

Registration

Registration for Faraday Discussion 139 is now open. Booking is easy with online registration, or if you prefer you can download the pdf registration form and return it to RSC Conferences by post or fax. Just visit www.rsc.org/FD139.

Registration includes attendance at the sessions, delegate pack including book of abstracts, refreshments throughout the meeting, lunch on Wednesday 26 and Thursday 27 March, attendance at the welcome drinks reception on Wednesday 26 March, attendance at the conference banquet on Thursday 27 March and a copy of the discussion pre-prints. Also included is a copy of the Faraday Discussion Volume related to FD139, which will be issued approximately 6 months after the date of the meeting.

Please note that the registration fee does **not** include accommodation or evening meal on Wednesday 26 March which delegates **must** book separately. Delegates are **strongly** advised to book the evening meal on Wednesday 26 March which will take place before the poster session as the University of York is on a campus three miles from town; this can be booked when registering to attend the meeting.

Fees (including VAT)	early bird (by 28 January 2008)	standard (by 25 February 2008)
Member*	£250	£300
Non-member	£350	£400
Student Member*	£150	£200
Student Non-member	£175	£225
Evening Meal (Wednesday 26 March)		£17

*Members of the RSC, IOP or IOM3

Accommodation

Accommodation should be booked directly with the University of York; for more details please see the FD139 Application and Fees web page. This will be allocated on a first-come-first-served basis and we advise early booking. Rooms must be booked by 25 February 2008 to guarantee accommodation in the same block as other conference delegates.

Non-Member? Join the RSC when you attend FD139

Non-members who enrol to attend this conference are eligible to join the RSC during 2008. Membership subscription is included in your registration fee. See the website for further details.

Poster Session – call for abstracts

A poster session and wine reception will be held on the evening of Wednesday 26 March. Offers of abstracts for poster presentation are now invited. The deadline for receipt of abstracts is **Monday 28 January 2008**. Abstracts should be sent as an MS Word attachment to conferences@rsc.org with 'FD139 poster abstract' as the subject header.

How it works

Preprints of full papers will be issued to delegates four weeks in advance of the meeting. The Discussion will be conducted on the assumption that the papers have been read in advance and **five minutes** will be allowed for each presentation. Most of the time will be devoted to discussion, which is then submitted for publication in the proceedings which will be published by the RSC approximately six months after the conference.

The latest ISI citation data reveal that the impact factor for Faraday Discussions has increased by 30% over the 2005 value to an incredible **4.731**. This impressive impact factor emphasises Faraday Discussions' role in providing a forum for the most exciting new research.

Student Delegates

In order to encourage undergraduate or postgraduate students to attend the Faraday Discussion, a reduced conference fee (to include a set of pre-prints but not the final Discussion Volume) is available. This fee applies to those undertaking a full time course for a recognised degree or a diploma at a University or equivalent Institution. A copy of the publication may be purchased at less than half price, only for orders placed at the meeting; application forms will be made available at the meeting.

Bursaries

Conference bursaries are available to student and younger members of the RSC in the early stages of their career (typically within 5 years of completing a first or postgraduate degree) who do not have support available from their employer or research grant. To apply for a bursary, please complete the bursary application section of the FD139 registration form from the website.

Sponsorship and Exhibition

A range of opportunities are available for you to promote your organisation at FD139, either by booking an exhibition space or taking an item of sponsorship. Please contact us at RSC Conferences for more information.

Image courtesy of Professor Tony Ryan, University of Sheffield, UK

Further information, sponsorship and exhibition

If you would like further information on any aspect of FD139 including the programme, registration, sponsorship or exhibition, please visit www.rsc.org/FD139 or contact us at RSC Conferences.

Royal Society of Chemistry
Conferences

Registered Charity Number: 207890

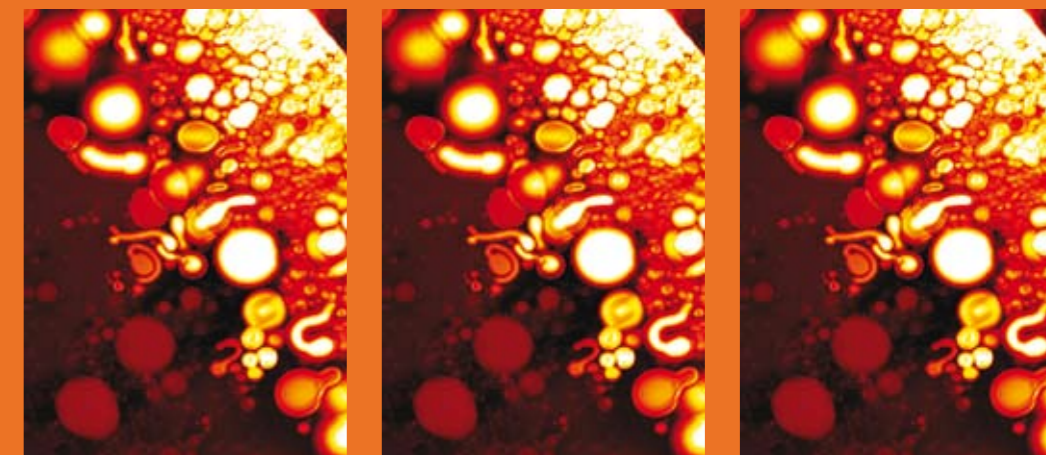
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CALL FOR POSTERS AND
PROVISIONAL PROGRAMME

Faraday Discussion 139: The Importance of Polymer Science for Biological Systems

26 – 28 March 2008
University of York, UK



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Chemical Sciences

www.rsc.org/FD139

So many of the key molecules in biological systems are polymers: proteins, polysaccharides and nucleic acids. Their long chain behaviour is a crucial contributing factor to their function in living systems.

There is increasing dialogue between the different communities of polymer scientists and biologists/clinicians, reflecting the growing awareness that only by bringing together interdisciplinary ideas will fast progress be made.

Who should attend?

FD139 aims to bring together researchers from different backgrounds (physical chemistry and biology) to share their knowledge and foster new collaborations and directions.

Aims

This meeting, hosted by the RSC's Faraday Division, will focus on two main strands:

- The common ground between biology and polymer science: the physical chemistry of macromolecules. One example is the role of specific interactions in self-assembly processes and signalling pathways; another is the ability of membranes to sustain local gradients in chemical potential; both of which involve the subtle interplay of kinetics and equilibrium.
- Medical applications of polymers such as tissue scaffolds and therapeutic delivery vehicles. Here the problems associated with biocompatibility and biodegradability are key.

Scientific Committee

Professor Tony Ryan OBE

University of Sheffield, UK (co-chair)

Professor Athene Donald FRS

University of Cambridge, UK (co-chair)

Professor Richard A L Jones FRS

University of Sheffield, UK

Professor Darrin Pochan

University of Delaware, USA

Professor Chris Hunter

University of Sheffield, UK

Professor Kevin Shakesheff

University of Nottingham, UK

Dr Peter Timmins

Institut Laue-Langevin, France

Co-sponsoring Organisations

We would like to thank the Polymer Physics Group of the Institute of Physics (IOP) and the Institute of Materials, Minerals and Mining (IOM3) for their co-sponsorship of FD139. Members of these organisations are entitled to attend the meeting at RSC member rate.

IOP Institute of Physics



Provisional Programme

Session 1: Cell Interactions

Introductory Lecture

L Mahadevan

Harvard University, USA

Equilibrium polymers of proteins in living cells

Richard P Sear

University of Surrey, UK

Single-biomolecule viscoelasticity and molecular conformational landscapes

Thomas C B McLeish

University of Leeds, UK

Manipulating the cell-material interface to regulate cell fate

David Mooney

Harvard University, USA

Thermo-reversible protein fibrillar hydrogels as cell scaffold

Aline F Miller

University of Manchester, UK

The polymer physics and chemistry of microbial cell attachment and adhesion

Mark Geoghegan

University of Sheffield, UK

Session 2: Membranes and Walls

Multifunctional polymer vesicles

Daniel A Hammer

University of Pennsylvania, USA

Non-cytotoxic polymer vesicles for rapid and efficient intracellular delivery

Giuseppe Battaglia

University of Sheffield, UK

Protein crystallization: universal vs specific aspects of PEG addition in lysozyme solutions

Antonio Emanuele

Università di Palermo, Italy

Calcium phosphate mineralization beneath monolayers of poly(n-butyl acrylate)-block-poly(acrylic acid) block copolymers

Wolfgang Meier

University of Basel, Switzerland

Forces inherent to the pericellular coat – a study on a well-defined model system

Ralf P Richter

Heidelberg University, Germany

Probing (macro)molecular transport through cell walls

Nicola Tirelli

University of Manchester, UK

Session 3: Proteins and Polysaccharides

Title TBC

Viola Vogel

ETH-Zurich, Switzerland

Structure-biopropey relations in self-assembling beta-hairpin peptide hydrogels

Rohan A Hule

University of Delaware, USA

Common motifs in protein self- assembly

Mark R H Krebs

University of Cambridge, UK

Cellulose structures in plants for organ movement and for mechanical support

Peter Fratzl

*Max Planck Institute of Colloids and
Interfaces, Golm, Germany*

Molecular and crystal deformation of cellulose: Uniform strain or uniform stress?

Stephen J Eichhorn

University of Manchester, UK

Mixed protein-polysaccharide interfacial layers: A self consistent field calculation study

Rammile Ettelaie

University of Leeds, UK

Session 4: Natural and Synthetic Polymers

The viscoelasticity of self-assembled proteoglycan combs

Thomas A Waigh

University of Manchester, UK

Synthesis and applications of biologically active well-defined glycopolymers

Neil R Cameron

Durham University, UK

The cell cytoskeleton viewed as an active polymeric gel

Jean-François Joanny

Institut Curie, Paris, France

Role of confined semi-rigid macromolecules in biophysical processes

Peter Cifra

Slovak Academy of Sciences, Slovakia

Biopolymer self-assembly and carbon cycling in the ocean

Pedro Verdugo

*University of Washington Friday Harbor
Labs, USA*

Concluding Remarks

David Tirrell

California Institute of Technology, USA

For contributing authors for the above papers, please see the website.