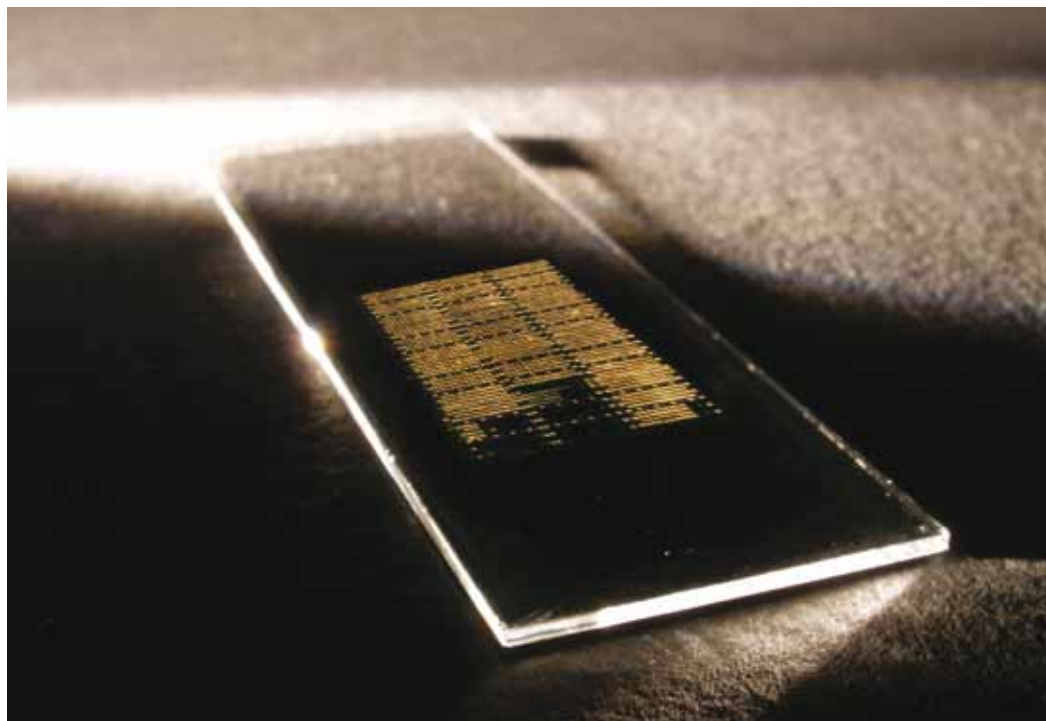


Faraday Discussion 149:  
**Analysis for Healthcare Diagnostics  
and Theranostics**

6 – 8 September 2010

University of Edinburgh, UK



The need in healthcare to detect biomolecular species such as proteins, oligonucleotides (DNA and RNA) and cells for diagnostics is driving the current development of physical techniques. These techniques are generally based on optical, electrochemical and mass spectrometric transduction. Exploitation in array formats is enabling the development of high throughput detection to inform systems biology and pathway medicine, giving new insights into biomolecular pathways and identifying new target analytes.

This is a highly topical and exciting area which opens up the real prospect of theranostics (the use of diagnostics in informing patient specific therapy). However, development and optimisation of detection requires an understanding and control of the fundamental physical processes occurring both in sensing and signal transduction and assessing the comparative merits of alternative detection strategies. For high throughput detection, bioinformatics (the processing and interpretation of vast amounts of data) also presents a real challenge.

This meeting offers a unique opportunity to discuss the relative merits of these physical methods, and the fundamental issues which currently hinder or preclude their development and utilisation. These discussions will be informed by the requirements for detection (the “clinical pull”) and for systems development (the “technological pull”).

## Themes

- Systems/Devices to Inform Therapy (SDIT)
- Physical Techniques for Diagnostics (PTD)
- High-Throughput Measurement and Analysis (HTMA)
- Towards Real-time Clinical Measurement (TRCM)

## Aims

Faraday Discussion 149, organised by the Faraday Division, aims to bring together scientists from many disciplines, including biologists, physicists and chemists, involving academics and industrialists from the healthcare and biosensing communities.

## Scientific Committee

**Andrew Mount** (Chair)  
*University of Edinburgh, UK*

**Till Bachmann**  
*University of Edinburgh, UK*

**Phil Bartlett**  
*University of Southampton, UK*

**Rob Beynon**  
*University of Liverpool, UK*

**Mark Bradley**  
*University of Edinburgh, UK*

**Paul French**  
*Imperial College, London, UK*

**David Mendels**  
*Cognoscens, France*

## Invited Speakers

### **Roger Tsien (Introductory)**

*University of California, San Diego, USA*

### **Pankaj Vadgama (Closing)**

*Queen Mary University of London, UK*

### **Nancy Allbritton**

*University of North Carolina, USA*

### **Tony Cass**

*Imperial College London, UK*

### **Graham Cooks**

*Purdue University, USA*

### **Kev Dhaliwal**

*MRC Centre for Inflammation Research,  
Edinburgh, UK*

### **Walter Kolch**

*University College Dublin, Ireland*

## How It Works

The Scientific Committee will select contributed abstracts to complement the invited presentations on the basis of the abstracts received. The authors will then be asked to submit their work as a full paper, which will form the basis of their short presentation at the meeting. The paper itself must contain new, unpublished work and be submitted by 30 April 2010.

The papers selected for presentation and discussion will be refereed and then sent to all participants as preprints.

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

## Key Deadlines

### **Abstracts for oral presentation**

2 November 2009

### **Submission of full papers**

30 April 2010

### **Abstracts for poster presentation**

2 July 2010

### **Early bird registration**

2 July 2010

### **Standard registration**

6 August 2010

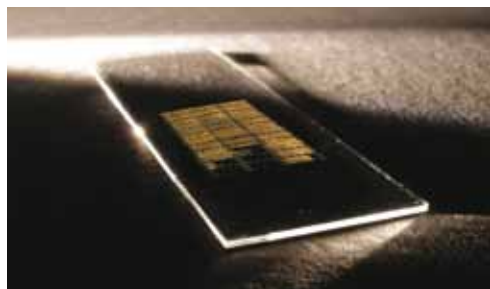
## Call for Papers

Offers of papers within any of the themes of the meeting are now invited. Oral abstracts should be submitted by 2 November 2009 and poster abstracts by 2 July 2010.

Abstracts for both oral and poster presentations should be sent by email attachment to RSC Conferences ([conferences@rsc.org](mailto:conferences@rsc.org)) with the following subject header: 'FD149 abstract'.

The abstracts should be no longer than one A4 page in portrait layout.

Please include your full address and contact details in the email and indicate whether you are submitting an abstract for oral or poster presentation.



## Registration

Registration will open in spring 2010. Accommodation is not included in the registration fee; this should be booked directly with the University of Edinburgh at the time of registering.

Financial support is available for students and recent graduates. The bursary application form will be available online when registration opens.

## Venue

The meeting will be held at the new John McIntyre Conference Centre at the University of Edinburgh's Pollock Halls site.

You may like to arrive in Edinburgh early to attend Edinburgh's world famous festivals which take place throughout August until the first week in September.

## Networking

Faraday Discussions provide excellent opportunities for interaction with other delegates. Networking will take place through an interactive poster session and the conference dinner which will include the traditional Faraday Loving Cup ceremony.

## Faraday Discussion Volume

The Faraday Discussion Volume documents the unique series of discussion meetings. The papers presented at the meeting are published in the Faraday Discussion Volume together with a record of the discussion contributions made at the meeting. Faraday Discussions therefore provide an important record of current international knowledge and views in the field concerned.

The latest ISI citation data give Faraday Discussions an impact factor of 4.60, emphasising their importance as a forum for developing exciting new ideas.

## Sponsoring Faraday Discussion 149

Sponsorship and exhibition opportunities available at this meeting include table-top exhibitions, sponsorship of social events and advertisements in the book of abstracts. Please contact RSC Conferences for details.

Cover image courtesy of Harald Peter, University of Edinburgh, UK

## Further Information

The programme and registration booking link will be available online at the start of 2010. All enquiries concerning any aspect of FD149 should be addressed to RSC Conferences.

**Royal Society of Chemistry**  
Conferences

Registered Charity Number: 207890

Thomas Graham House  
Science Park, Milton Road  
Cambridge, CB4 0WF,  
UK

Tel: +44 (0)1223 432380 / 432254  
Fax: +44 (0)1223 423623  
Email: [conferences@rsc.org](mailto:conferences@rsc.org)  
[www.rsc.org](http://www.rsc.org)