Oxford.*

Also this year there are two Plenary Lectures that are relevant to Biological Physics:

Prof Athene Donald, University of Cambridge, “Mott Lecture - Self Assembly of Proteins”.
Prof Marshall Stoneham, UCL, “Where quantum physics meets biology”.

For more details contact Jamie Hobbs (Jamie.hobbs@sheffield.ac.uk) or go to http://www.cmmp.org.uk/.
Recent Appointees in Polymer Science

12th Annual Meeting

7th – 9th September 2011
Loughborough University

Generously sponsored by:
Sponsors confirmed to date

RAPS brings together academic and industrial researchers in UK polymer science at the beginning of their careers.

Our conferences offer ideal and informal opportunities for knowledge transfer, discussion, networking, collaboration, sharing experiences and career development.

For more information, visit our website or contact:
Dr Steve Edmondson, Dept. of Materials,
Loughborough University, LE11 3TU
s.edmondson@lboro.ac.uk Tel: 01509 223222

http://www.raps.org.uk
## Forthcoming Meetings & Conferences

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<td>26/06/11 - 01/07/11</td>
<td>European Polymer Congress, Granada, Spain (<a href="http://www.epf2011.org">www.epf2011.org</a>)</td>
<td>Prof. Julio San Roman</td>
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<td>28/06/11</td>
<td>Macro Group UK Medal Meeting (Frontiers of Research), RSC, Burlington House, London</td>
<td>Prof Ian Manners (Bristol)</td>
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<td>04/07/11 - 07/07/11</td>
<td>10th International Conference on Materials Chemistry (MC10), Manchester, UK (<a href="http://www.rsc.org/conferencesandevents">www.rsc.org/conferencesandevents</a>)</td>
<td>Prof. Peter Budd (Manchester)</td>
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<tr>
<td>10/07/11 - 15/07/11</td>
<td>International Symposium on Ionic Polymerization (IP’11), Akron, OH, USA (<a href="http://www.rubber.org/iupac-ip11-akron">www.rubber.org/iupac-ip11-akron</a>)</td>
<td>Prof Judit E. Puskas (Akron)</td>
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<td>11/07/11 - 12/07/11</td>
<td>Macro Group Young Researchers Meeting, Liverpool</td>
<td>Dr Dave Adams (Liverpool)</td>
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<td>24/06/12 - 29/06/12</td>
<td>IUPAC World Polymer Congress, Blacksburg, VA, USA (<a href="http://www.cpe.vt.edu/macro2012">www.cpe.vt.edu/macro2012</a>)</td>
<td>Prof. Tim Long</td>
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<tr>
<td>08/07/12 - 12/07/12</td>
<td>Polymers in Medicine 2012, Prague, Czech Republic (<a href="http://www.imc.cas.cz/sympo/pmm2012">www.imc.cas.cz/sympo/pmm2012</a>)</td>
<td>Jindrich Kopecek</td>
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### 10th International Conference on Materials Chemistry (MC10)

**4 - 7 July 2011**  
University of Manchester, United Kingdom

[www.rsc.org/MC10](http://www.rsc.org/MC10)

**Oral abstract submission** 22 October 2010

### Plenary Speakers

- Joanna Aizenberg  
- Andre Geim  
- Michael Graetzel  
- Omar Yaghi  
- Seth Marder  
- Jean-Marie Lehn (TBC)

### Themes

- Advanced technologies and nanomaterials  
- Energy and sustainability  
- Life and health  
- Soft matter  
- Crystalline solids
D H Richards Memorial Bursaries (Macro Group UK)

Are you:

● a student member of Macro Group UK?
● desperate to go to an important conference?
● short of all the funding needed?

then the D H Richards Memorial Bursaries scheme can help you!

About the bursaries

Macro Group set up the bursaries as a memorial to D H Richards, who was one of the founding officers of Macro Group and worked hard to establish it as a major group in the UK. Under this scheme, Macro Group sets aside funds each year to support its student members that wish to attend a scientifically-important conference, but are short of funds to make this happen. Only one student from a particular department/school will be granted a bursary for a particular conference. The applicant must be a current Macro Group member, have their supervisor's support, and be planning to make an oral or poster contribution at the conference. It is expected that part of the funds needed to attend the conference will be obtained from other sources. A particular student can only receive one bursary award during their period of study and the maximum amount awarded will be £300. A condition of receiving a bursary award, is that the student will be required to write a short conference report for publication in the Bulletin.

How to apply

Application forms can be obtained from the Macro Group Secretary, Rachel O'Reilly, by sending an email request to: r.k.o-reilly@warwick.ac.uk or by downloading the form at http://www.macrogroup.org.uk/awards/bursaries.php The completed application form must be sent by the applicant's supervisor (to confirm their support of the application) via email to Rachel O'Reilly in accord with the following deadlines - 1 May, 1 Nov. Decisions will normally be announced less than 4 weeks after the deadline.

The IOP Research Student Conference Fund

If you a PhD student and a member of the IOP, you are entitled to apply for up to £250 conference support. You may apply more than once, so you may either request the full amount or decide to request a smaller amount and then apply for funding again for another conference at a later stage.

Grants will normally cover only part of the expenses incurred in attending a conference and are intended to supplement grants from other sources. Applications are now made direct to the IOP, rather than through groups, as has been the case in the past. Applications will be considered on a quarterly basis and should reach the Institute by: 1st March, 1st June, 1st September or 1st December of each calendar year.

A decision will be made within eight weeks of the closing date, so the deadline chosen should be at least three months before the event that you wish to attend. In return for the financial support you will be asked to write a short conference report, which will appear in this newsletter.

The only other condition is that if you wish to apply for support for a polymer physics related conference you must also be a member of the Polymer Physics Group!

Further details and an application form can be found at, http://www.iop.org/activity/grants/Research_Student_Conference_Fund/page_26535.html
Recent Appointees in Polymer Science (RAPS)
Leeds, September 2010

RAPS (recent appointees in Polymer Science) and RAMS (recent appointees in Materials Science) are two of a number of organisations set up to support new appointees to academic and industrial posts in these particular subject areas. RAMS and RAPS seek to provide a medium where new appointees can share their experience, their tips and tricks for surviving those early years in post. RAPS has now been well established for over 10 years were as RAMS is far younger, holding its first conference in 2008. However, as time has gone on more and more overlap between the fields was noticed and so for first time in 2010, a joint conference of RAMS and RAPS was held in Leeds.

The conference spanned over 3 days, starting with two oral presentation sessions on the Wednesday afternoon with drinks and posters in the evening. A full day on Thursday comprised 4 sessions of research presentations with another poster session and drinks followed by the conference meal at Aagrah curry house in the BBC building in Leeds city centre. The final two sessions on Friday morning were dedicated to career development. All of the three research half days featured a plenary talk and 7-8 research talks from the delegates. The talks were deliberately randomized to keep the research topics broad in all the sessions to increase networking and collaborative interactions. Additionally on the first day we heard from all the industrial sponsors, whose sponsorship enabled us to give out grants to all the recently appointed lecturers that applied for one, to cover the cost of the conference.

The conference was opened with a Plenary lecture by Prof. Morgan Alexander from the University of Nottingham, giving a fascinating insight into using polymer microarrays for a range of applications for cells from directing their behaviour to analysis. This included screening for biological “hits” and monitoring surface interaction of biological components. Also in this first afternoon we heard about self-assembled polymer “nanowhiskers” and more inorganic nanowires and nanoparticles quantum dots and the many applications of these nano-materials. Topics as diverse as functional hydrogels to liquid crystals were also reported and discussed in the rest of the day. Such diversity was also very present in the poster presentations which lead to a real buzz of discussion about the posters and research as a whole over an excellent buffet dinner and drinks over the whole evening (ending up in the pub over the road). Additionally we had heard from all our exhibitors: Varian, Wyatt, PerkinElmer, Sigma-Aldrich, Malvern, the Materials KTN, Kruss and Merrow Scientific.

From the feedback, it seems the joint RAMS/RAPS conference was a great success, with good things been said about the mixed and diverse sessions, the programme, the networking, the food and the venue. It was such a success the committees both agree we should do a joint conference again, so we are now looking at a alternate year event. Therefore each organisation will go back to holding their own separate conference next year and come together again for another joint conference in 2012. The RAMS conference next year (2011) will be held in Bristol and the RAPS conference in Loughborough.

Sarah Staniland, University of Leeds
Zing International Conference on Polymer Chemistry  
19 – 22 November 2010, Puerto Morelos, Mexico

The international conference on Polymer chemistry was hosted in Puerto Morelos, Mexico (near Cancun). It offered 44 symposia on a vast range of topics including an interesting session on “New Chemistries”. Professor Heather D. Maynard and Dr. Eva M. Harth timetabled the conference so it included several themed consecutive sessions which included one plenary lecture (30mins) and several complementary talks (15mins). There was one specific session dedicated to “poster highlights” (3min short talk) from selected PhD and young researcher posters who had been given the opportunity to present their work. During this conference I was delighted to be given the opportunity to present a poster on my work and to be selected for a 3min talk which was very well received by the audience. This provided me with the chance to discuss my research with fellow scientists doing similar work.

The talks were engaging and information, especially the lecture given by Steve Moratti (see picture), from the University of Otago (New Zealand) on “Chitosan – Dextran Hydrogels for use in Surgery”. It was very interesting to hear how an idea developed from concept to production.

I found the entire conference very enjoyable and the location was beautiful. I would like to thank not only my supervisor, Richard Thompson, but also the MacroGroup UK for awarding me the D.H. Richards Memorial Bursary enabling me to attend the conference.

Sarah Hardman (University of Durham)

3rd Congress on Ionic Liquids (COIL-3)

After two previous successful meetings in Saltzburg and Yokohama, COIL moved to the idyllic setting of Cairns in Northern Australia for its third meeting. Caught between the unique environments of the rainforest and the Great Barrier Reef, the setting was well suited to a research area rooted in green, sustainable chemistry. Organised by Professor Doug Macfarlane and his team the conference reverted to a format of no parallel sessions which worked very well to ensure large and attentive audiences for all speakers. With 44 lectures and 355 poster presentations it was clear that the field of ionic liquids has expanded to encompass a wide range of chemistry. Polymer chemistry was represented strongly with several lectures focusing on cleaner polymer production in ionic liquids and conducting polymers both in and from ionic liquids. As expected, the big names in the field gave notable lectures, Professor Peter Wasserschied’s opening address in particular highlighting the ever increasing development in the field. With such a unique venue, the social success of the conference was never in any doubt and the midweek activity afternoon offered delegates the chance to take trail walks into the rainforest, visit crocodile farms and even go scuba diving on the Great Barrier Reef.

The final day of the conference included the closing lecture by Professor Robin Rogers who will be organising COIL-4 to be held in Washington in the summer of 2011. The conference was closed with the handing over of the iconic sodium chloride crystal associated with previous meetings.

Simon Puttick, The University of Nottingham
"Polymeric Biomaterials" meeting  
University of Reading  
April 15-16 2010.

A total of 74 delegates attended, many from overseas including USA, Germany, France, Israel, Netherlands and Saudi Arabia. We had 13 excellent invited talks and a further 11 contributed talks and 16 posters. A wide range of topics within the polymeric biomaterials theme were covered, ranging from peptide/polymer conjugates to glyopolymers. There were two commercial exhibitors. Feedback from delegates was very positive, the only problem was some overseas speakers unfortunately got stuck in the UK after the meeting due to the Icelandic volcano disruption of flights.

Ian Hamley, University of Reading

Competition Announcement:  
Polymer Physics Group Prize for the Best Student Publication

The Polymer Physics Group (PPG) is pleased to announce that applications are being accepted for a prize to recognise the most outstanding publication by a PhD student on a subject within PPG’s remit. The prize winner will receive a monetary award and will also be invited to present a lecture at the next Polymer Physics Group Biennial Meeting on 12-14 September 2011 at the University of Surrey.

Criteria
The prize will be awarded for the best publication in a journal on a topic of relevance to polymer physics, as judged by the awards committee. The scientific quality, originality and significance of the research will be considered. The nominee must be an author or co-author of the publication. The research reported in the publication must have been carried out as part of the PhD research of the applicant. The publication must be publicly available, either on a journal website or in printed format, and the date of publication (as stated by the journal) must be after 30 April, 2009. Manuscripts in preparation or under review will not be considered for the prize.

Application Procedure
The application for the prize will consist of three items:

A paper or electronic copy of the publication in a journal.

A signed letter (on University letterhead) from the supervisor of the PhD student confirming that the research was carried out by the applicant as part of PhD research.

(3) A statement from the applicant (or nominee) outlining the significance of the publication.

The application should be submitted to the PPG Honorary Secretary, Prof. Nigel Clarke (Department of Physics and Astronomy, University of Sheffield, Hicks Building, Hounsfield Road, Sheffield S3 7RH. Applications must be received by 30 April, 2011. Applicants should separately submit an abstract for their oral presentation on the IOP Conference website (www.paps10.iopconfs.org) in the usual way.
Macro Group Committee Nominations

Nominations are required for Ordinary Members of the committee to serve for a three-year period from April 2011. The Group constitution requires that the persons elected as Ordinary Members must be Macro Group members and include at least one member from each of the parent societies (RSC or SCI). Nominations signed by the proposer and seconder (both of whom must be members of Macro Group) and also by the nominee and should be made using the form below to the Group Secretary, Rachel O’Reilly, no later than Monday 24 March 2011. Nominations should be signed by the proposer and seconder (both of whom must be members of Macro Group) and also by the nominee to indicate his/her agreement to serve. A short biographical outline of the experience, knowledge and skills that the nominee would bring to the committee also is required and should be attached to the nomination. Additionally, the post of Bulletin Officer will be vacated during this year, nominations are especially welcomed for this post.

Nomination for Macro Group UK Committee

To be returned to Dr Rachel O’Reilly, Macro Group Secretary, Department of Chemistry, University of Warwick, Coventry, CV4 7AL.

DEADLINE FOR RECEIPT: MONDAY 24 MARCH 2011

We hereby nominate: ________________________________ (print name)
for the post of Ordinary Member on Macro Group UK Committee

Proposer: __________________________ (print name) __________________________ (signature)

Seconder: __________________________ (print name) __________________________ (signature)

Nominee:

I ________________________________ (print name)
confirm that I am a member of Macro Group through the RSC / SCI (delete as appropriate) and agree to serve on Macro Group Committee if elected.

______________________________ (signature)