Social Programme
There will be a welcome reception and conference dinner during the conference. Trips to London, Oxford and Windsor will be organised on an “on demand” basis on July 26, 2014, after the conference has ended.

Exhibition
A key part of CCC2014 will be the Exhibition. The program will be structured to ensure that participants have ample opportunities to meet commercial CCC/CPC suppliers with their state-of-the-art instrumentation. To reserve booth space and get quotations, exhibitors should contact the Conference Chair.

Meeting and Hotel registration
Brunel University has its own hotel accommodation. This is in or adjacent the Lancaster Suite or Lancaster Lodge. Room prices are in the order of £40-£50 per night +VAT (20%). Please consult the web site www.ccc2014.com which will be regularly updated as the organization of the conference progresses.

Contact
Dr Svetlana Ignatova
Chair CCC2014
Advanced Bioprocessing Centre
Brunel Institute for Bioengineering
Brunel University, Uxbridge UB8 3PH, UK
E-mail: ccc2014@brunel.ac.uk

Abstracts
One-page abstracts (up to 500 words) are invited for research involving all areas of CCC/CPC and related techniques using a support free liquid stationary phase. The abstracts along with title, authors, affiliation and a summary of the research (see www.CCC2014.com for more detail) should be sent as a Word electronic file to:
CCC2014@brunel.ac.uk

Special Journal Issue of JCA
Elsevier (the Journal of Chromatography A) have agreed to publish papers arising from presentations and posters at the meeting as a virtual special issue. They will also be pioneering new forms of dissemination of the conference by publishing links to videos/ powerpoints, prize winners and keynote lectures as part of the special issue.

How to get there
Brunel University is located in Uxbridge which is 5 miles from Heathrow Airport, 40 miles from Gatwick, Luton and City Airports and 60 miles from Stansted. Uxbridge is 45 minutes from Central London at the end of the Metropolitan Underground line. The U3 and 222 buses from Heathrow go to the University.
Full location and access details can be found at www.brunel.ac.uk/about/campus/directions

CCC International Committee
Prof Alain Berthod, Lyon, France
Prof Xueli Cao, Beijing, China
Prof Walter D. Conway, Buffalo, NY, USA
Dr Dalene de Beer, Stellenbosch, South Africa
Prof Qizhen Du, Hangzhou, China
Prof Brent Friesen, River Forest, IL, USA
Dr Svetlana Ignatova, Uxbridge, UK
Dr Yoichiro Ito, Bethesda, MD, USA
Dr Yeong Shik Kim, Seoul, South Korea
Prof Artak Kostanian, Moscow, Russia
Prof Gilda Leitao, Rio de Janeiro, Brazil
Prof Tatiana Maryutina, Moscow, Russia
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Prof Hisao Oka, Nagoya, Japan
Prof Yuanjiang Pan, Hangzhou, China
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Prof Ian A. Sutherland, Uxbridge, UK
Dr Adrian Weisz, College Park, MD, USA
Prof Peter Winterhalter, Braunschweig, Germany
Prof Tianyou Zhang, Beijing, China

CCC Industrial Committee
Dr Roland Brown, Pfizer, Sandwich, UK
Dr Keith Freebairn, GSK, Stevenage, UK
Dr Paul Hellier, Pierre Fabre, Toulouse, France
Dr Veronique Pinilla, UCB Pharma, Brussels, Belgium
Dr Frank Riley, Pfizer, Groton, CT, USA
Dr Christoph Seidel, Roche, Penzberg, Germany
Dr Neil Sumner, AstraZeneca, Macclesfield, UK
Background

Separation technology and scale-up of separation processes are one of the major challenges facing industry today. This conference series highlights the progress being made in new processes where the sample is simply kept in a liquid stream. Counter-current chromatography (CCC) and Centrifugal Partition Chromatography (CPC) are unique liquid-liquid extraction/chromatography processes with a support free liquid stationary phase. As both phases are liquid either phase can be the mobile phase opening up a range of different operating modes, including continuous processing. There is no adsorption to solid supports, particulates are tolerated and the high volume proportion of stationary phase means that there is high loading capacity and high resolution separation with a low number of theoretical plates. When the 1st International Conference on CCC was held in London in September 2000, the technology was only just evolving as a laboratory process. Now, 14 years on, the technology is commercially robust, competitive at an industrial scale and finding application in many laboratory and industrial scale separations including recovery of target chemicals from waste streams.

Conference Overview

The conference will be preceded by a two-day workshop for those less familiar with the technology or those wanting to have a master class for their own particular application. The main conference will be opened by Professor Julia Buckingham, Vice-Chancellor of Brunel University and herself a pharmacologist. This will be followed by a keynote lecture given by Dr Svetlana Ignatova, Director of Brunel’s Advanced Bioprocessing Centre which is nearby. Conference sessions and the exhibition will take place in the Hamilton Conference Centre at Brunel. The conference will be held on the Brunel University Campus in Uxbridge, West London (UB8 3PH) which is very close to Heathrow Airport. Conference sessions and the exhibition will take place in Brunel’s Advanced Bioprocessing Centre which is nearby.

The second day will be dedicated to industrial delegates with an opening talk by Sir Richard Sykes, Chancellor of Brunel University and in the past Rector of Imperial College and CEO of GlaxoSmithKline. Exhibitors will have a chance to give short presentations on this day and delegates will have an opportunity to focus on scale-up and production issues that have not been aired at CCC conferences before. This day will culminate in the Conference Dinner.

The final day will start with Emerging Technologies so that any Industrial delegates who want to linger can get a taste for the future.

Conference Themes

Process Development - highlighting the versatility of the process with different elution/separation modes (i.e., elution/extrusion; pH zone refining; ion-exchange; liquid-liquid extraction; chiral separations)

Scale-up and Scale-down - transferability of the process from one country, instrument and scale to another country, instrument and scale

Continuous Processing - true moving bed; intermittent counter-current extraction; dual flow; non-equilibrium processes

Method Development - rapid and robust (including automated) approaches and optimisation processes

Novel Solvent Systems - novel solvent and additives for improving selectivity, solubility and phase system stability

Process Modelling - theory, prediction and visualisation

Instrumentation and Process integration - hyphenated techniques, robust engineering and technological developments

Applications - from small molecules to large biomolecules - natural and synthetic products from the food, agriculture, pharmaceutical, fine chemicals and perfume sectors; environmental applications

Emerging technologies - particles, biologics, cells, reactive extraction and novel liquid extraction processes

Conference Dinner

The final day will start with Emerging Technologies so that any Industrial delegates who want to linger can get a taste for the future.

Conference venue and location

The conference will be held on the Brunel University Campus in Uxbridge, West London (UB8 3PH) which is very close to Heathrow Airport. Conference sessions and the exhibition will take place in the Hamilton Conference Centre at Brunel. The pre-conference workshop on July 21-22, 2014 will take place in Brunel's Advanced Bioprocessing Centre which is nearby.

Registration

Delegates can register online on the conference web site: www.ccc2014.com. The registration rates are as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Early</th>
<th>Late</th>
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<tbody>
<tr>
<td>Academic Registration (Full)</td>
<td>£300</td>
<td>£400</td>
</tr>
<tr>
<td>Industry Registration (Full)</td>
<td>£500</td>
<td>£650</td>
</tr>
<tr>
<td>Industry Registration (Industrial Perspective Day only)</td>
<td>£200</td>
<td>£300</td>
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<tr>
<td>Student* Registration (Full)</td>
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<tr>
<td>Accompanying Person Registration (Full)</td>
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<td>Welcome Reception (per head)</td>
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<tr>
<td>Conference Dinner (per head)</td>
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<td>£60</td>
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* A limited number of bursaries are available.