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NEWSLETTER

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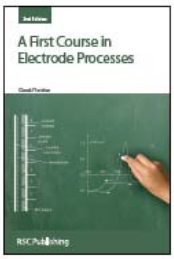

A First Course in Electrode Processes

Author: Derek Pletcher

Series: A First Course in Electrode Processes
Publisher: Royal Society of Chemistry
ISBN: 9781847558930
Price: £39.99
Publication date: 2009
Target audience: Professional and Scholarly

Format: BB Hardback
Size: 234mm x 156mm
Pages: 316
Illustrations: Black & White
BIC: PNRH, PNF, PN

Synopsis

This book provides a basis for an introductory course on electrochemistry. Uniquely, little or no background knowledge of mathematics is required to follow the course, as concepts are clearly emphasised throughout. The first edition has been adopted by university course across the globe and remains highly sought after. This second edition has been completely revised and expanded, and will continue to appeal to undergraduate and postgraduate students of chemistry and related disciplines, Professionals wishing to apply electrochemical methods in their work will also find the book invaluable.

The text is supported by a large number of figures which illustrate key points. A final chapter contains problems with fully worked answers to test reader's understanding.

Brief Contents

For more information please contact:

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IVIUM TECHNOLOGIES

Solutions for electrochemical research

NEWSLETTER

Ivium Technologies keeps innovating: Latest news for 2010!

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CompactStat **&** ***IviumStat***

New features:

- *Increased frequency range: 10µHz - 3 MHz*
- *Increased compliance: ±8 V to ±10 V*
- *Increased applied: ±4 V to ±8 V*

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The external Plus-module is replaced by an optional power booster that is integrated inside the CompactStat:

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New features:

- *Increased frequency range: 10µHz - 8 MHz*
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- *Better noise reduction*

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In addition to the already known IviumStat.XR (±20V@±5A) the IviumStat extended-range-family now also includes:

- IviumStat.XRi: **±10 V @ ±10 A** *Now available*
- IviumStat.XRe: **±50 V @ ±2 A** *Expected in Q3*

More for less:
The first affordable multi-channel high performance instrument!

Ivium-n-Stat:

- 1-8 channels per frame, stackable up to 64 channels
- Independent floating operation
- Modules encapsulated for easy handling

s-Module:

- ±2.5 A @ ±10 V (expandable to ±5 A @ ±10 V)
- Each channel with integrated impedance analyser: 10µHz to 250 kHz
- Data acquisition rate: 100 kHz
- Current ranges 10 nA – 10 A; min. resolution: 1 pA
- Peripheral analog/digital channels

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FastScan module

Coming soon!

sampling: 20MHz
scanrate: 10 MV/s

Data recorder and ultrafast scan generator add on module for CompactStat & IviumStat

Data sampling:
- 2 channels, 16 bits
- Max acquisition speed: 20,000,000 samples/sec
- Data memory: 10,000,000 data points
- Input bandwidth > 8 MHz

Scan generator:
- Max scanrate: 10,000,000 V/sec
- Vertex resolution: 0.125 mV at ±4 V scanrange

Ivium Technologies frequently visits conferences and meetings all over the world. Check our website at "www.ivium.nl/Upcoming events" to see when we are attending an event near you.

IviumSoft

We frequently release new software:

- additional method parameters
- additional graphic data representation
- new techniques
- new analysis methods and features
- extra applications
- ...

Latest new features:

- save & restore method parameters between sessions
- working with multiple instruments on 1 PC
- automatic current ranging:
  - now also available for Chronopotentiometry
  - AutoCR in combination with Dynamic Vertexes
- view/edit scan properties
- improved noise reduction for EIS
- baseline subtraction for ECN
- process scheduler in the Batchmode
- ...

How to upgrade to the latest version IviumSoft:

Downloading new IviumSoft:

1. Go to our website at www.ivium.nl/Support
2. Click on the "IviumSoft x.xxx" link to start download
3. Unzip to make the IviumSoft.exe file available
4. Copy the IviumSoft.exe to the c:\IviumStat directory to replace the existing one
5. Start IviumSoft and upgrade the instrument firmware at the "Tools > Device maintenance" menu

After upgrading the IviumSoft, don't forget to upgrade the firmware.

New modules

Current Interrupt Module (CIM): adapter module for measuring the IR-drop via the current-interrupt technique; connects in-line with the cell-cable of the potentiostat.

Peripheral Level Transformer (PLT): adapter module that increases the voltage of the analog inputs&outputs; connected between the instrument and the periphery.

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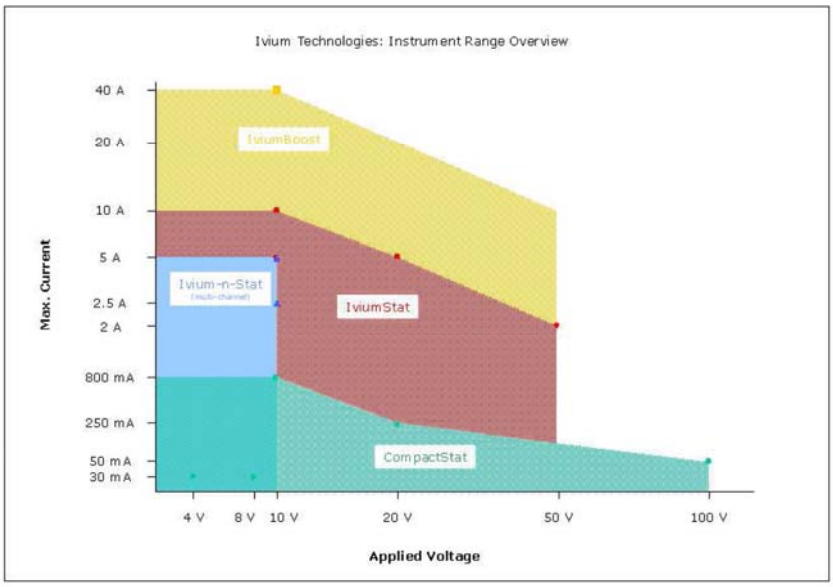

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- Electrode development
- Biotechnology
- Corrosion

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Each channel with integrated impedance analyser!

Ivium-n-Stat:

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- *Independent floating operation*
- *Modules encapsulated for easy handling*
- *2-mode software:*
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  IviumNcontrol: synchronous control of multiple channels

s-Module:

- *±2.5 A @ ±10 V (expandable to ±5 A @ ±10 V)*
- *Each channel with integrated impedance analyser: 10µHz to 250 kHz / 1MHz*
- *Data acquisition rate: 100 kHz*
- *Current ranges 10 nA – 10 A; min. resolution: 1 pA*
- *Peripheral analog/digital channels*

Alvatek Ltd.
Tel. 01666 500991 E-mail: sales@alvatek.co.uk

Ivium Technologies was founded in 2001 and is based in the Netherlands.
Our mission is to provide the latest electronics and technology to electrochemical research and facilitate the advancement in science. We develop and supply equipment for electrochemical research all over the world and we have grown to where we are today by combining modern design techniques and state-of-the-art components with efficient manufacture and swift customer service. Our dedication to developing solutions for electrochemical research has resulted in high performance instrumentation for a wide variety of applications. The cornerstone of our product range is a potentiostat/galvanostat platform that is available in a high power general-purpose device (IviumStat), and a low-power portable device (CompactStat).

CompactStat — Mobile measurement station

Ivium Technologies is best known for its development of the **CompactStat™:** the only true mobile potentiostat/galvanostat with built-in impedance analyser on the market. It is powered directly from the USB port of a PC/laptop and does not need a power-cord.

Portable: < 600 gram
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With integrated impedance analyser

IviumStat — All purpose potentiostat /galvanostat

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CompactStat&IviumStat:

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- ***Data acquisition rate: 100 kHz***
- ***High resolution: 0.15 fA***
- ***Peripheral analog/digital channels***
- ***Expandable with modules***
- ***High performance data analysis software included***

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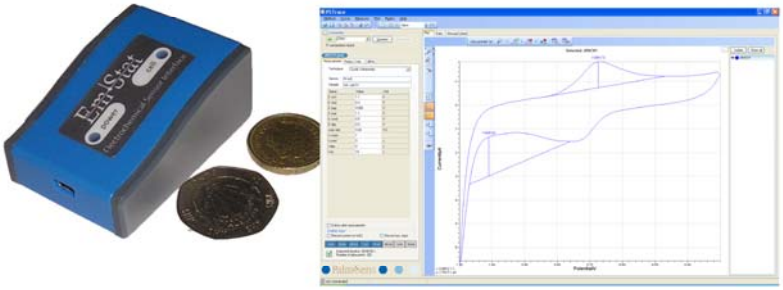

- USB-powered
- Cyclic and Linear Sweep Voltammetry (CV, LSV), Square Wave Voltammetry (SWV), Differential Pulse Voltammetry (DPV), etc
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"At £1199, the Emstat is low-cost yet surprisingly capable. It is excellent for teaching and less demanding applications – but it still has nanoamp measurement capabilities! Call us for a demo." – Steve Fryatt, Alvatek Ltd.

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The entry level in the Autolab range of electrochemical instruments, the Autolab/PGSTAT101 in combination with the powerful NOVA software, can be used for most of the standard electrochemical techniques. Autolab/PGSTAT101 is an affordable potentiostat/galvanostat without compromising on quality and specifications, making it an ideal instrument for students and educational purposes.

The small footprint allows you to place a high quality potentiostat/galvanostat on a crowded workbench. Analog and digital inputs and outputs for interfacing and controlling external devices are available. The Autolab/PGSTAT101 comes with an internal dummy cell.

KEY FEATURES

• Electrode connections	2, 3 and 4
• Potential range	+/- 10 V
• Compliance voltage	+/- 10 V
• Maximum current	+/- 100 mA
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• Potential resolution	3 µV
• Current accuracy	+/- 0.2 %
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• Control software	NOVA

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- FRA2 - FREQUENCY RESPONSE ANALYZER
  10 µHz - 1 MHz / Single and multiple sine
- BA - DUAL MODE BIPOTENTIOSTAT
  7 Current ranges10 nA -10 mA/Maximum current 50

NOVA

Electrochemical

Software

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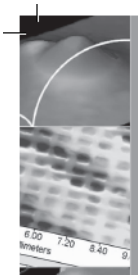

Rotator Controller

RC10V

The RC10V Rotator Controller accessory connects the BiStat 3200, PG580RM or PG580 potentiostat to an electrode rotator and remotely controls the rotational speed of the unit.

- Support for Pine Research and Princeton Applied Research rotators
- Small footprint enclosure
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Application Areas

- Erosion enhanced corrosion resistance studies
- Structures and activity of nanoparticles
- RDE and RRDE electrodeposition studies
- Catalysts for mixed-reactant fuel cell
- Electrochemical kinetics studies

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Contents

Editorial

A new year, a new decade, and electron transfer chemistry still continues to make a major impact on our lives, both consciously through technological design and application, and in the wonderful, yet innate, beautiful self-perpetuating systems that constitute Natural Life. To emphasise this, the RSC Electrochemistry Group Committee have announced that the Geoffrey Barker (RSC Electrochemistry) Medal will continue to be awarded to outstanding UK electrochemists who have contributed with important experimental or theoretical achievements, and whose research work is recognized internationally, so that the award is seen as strengthening the standing of UK Electrochemistry. This will be presented for the first time since 2007 at Electrochem10.

In seeking to emphasise developments in Electrochemical Technology which may be highlighted for commercial exploitation, thereby adding value and benefit to societal welfare and consciousness, I introduce, in this issue, a new module – a Technology Highlights Portal (*q.v.* page 19). It is my great pleasure to feature within this first edition, the Hull University Naso-gastric Tube, which has been developed within the Faculty of Health and Social Care at Hull University, with collaborators from Curtin University, Perth, Australia, and which relies on a form of amperometric pH measurement.

Readers will be aware of a report by The Expert Group of the European Union published earlier this year regarding the rôle of community research policy in the knowledge-based economy; following the recommendations described therein, I continue to feature the New Faces in UK Electrochemistry (*q.v.* page 46) – the future of our subject within the UK is related to the survival of this generation. Pleasingly, Dr. Tim Albrecht (of Imperial College), who was featured in a previous edition of this magazine, will join the RSC Electrochemistry Group Committee as Electrochemical Society representative. Other committee changes include the appointment of Professor Peter Fielden as Chairman of the RSC Electroanalytical Sensing Systems Group.

Last, owing to popular demand, the su-do-ku competition has returned (*q.v.* page 51)! Please send in your completed solutions to me at the e.mail address below by midnight (BST) on July 24, 2010; the author of the winning solution will receive a copy of *Understanding Voltammetry* by R. G. Compton and C. E. Banks (which has been very generously donated to this magazine as a prize by Professor Richard Compton of Oxford University).

It remains for me to thank all those who have contributed material and ideas for, and advice on, the content of this issue.

Editor

If you wish to notify the editor with your view on the material or the content of any item in this issue, or your wish to contribute to the newsletter, please write to the editor at:

electrochemistry.newsletter@googlemail.com

Missed a copy? You can catch up on all the news *via* our webspace hosted by the Royal Society of Chemistry at the following URL.

http://www.rsc.org/Membership/Networking/InterestGroups/Electrochemistry/news.asp

Congratulations to....

Professor Dr. Christian André AMATORE, Honorary Fellow of *The Royal Society of Chemistry*, member of the *Haut Conseil de la Science et de la Technologie of the Government of the Fifth French Republic*, and of Ecole normale supérieure, Paris, France, and Delegate for the Chemistry Section of the *Académie des Sciences, Institut de France* on his election to the grade of Knight of the *French Legion of Honour*.

Professor Damian ARRIGAN on his appointment to a position within the Nanochemistry Research Institute at Curtin University, Perth, Australia.

The Editor warmly congratulates Dr. Oleksandr OLIYNYK on his new CNRS position.

Development of Enteral Feeding Tubes

Lead Academic: Mrs Barbara Elliott, University of Hull

The Challenge

The use of nasogastric tubes (thin tubes which pass through one nostril and down the oesophagus to reach the stomach) is common both in hospitals and homes throughout the world for patients of all ages with a range of acute and chronic medical conditions. The key issue is verification of the correct placement of the tube which is usually intended to be in the stomach. Malpositioned tubes cause problems and occasionally serious or fatal complications. There are a number of tests for determining the location of nasogastric tubes but all have limitations and some are dangerous. There is currently no definitive, safe and reliable method of verifying where a nasogastric tube is placed.

The Innovation

Development of a fail safe detection mechanism for the placement of nasogastric feeding tubes that is reliable and cheap to manufacture; comprising of a sensor which specifically detects stomach contents and signals to an external monitor that the tube is in the correct location. The sensor can operate over extended periods without the need for removal, providing long-term reassurance of correct positioning. The innovation is protected by PCT (international) Patent Application (filed 8 June 2007) and UK Patent Application (filed 8 June 2006). A prototype has been successfully demonstrated in laboratory conditions.

The Opportunity

Independent study of the market potential of this product has been conducted by Cion Consulting. UK sales are understood to be in the range of 6 -12 million tubes annually (£5-10m) and 69 – 154m annually (£60 -120m) in the USA and Europe. There are many suppliers of nasogastric tubes ranging from divisions of multi-national companies to UK private companies. The clinical trials required of this product would most easily be supported by a company producing the tubes under licence. Future sales depend upon manufacturing costs, market research of potential partners suggests proof manufacture is necessary to give assurance that a working prototype can be made with at an estimated cost of under £2.50 per tube.

Nasogastric tubes are commonly used to feed premature and/or sick infants

Nasogastric tubes are commonly used to feed premature and/or sick infants

Dr Jay Wadhawan, Barbara Elliott and Dr John Greenman (co-inventors)

The inventors:

University of Hull - Dr Jay Wadhawan (Department of Chemistry), Dr John Greenman (Postgraduate Medical Institute), Barbara Elliott (Department of Community Health and Social Care)

External - Dr Magdi el-Habbal, Dr Cameron Imrie, Professor Linda Shields

How has the Yorkshire Concept Fund Contributed?

Yorkshire Concept funding of £30,000 has enabled the development of tubes and extensive laboratory testing to prove the concept and technological development worked. Application for international and UK patents has also been facilitated as was appropriate exploration of market potential through business contacts.

Proposition Position Today

Work is continuing to provide further evidence of the tubes potential to identify location in the stomach. Manufacturing partners and/or further funding sources are being actively sought to develop the proof of manufacture at a reasonable cost in order to proceed with this innovation.

Fact Box

Lead Academic:
Mrs Barbara Elliott

Faculty of Health and Social Care, Calder Building, West Campus, The University of Hull, Cottingham Road, Hull HU6 7RX

01482 464518

b.e.elliott@hull.ac.uk

Business Development Manager:
Mr John Frankland

University Deputy Director, The Knowledge Exchange, The Enterprise Centre, University Of Hull, Cottingham Road HU6 7RX

01482 464903

j.frankland@hull.ac.uk

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INTERNATIONAL SOCIETY OF ELECTROCHEMISTRY

ISE REGIONAL STUDENT MEETINGS

Graduate Students who are members of ISE and intend to organize a Regional Student Meeting can apply for ISE financial support. Regional Student Meetings are typically one-day meetings involving graduate students active in the geographic area where the meeting takes place.

The format of the meeting (oral presentations, posters, discussion sessions, other) is autonomously decided by the organizers who will be responsible for securing a venue and collecting registrations. No registration fee should be requested. No later than one month after the meeting, the organizer(s) will send to the ISE Office a report on the event, including the names and the e-mail addresses of the participants. The participants will be encouraged to apply for ISE membership. An overview of the report accompanied by suitable pictures if available will be posted on the ISE website under Student Activities.

Applications for ISE support must be sent by e-mail to the ISE Office (info@ise-online.org), with a copy to the Regional Representative of the country where the meeting is organized, 3-12 months before the meeting date, using the application form (*q.v.* page 21). The local ISE Regional Representative *(Professor Robert A. W. DRYFE of The University of Manchester, for the United Kingdom)*, if requested, will assist the potential meeting organizer in the preparation of the application. Applications will be analyzed by a committee consisting of (i) ISE Secretary General, (ii) ISE Treasurer, (iii) ISE Vice President responsible for Educational Activity and (iv) ISE Vice President responsible for Regional Sections.

The response will be communicated to the applicant and to the relevant Regional Representative no later than 1 month after the application submission.

The maximum financial support will be 600 €; the expected use of the funds must be specified in the application. Co-sponsoring by other Societies and/or institutions is possible.

Want to know more?

http://www.ise-online.org

APPLICATION FORM FOR SPONSORSHIP OF REGIONAL STUDENT MEETINGS

Send the filled in form by e-mail to the ISE OFFICE : info@ise-online.org

ALL the parts of this form, including the bank details, must be filled by the meeting organizer, in collaboration with the local Regional Representative. Incomplete forms will not be processed.	
ISE REGIONAL SECTION:	
SCIENTIFIC THEME(S) OF THE MEETING:	
MEETING DATES (day-month-year**):**	
MEETING VENUE:	
MEETING ORGANIZER First Name: Last Name: Institution: E-mail:	
FACULTY SPONSOR First Name: Last Name: Institution: E-mail:	
REGIONAL REPRESENTATIVE First Name: Last Name: Institution: E-mail:	
EXPECTED NUMBER OF PARTICIPANTS - **From the local Region** - **From other Regions**	
REQUEST OF FINANCIAL SUPPORT - **Support requested (maximum 600 €)** - **Proposed use of funds (itemized)**	
OTHER EXPECTED SPONSORS, if any	

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Beneficiary's details

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Bank Account number / IBAN:

Details of beneficiary's bank

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City:
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Student Notice bis

The Electrochemical Technology Group of the Society of Chemical Industry (SCI) is developing a post-graduate network for students involved in all areas of electrochemistry and electrochemical engineering.

The network will provide a forum for discussions, symposia and networking events and seeks to engage it's members with the wider activities of the SCI.

Current students (Masters or PhD level) who may wish to join the network may contact the organiser (*vide* infra) directly to join and with any queries.

p.shearing@imperial.ac.uk<p.shearing@imperial.ac.uk>

Paul Shearing
Postgraduate Representative
Society of Chemical Industry Electrochemical Technology Group

For further information on the SCI and the Electrochemical Technology Group, please visit our website:

http://www.soci.org/Membership-and-Networks/Technical-Groups/Electrochemical-Technology-Group.aspx

2010 Postgraduate Research Topics Meeting in Electroanalysis

8th December 2010 at Birkbeck, University of London

The Electroanalytical Sensing Systems Group, Analytical Division, RSC in collaboration with
The School of Biological and Chemical Sciences, Birkbeck is organising the 9th Annual Meeting for Postgraduate Research Topics in Electroanalysis.

We would like to invite a contribution from your Group and/or attendance at the meeting – contributions of work in progress are particularly welcome as are posters.

• The meeting will be free of charge to all attendees but advance registration of interest by e-mail is requested so any changes to the program or venue can be communicated.

• The Electroanalytical Sensing Systems Group will pay travel costs (equivalent to a 2nd class off-peak rail fare with student rail card) for speakers.

• The program of talks will start at 2.00pm with an anticipated finish by 5.00pm.

• Contributors are requested to offer a title as soon as possible and will receive rapid confirmation regarding speaking slots. Presentations should be no longer than 20 minutes with the opportunity of 5 minutes questions.

• The meeting will take place in Birkbeck Main Building, Birkbeck, University of London Malet Street, Bloomsbury, London WC1E 7HX.

Student Conference Bursaries

The Student Bursary Scheme provides financial support to promising postgraduate students to attend a major electrochemistry conference abroad. This includes UK based students travelling to a conference abroad and students based abroad wishing to attend a conference in the UK. The Bursary Scheme is open to all postgraduate student members of the RSC's Electrochemistry Group undertaking research in electrochemistry. Applications shall consist of:

(i) the application form (download from http://www.rsc.org/lap/rsccom/dab/fara005bursary.htm),
(ii) the abstract submitted to the conference organisers,
(iii) one A4 page *curriculum vitae* stressing academic and scientific achievements (e.g., research articles, oral and poster presentations *made by the applicant*).

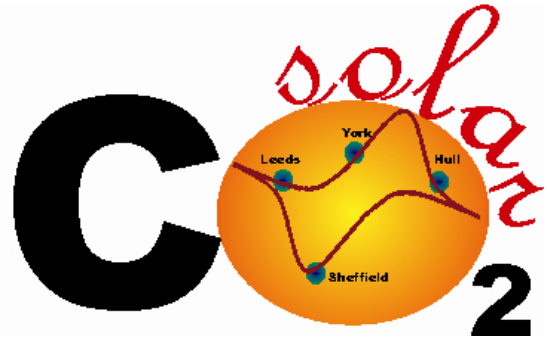
Applications may be made at any time of the year and shall be submitted to the Group Secretary in electronic form.

The selection committee of the Electrochemistry Group shall decide the sum awarded. Under normal circumstances this sum shall not exceed £300.

Successful applicants shall produce a conference report article for the Newsletter. The Editor asks applicants and their supervisors to note this particular condition, and respectfully requests that successful applicants send in their report *quam primum*.

Candidates should submit their applications directly to the Dr Frank Marken, the Group Secretary (f.marken@bath.ac.uk).

Opportunities



Four PhD Studentships Available

White Rose Solar CO_2 Network

Yorkshire's Premier Solar Fuels Research Consortium

Funded *via* the Centre for Low Carbon Futures

We are a team of eight academics and four research students across the four principal universities within Yorkshire County, UK, focussed on the single aim of developing a solar-powered electrochemical device in which the reduction of carbon dioxide (CO_2) is coupled with Wacker-type oxidations of hydrocarbons.

We are currently seeking FOUR PhD students to engage in research within this funded consortium, with the projects given below.

New macroporous materials for photocatalytic and photonic applications
Principal supervisor: Dr Richard Douthwaite (York)
Secondary supervisor: Professor Rik Brydson (Leeds)

Synthesis and characterisation of (photo)electrocatalysts for CO_2 reduction based on transition metal complexes
Principal supervisor: Dr Julia Weinstein (Sheffield)
Secondary supervisor: Professor Robin Perutz (York)

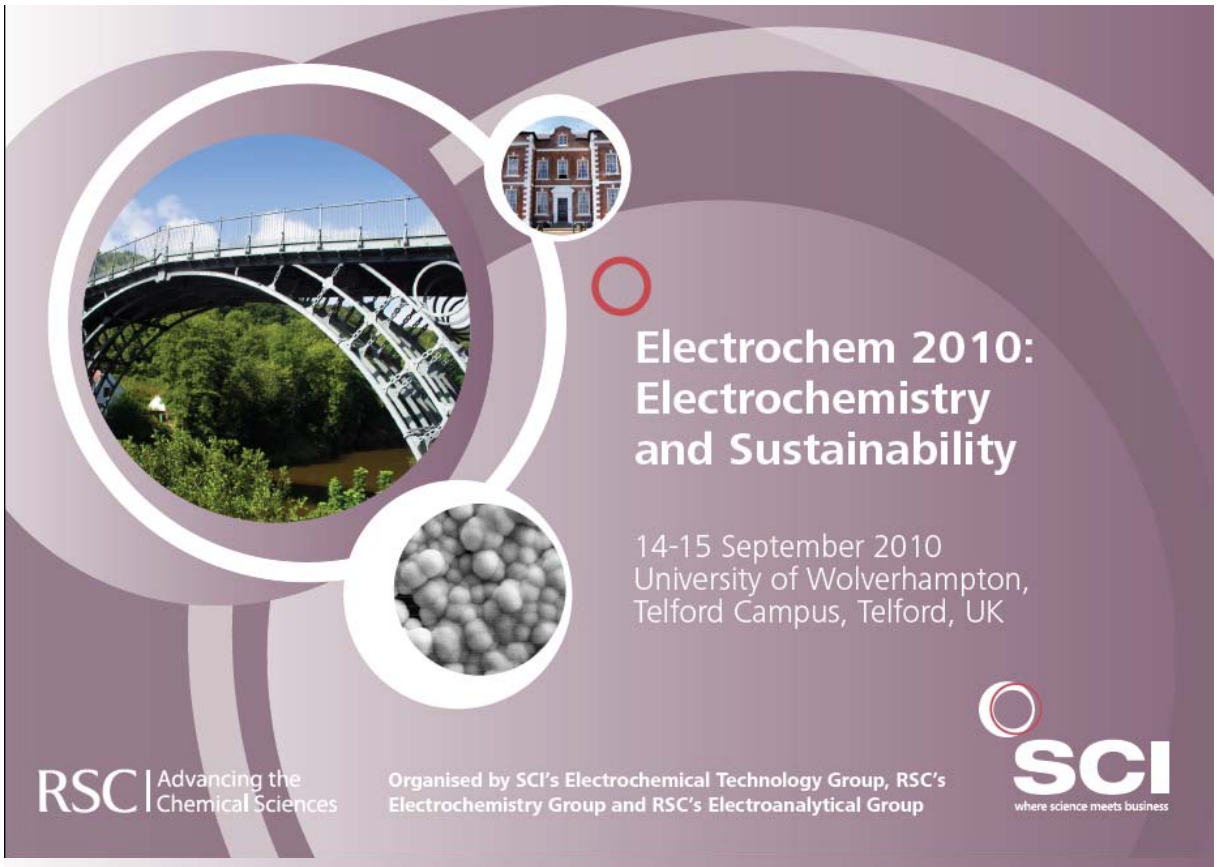
Design of photovoltaic components for a solar electrochemical cell for the reduction of CO_2
Principal supervisor: Professor Stephanie Haywood (Hull)
Secondary supervisor: Dr Bruce Ewan (Sheffield)

Correlating electronic, electrochemical and functional properties of highly-textured semiconductor-catalyst materials
Principal supervisor: Dr Rolf Crook (Leeds)
Secondary supervisor: Jay Wadhawan (Hull)

Interested in applying? Check out our webspace…

http://www.hull.ac.uk/chemistry/WhiteRoseSolarCO2

Future Events



Electrochem 2010 *Call for Papers*

14-15 September 2010, University of Wolverhampton, Telford, UK

SCI
where science meets business

Electrochem 2010: Electrochemistry and Sustainability aims to bring together members of the international community involved in the practice and promotion of electrochemistry and electrochemical engineering. There will be a mix of plenary lectures, parallel breakout sessions of contributed lectures and keynote talks, an extended poster session and a gala dinner.

Symposia Themes

Many symposia themes will be covered, all with a clear focus and emphasis on sustainability.
Conference Organiser: Chike Oduoza.

1. Electrochemical energy storage and conversion (Nigel Brandon, Carlos Ponce de Leon)
2. Electrochemical surface technology (Karl Ryder, Natasa Vasilevic)
3. Bio/electroanalysis and sensors (Peter Fielden, John Hart)
4. Nano/advanced materials (Craig Williams, Dave Walton)
5. Environmental treatment and recycling (Ted Roberts, Pauline Allen)
6. Lab to market (Rob Andrew, Dave Hodgson)
7. Symposium for postgraduate students (Paul Shearing, Stacey Handy)
8. General poster session

Plenary lectures to be announced. Please check the website regularly for updates.

Call for Papers

Please submit A4 abstracts stating whether you prefer an oral or poster presentation and the corresponding symposia theme to susan.fitzgerald@soci.org. Technical assistance is provided, please contact the secretariat who will put you in touch with the correct person.

Deadline for oral presentations: Monday 31 May 2010
Deadline for poster presentations: Friday 30 July 2010

Sponsorship & Exhibition

The University of Wolverhampton is an ideal venue for an exhibition. All refreshments, lunches, the exhibition and posters are situated in a single area, ensuring excellent access to delegates througout the meeting. There is also plenty of opportunity for sponsorship, please contact susan.fitzgerald@soci.org for further information and costs.

For further details please visit:

www.soci.org

Or contact the SCI Conference Team

E: conferences@soci.org
T: +44 (0) 20 7598 1561
F: +44 (0) 20 7235 7743

Cover Images: World Heritage Site of Ironbridge and Telford, often referred to as 'The Birthplace of the Industrial Revolution'; Priorslee Hall, Telford Campus; SEM image of nickel deposition on aluminium

With thanks to our sponsor:

Electrochem 2010: Electrochemistry and Sustainability

University of Wolverhampton, Telford, UK
14-15 September 2010
Organised by SCI's Electrochemical Technology Group, RSC's Electrochemisty Group and RSC's Electroanalytical Group

Synopsis

Electrochem 2010 aims to bring together members of the international community involved in the practice and promotion of electrochemistry and electrochemical engineering.

Electrochemical technology as a specialist theme in electrochemical engineering/electrochemistry, deals with the application of a variety of electrochemical tools and techniques for industrial use. It is a subject area that focuses on problem solving for industry, especially in the manufacture of specialist chemicals, materials, batteries, electrochemical cells / reactors, pharmaceuticals and automotive components. Electrochemical technology is also used in corrosion protection, energy generation, research into new materials and methodologies for chemical processing.

In recent years, energy generation and environmental protection have become topical and seem to dominate the field. Electrochem 2010 will cover many symposia themes all with a clear focus and emphasis on sustainability.

Who should attend?

Those interested in the applications of Electrochemical Techonology and people from the backgrounds of industry, government and academia.

Symposia Themes

- Electrochemical energy storage and conversion (Nigel Brandon, Carlos Ponce De Leon)
- Electrochemical surface technology (Karl Ryder, Natasa Vasiljevic)
- Bio / electroanalysis and sensors (Peter Fielden, John Hart)
- Nano / advanced materials (Craig Williams, Dave Walton, Martin Eason)
- Environmental treatment and recycling (Ted Roberts, Pauline Allen)
- From Lab to Market (David Hodgson)
- Symposium for postgraduate students (Paul Shearing, Stacy Handy)
- General poster session

Plenary Lectures

John Saffell (Technical Director, Alphansense Ltd)
John Saffell has been Technical Director of Alphasense Ltd since it was founded in 1997. Dr Saffell has a BSc in chemistry from MIT (1975) and PhD in materials science from Cambridge University (1979). Co-founder of Solomat in 1979 and then Research Director of Neotronics in 1994, he has been involved in gas sensing and water quality sensors and measurement for 30 years. As Chairman of the Council of Gas Detection and Environmental Measurement (CoGDEM) and previous chairman of Sensors for Water Interest Group (SWIG), he encourages partnerships between technology providers and technology users in water quality and gas detection.

With thanks to our sponsor

International Society of Electrochemistry (ISE)

Papers

Please submit A4 abstracts stating whether you prefer an oral or poster presentation and the corresponding symposia theme to susan.fitzgerald@soci.org.

Deadline for oral presentations: Monday 31 May 2010
Deadline for poster presentations: Friday 30 July 2010

Sponsorship and Exhibition

The University of Wolverhampton is an ideal venue for exhibition. All refreshments, lunches, the exhibition and posters are situated in a single area, ensuring excellent access to delegates througout the meeting. There is also plenty of opportunity for sponsorship.

Accommodation

Accommodation will be available on campus, these details will be available on the website shortly.

Scientific Organising Committee

Dr. Chike Oduoza (University of Wolverhampton), Professor Frank Walsh (University of Southampton), Professor Craig Williams (University of Wolverhampton), Professor Dave Walton (Coventry), Professor Sudipta Roy (University of Newcastle), Dr. Peter Farr (Institute of Metal Finishing), Dr. Ted Roberts (University of Manchester), Dr. Alison Davenport (University of Birmingham), Dr. Pauline Allen (Bristol), Dr. Trevor Pearson (MacDermid), Stacey Handy (MacDermid)

Location

Telford Campus, University of Wolverhampton, Telford, UK

Delegate Fees

Please note fees include the 5% discount for making an online booking.

Earlybird fees - before 14 August

GB£209 . . . . . SCI / RSC Member
GB£119 . . . . . Student / Subsidised Member
GB£285 . . . . . Non member

Standard fees - after 14 August

GB£256 . . . . . SCI / RSC Member
GB£142 . . . . . Student / Subsidised Member
GB£323 . . . . . Non member

For more information please contact:

Conference Team
T: +44 (0)20 7598 1561
F: +44 (0)20 7235 7743
E: conferences@soci.org

Ysgol Cemeg Prifysgol Cymru, Bangor Gwynedd LL57 2UW, UK
School of Chemistry University of Wales, Bangor Gwynedd LL57 2UW, UK
Rhagoriaeth ers 1884 | Excellence since 1884

Ffôn | Tel: +44 (0)1248 382375/7. Ffacs | Fax: +44 (0)1248 370528. E-mail | E-bost: chemistry@bangor.ac.uk www.chemistry.bangor.ac.uk

Electrochem North West 8th annual workshop: Electrochemical applications

Monday 21st June 2010

Time 10am till 4pm then drinks
at
Bangor University, School of Chemistry
The Orton Lecture Theatre, Bangor University, LL57 2UW

Outline Programme

10:00 Registration with coffee

Morning Session

10:25	Opening Remarks
10:30	Simulation of the solid phase reduction of metal oxides by molten salt electrolysis - the Cambridge FFC process *Charles Osarinmwian - University of Manchester*
11:00	Electrocoagulation *John Jones - Bangor University*
11:30	Oxidation of dimethylamine Borane on single crystal electrodes: implcations for electroless deposition and borohydride fuel cells *Daniela Plana - University of Manchester*
12:00	Surface Decontamination by Photocatalysis *Richard Wilbraham – Lancaster University*
12:30	Lunch ……. *Discussion Groups**

Afternoon Session

14:00	Graphene Based Microelectrodes *James Dickinson - Lancaster University*
14:30	Electrocatalyst support materials for PEM fuel cells. *Ashley Moore - University of Manchester*
15:00	Single molecule electrochemistry *PhD student of Dr R Nichols - University of Liverpool*
15:30	Permeability measurements under Hydrodynamic Control *Matej Velicky - University of Manchester*

16:00 Drinks Reception

SYMPOSIUM AIM

Summary: This symposium is a one day informal meeting, devoted to student presentations; with the aim of highlighting the novel research that is taking place within the field of electrochemistry.

Electrochemistry as well as having fundamental application is applicable in all areas of science and as such is a growing field of research and the amalgamation of local international experts within the field is hoped to generate future funding applications.

Discussion Groups*

Delegates will have the opportunity to network both over lunch and at the drinks reception.

REGISTRATION: **This is a free workshop**

If you are attending, please respond by email : c.d.gwenin@bangor.ac.uk
Alternatively, complete the form below and return to:
Chris Gwenin, School of Chemistry, Bangor University
LL57 2UW

✂----------

Electrochem North West 8th annual workshop: Electrochemical applications

Monday 21st June 2010

Title _____

First Name _____

Surname _____

Departmental Affiliation (for badge) _____

E-mail _____

Closing date for registration: 31/05/2010

Electrochemistry, Electrochemical Engineering and Electrochemical Technology:

July 5th – 9th 2010

Electrochemistry, Electrochemical Engineering and Electrochemical Technology is a one week, residential course designed to introduce the practical steps essential to implement electrochemical technology on a commercial scale. It is intended to compliment the course ***Instrumental Methods in Electrochemistry***, run almost annually in Southampton since 1969. Indeed, we hope that those who found Instrumental Methods in Electrochemistry useful will return to Southampton to attend the new course.

In the Southampton tradition, *Electrochemistry, Electrochemical Engineering and Electrochemical Technology* will consist of both lectures (with full written supporting material) and hands-on practical sessions. The early lectures will cover core material such as:

Applications of Electrochemistry
Introduction to Electrode Reactions
Voltammetry
Steps to Move from the Laboratory to Commercial Exploitation
Current and Potential Distribution
Electrode Materials and Membranes
Cell Design

The final three lecture sessions will address specific topics in electrochemical technology, especially examples of applications. In 2010 these topics will be:

Fuel Cells
Electrodeposition for Nanotechnology
Energy Storage – Li Batteries, Supercapacitances and Flow Batteries

All participants will do an introductory voltammetry experiment in the first practical session and then select two further experiments out of 6-8 designed to illustrate the core material and the selected specific topics. The Summerschool will also provide formal and informal opportunities for discussion of topics related to the interests of the participants.

For enquiries and registration, please contact : Professor Derek Pletcher, School of Chemistry, The University, Southampton SO17 1BJ, UK. **telephone:** +44 (0)2380 593519 **email:** dp1@soton.ac.uk

Further details: http://www.soton.ac.uk/~elchem/index.htm

Bath
Electrochemical
Impedance
Spectroscopy
Summer School 2010

Theory and Practice
of Electrochemical
Impedance
Spectroscopy

20th—23rd July

http://www.bath.ac.uk/chemistry/eissummerschool/

iSAEST-9

9th International Symposium on Advances in Electrochemical Science and Technology

First Circular & Call for Papers

December 2–4, 2010

Hotel Green Park, Chennai, India

Organised by

Society for Advancement of Electrochemical Science and Technology (SAEST), Karaikudi

and

Central Electrochemical Research Institute (CSIR), Karaikudi

www.saest.com

ABOUT THE SYMPOSIUM

Electrochemistry, a truly interdisciplinary field of science, plays a vital role in areas such as Chemistry, Chemical Engineering, Physics, Materials Science, Metallurgy and Electrical & Electronics Engineering. Emerging areas such as Nanotechnology and Biotechnology require vital inputs from Electrochemistry. In order to take stock of recent developments, the Society for Advancement of Electrochemical Science and Technology (SAEST), Karaikudi and Central Electrochemical Research Institute (CECRI), Karaikudi are organising the 9th International Symposium on Advances in Electrochemical Science and Technology (ISAEST-9). The Symposium will provide a forum for electrochemists and technologists from all over the world to meet and exchange knowledge and research experience.

The Symposium will discuss developments in all branches of Electrochemical Science and Technology.

SAEST and CECRI invite students, research scholars, scientists, academicians and industrialists to participate in the Symposium and make it a memorable event.

The best poster presentations/ best scholar presentations (oral) will be considered for awards in the Symposium.

SESSIONS

Code	Area
[A]	Basic Electrochemistry and Electroanalysis
[B]	Electrochemical Power Systems
[C]	New Materials in Electrochemical Systems
[D]	Corrosion Science and Materials Protection
[E]	Electroplating and Surface Engineering
[F]	Bioelectrochemistry and Biotechnology
[G]	Electrochemical Sensors and Devices / Instrumentation
[H]	Nanoscale Electrochemistry
[I]	Environmental Electrochemistry
[J]	Electrosynthesis & Electrometallurgy / Industrial Electrochemical Processes
[K]	Hydrogen - Electrochemical Production, Storage and Applications
[S]	Code for scholar session, irrespective of the area

ISAEST-9

CALL FOR PAPERS

Technical papers in session topics and in allied aspects will be considered for presentation at the Symposium in oral/poster sessions.

Those desirous of contributing papers to the Symposium are requested to send abstracts of the papers (maximum 250 words, two figures and one table) in electronic version to <saestkkd@yahoo.com> and a hard copy on an A4 size paper along with the duly filled-in pre-registration form. The abstract should include objectives of the study, results and tentative conclusions. Please indicate the session name on the abstract and your choice for oral or poster presentation. However, the committee reserves the right to reassign presentations as deemed appropriate. The name of the authors, the presenting author, their affiliations, addresses, fax, e-mail, mobile numbers and other details should be mentioned.

All the delegates will receive a book of abstracts and registration kit at the symposium hall.

SYMPOSIUM PROGRAMME

Dates	: December 02–04, 2010
Venue	: Hotel Green Park, Chennai, Tamil Nadu, India.
Language	: English
Technical Programme	: Keynote lecture(s), Invited lectures, oral and poster sessions, scholar session and commercial exhibition
Social events	: Pre-conference meet, cultural programme and local sight-seeing
Souvenir	: A souvenir along with a book of abstracts will be released

IMPORTANT DATES

Deadline for abstracts with Pre-registration form	: July 31, 2010
Notification to author(s)	: August 30, 2010
Final Announcement	: October 25, 2010

ISAEST-9

REGISTRATION FEE

Delegates Registration	Overseas (US $)	India (Rs.)
Delegate	300	6000
SAEST Life Fellow/Life Active Member	-	5000
Accompanying spouse	150	2500
Student researcher	150	3000
Company registration (for 3 delegates)	750	15000

Please register on or before **August 31, 2010**. The registration fee has to be paid by a demand draft drawn in favour of "SAEST, KARAIKUDI", India payable at KARAIKUDI. The registration fee, once paid, will not be refunded but could be adjusted for another delegate from the same organization and/or towards abstracts and proceedings. Registration fee includes three lunch and two dinner.

ACCOMMODATION

Delegates are requested to make their own arrangements for accommodation well in advance. Those who desire to stay at Hotel Green Park, the venue, may please contact the hotel directly at < http://www.hotelgreenpark.com>.

COMMERCIAL EXHIBITION

Exhibitor participation is an important feature of the event. The exhibition will showcase a wide range of products and services, plus the latest developments in electrochemical products. It will provide the exhibiting industry/organisation with a unique opportunity to access a high profile, highly targeted, global audience from the government, industry and the electrochemical community at large.

SYMPOSIUM SECRETARIAT

Dr. G. Sozhan
Secretary
Society for Advancement of Electrochemical Science and Technology (SAEST)
CECRI Campus, Karaikudi 630 006
Tamil Nadu, INDIA.
Tel : +91 4565 224198 / 227550 to 227559
Fax : +91 4565 227713 / 227779
E-mail: saestkkd@yahoo.com
Website: www.saest.com

Chennai, formerly known as Madras, the capital city of the Indian state of Tamil Nadu, is located on the Coromandel Coast of the Bay of Bengal. The city was established in the 17th century by the British, who developed it into a major urban centre and naval base. The city is India's second largest exporter of software, information technology and information technology-enabled services. Its average elevation is 6.7 m (22 ft), and its highest point is 60 m (200 ft). The Marina Beach runs for 14 km along the shoreline of the city. Chennai is a major centre for music, art and culture in India. Chennai is well connected to other parts of India by road, rail and air.

9th International Symposium on

Advances in Electrochemical Science and Technology

December 2–4, 2010 Hotel Green Park, Chennai, India.

PRE-REGISTRATION FORM

(Please photocopy for multiple use)

I/We would like to attend the symposium ☐

I/We would like to present a paper ☐

I/We intend to participate in the industry fair ☐

My spouse will accompany me ☐

Registration fee is sent herewith ☐

Registration fee will be sent before due date ☐

Abstract of the paper is enclosed ☐ Session code ☐

SAEST life membership number ☐☐☐☐☐☐

(Please print or type in capital letters)

Title of the paper :.....

.....

Co-authors :.....

.....

Name :.....

(Author for correspondence)

Job Title .....

Organisation :.....

Address :.....

.....

Postal code: .....Country:.....

Telephone :.....Fax: .....

E-mail : .....

(Enclose details of registration fee separately)

ACADEMY OF SCIENCES OF THE CZECH REPUBLIC

J. HEYROVSKÝ INSTITUTE OF PHYSICAL CHEMISTRY, PRAGUE

43rd Heyrovský Discussion

on

ELECTROCHEMISTRY OF ORGANIC MOLECULES AND COORDINATION COMPOUNDS

Castle Třešť

Czech Republic

May 30-June 3, 2010 (Sun-Thu)

ORGANIZERS:

Jiří Ludvík (Chair), Jiří Klíma, Irena Hoskovcová, Karolina Rulíšková, Ludmila Šimková, Věra Hudská

HISTORY AND PURPOSE

The Heyrovský Discussions have been organized during the last four decades every year by the J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic in one of the conference centers of the Czech Academy. Originally, the Discussions were held at the Liblice castle, later in castle Bechyně and recently it has taken place at the renaissance castle Třešť in southeastern Bohemia, in an attractive, peaceful locality rich in historical monuments and of beautiful natural scenery. Each year a different field of electrochemistry is selected as the discussion theme. The total number of participants is limited to about 50-60 by the capacity of the Castle.

The general philosophy of the Discussions is to bring together students and young research workers with experienced electrochemists specialized in a certain field, and to let them to present in an informal way their most recent achievements and interpretations with a **special stress on a friendly scientific discussion**.

For this reason the time schedule is more free than that at conventional meetings allowing more space to discussion: the program is divided into several sessions devoted to individual topics. Every session is opened by **an introductory lecture (40 min)**. After that **oral presentations** announced in the program (**15-20 min long**) as well as **short *ad hoc* contributions (5-15 min long)** follow, which are accompanied by free discussion. Each session has a chairman whose duty is a.o. to accept the relevant *ad hoc* contributions and determine their sequence, to follow time and to organize and provoke the discussion. Besides that, contributions in form of posters are also accepted.

In order to allow presentation of the **most recent results**, abstracts of announced oral contributions and posters are required (in electronic form) **only one month in advance** (i.e. until April 25, 2010). Note that the most fresh results presented as *ad-hoc* contributions need no abstracts. Printed proceedings of announced papers (as well as their electronic form) will be prepared before the Discussion (with its own ISBN).

We hope that the 43rd Heyrovský Discussion will contribute to the development of electrochemistry itself, to establishing new cooperative plans and projects as well as to a suited commemoration the 120th anniversary of the birth of professor Heyrovský (1890-1967). Simultaneously, we would like to remember 50 years of laboratory of organic

electrochemistry in the J. Heyrovský Institute, with the presence of its founder and promoter, prof. Petr Zuman. We wish that you could enjoy this meeting.

MAIN THEME AND PROPOSED DISCUSSION TOPICS:

Every year new organic molecules and organometallic or coordination compounds are synthesized for special purposes: catalysts, non-linear optics, liquid crystals, synthetic precursors, mimics for biological systems, contrast agents for diagnostics and imaging, dyes, pharmaceuticals, etc.
Electrochemical investigation of such molecules is the main theme of this Heyrovský Discussion.

* redox mechanistic studies of organic and coordination compounds
* electrochemical studies of aromaticity, electron delocalization, electronic conductivity, localization of redox centers
* electrochemistry and chirality
* investigation of units for supramolecular devices and molecular wires
* investigation of dendrimers
* investigation of host-guest relationship
* investigation of (photo-) electrochromism
* use of electrochemical probes and markers
* models of active centres in biomolecules
* bond activation by ET for (electro)synthetic purposes
* generation and characterization of radical intermediates
* electrochemically generated luminescence
* combination of electrochemistry with spectroscopic techniques
* correlation of experimental data with theoretical calculations

and others related problems

DATE AND PLACE:

Arrival at the Castle:	**Sunday May 30, 2010 afternoon** (before dinner) (A special bus will depart from the J. Heyrovský Institute, Prague, around 15.00 on Sunday)
Departure from the Castle:	**Thursday June 3, 2010** (the time will be specified later) with a direct connection to the Prague Airport

The castle (chateau) Třešť is located in the small town Třešť, about 15 km south of Jihlava (which is situated on the highway D1 Prague-Brno)

FURTHER INFORMATION (WILL BE CONTINUOUSLY COMPLETED AND UPDATED):

http://www.jh-inst.cas.cz/~hdisc/

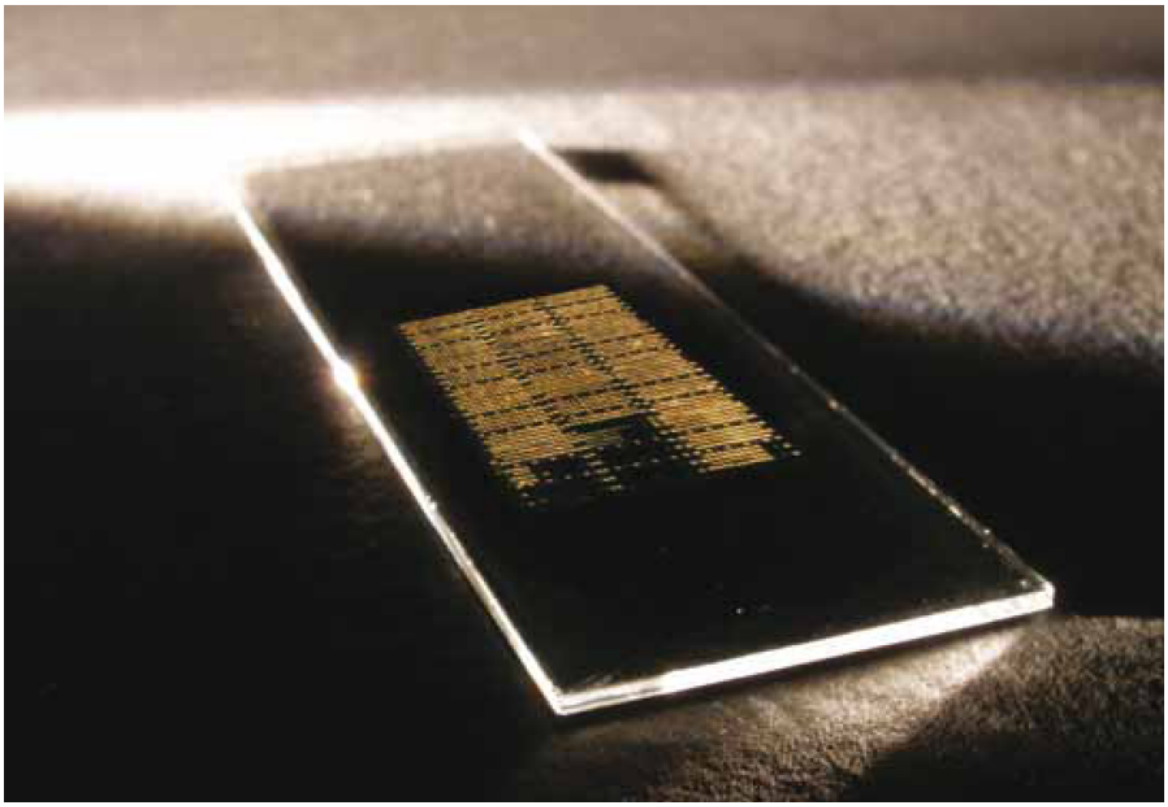
FARADAY DIVISION

Faraday Discussion 149:

Analysis for Healthcare Diagnostics and Theranostics

6 – 8 September 2010

University of Edinburgh, UK



RSC | Advancing the Chemical Sciences

www.rsc.org/FD149

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

Key Deadlines

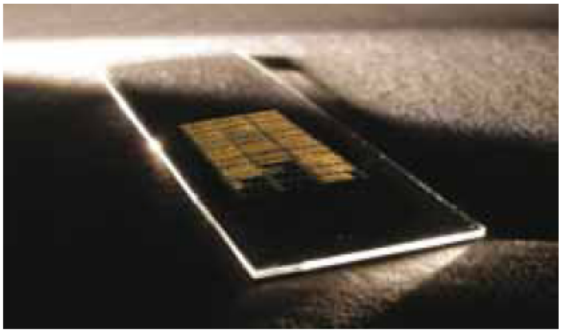
Abstracts for oral presentation
2 November 2009

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



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.

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) 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.

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freshEYES

Dr. Bruce ALEXANDER is a Lecturer in Physical Chemistry at The University of Greenwich.

Bruce started his research career as a spectroscopist with a Phi from the University of Dundee. Although primarily concerned with surface-enhanced Raman spectroscopy (SERS), his work studying the behaviour of porcelains and their analogues on electrode surfaces led to a fruitful collaboration with Joe Crayston at St Andrews University using spectroelectrochemistry to probe the nature of porphyrin analogues. Having finished his Ph.D., Bruce moved to the Université de Genève in Switzerland where he worked with Jan Augustynski developing and characterising thin films of semiconductor materials for solar hydrogen production and electrochromics. After a short stay in Aberdeen University working on the solar-assisted degradation of organic pollutants through photocatalysis, he took a lectureship at the University of Greenwich.

Since arriving at Greenwich in 2007, his group have been expanding their research interests in photo-electrochemistry and are particularly interested in developing photocatalysts with an increased activity to visible-light. This would enable a more efficient generation of hydrogen through the photolysis of water. Bruce retains an active interest in SERS and is working on ways to pattern silver surfaces and surface modification strategies for the selective detection of biologically relevant molecules.

Find out more at the following URL.
http://www.gre.ac.uk/schools/science/staff/alexander-bruce

Dr. Paolo BERTONCELLO is an Assistant Professor in Biosensing at The University of Swansea.

Paolo received a BS in Industrial Chemistry from the University of Venice (Italy) in 1997, and a PhD in Biophysics from the University of Genoa (Italy) under the direction of Prof. Claudio Nicolini in 2003. In 2003/2004, he was a postdoctoral fellow at the University of Texas at Austin under the supervision of Prof. Mike White. From 2004 to 2007 he was a Marie Curie Intra-European Fellowship at the University of Warwick (UK) under the supervision of Professor Pat Unwin and Professor Julie Macpherson. From 2007 to 2010 he was a Senior Postdoctoral Fellow at Dublin City University (Ireland) after being awarded a Marie Curie Reintegration Grant as well as a DCU Research Fellowship under the supervision of Prof. Robert Forster.

In 2010 he joined the Multidisciplinary Nanotechnology Centre and the Centre for NanoHealth at the School of Engineering, Swansea University (UK) as a Lecturer (Assistant Professor) in Biosensing. His research interests focuses on Langmuir-Blodgett films of perfluorinated polymers, electrochemistry at metal nanoparticles and carbon nanotubes and Scanning Electrochemical Microscopy (SECM) for biosensing and catalysis.

Find out more at the following URL.
http://www.swan.ac.uk/engineering/NanoHealth//

Dr. Chris GWENIN is an Academic Officer in Chemistry at The University of Bangor, and whose research is centred at the electrochemical biological interface.

Chris graduated with an M.Chem. in Chemistry in 2002 and a PhD in 2006, both from Bangor University. In 2006 he joined the electrochemistry and sensors group at the School of Chemistry at Bangor University. In 2009 Chris was appointed as an academic officer due to his experience in research coordination as he is leading on a managerial and scientific level in a major sensors development workpackage in a 11 Million Euro European grant (NANOSECURE), which involves 25 partners, both academic and industrial. He has also raised grants in order to bridge gaps between the chemical and biological science's through the Royal Society of Chemistry, and has patents awarded including the development and improvement of biosensors. He is an active member of the local committee for genetic manipulations.

The school of chemistry at Bangor University is committed to the integration of chemistry with biology; this area of research at the interface of two key sciences has been a key area of Dr Gwenin's research. This research has taken place in a fully equipped laboratory which Chris has helped to design, and in the following key areas.

- Optical and electrical properties of novel conducting polymers.
- The design of sensors and recovery systems for precious and heavy metal ions.
- Self-Assembled Monolayers.
- Electrocatalysis.
- Biological fuel cells.
- Design of sensors for explosives.
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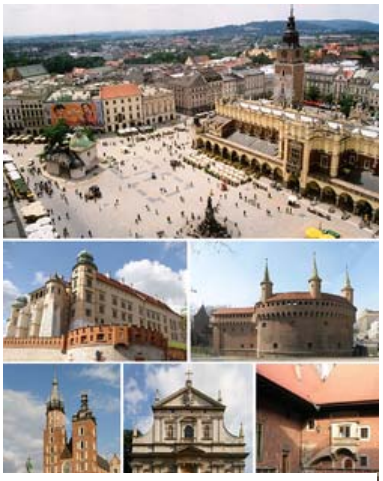
- Cancer therapy.

Find out more at the following URLs.
http://www.chemistry.bangor.ac.uk/cdg/index.php
http://www.nanosecure.eu/
http://www.electrochemistry.bangor.ac.uk/
http://www.chemistry.bangor.ac.uk/elect/

Meeting Report

SMCBS'2009: 4th International Workshop on Surface Modification for Chemical and Biochemical Sensing

November 6-10, 2009, Przegozaly (near Cracow), Poland



Images of Cracow, Poland.

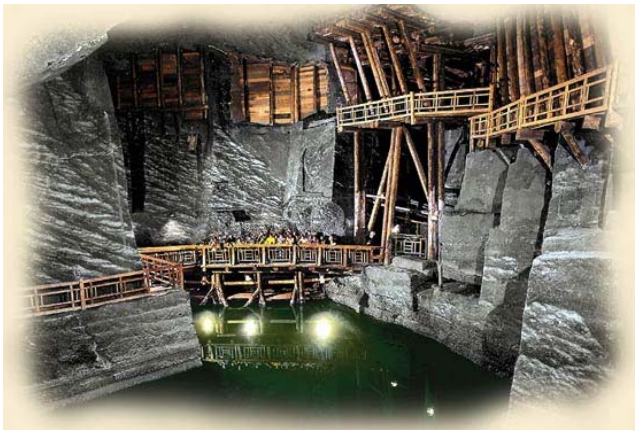
Having thoroughly enjoyed the last edition of this meeting in 2007, I joined 125 others in converging on Cracow in early November to attend the fourth meeting convened by Professors Kutner and Opallo from the Institute of Physical Chemistry on surface modification for chemical and biochemical sensing.

As in previous years, this conference was located far away from any distractions, and took the unusual format of starting on a Friday afternoon, ending on Tuesday morning, allowing for the exciting, value-for-money opportunity to have whole days devoted to lectures, scientific discovery and educative enhancement explorations, interrupted only by the excursion to the salt mines at Wieliczka on the Monday morning. As in previous years, the conference was well-attended by delegates based within the United Kingdom (just over 11% of the attendees, and with over 50% of this number originating from Dr. Marken's group based in Bath Spa).

The first session on SECM and SEPM included talks by Professor Wittstock and Professor Schuhmann's group. This was followed by an exquisite lecture by Professor Boukherroub on diamond nanowires, with two subsequent and high quality and lucid talks by Dr. Anne Vuorema and Mr. John Watkins, both from Bath University, who discussed the electrochemistry of carbonised cellulose nanofibrils, and the functionalisation of carbon surfaces for the electrostatic binding of electroactive species, respectively. Watkins' impressive performance on stage was compounded during the discussion afterwards. The afternoon sitting commenced with an excellent tutorial lecture by Professor Haupt on nanostructured molecularly-imprinted polymers, and included an interesting lecture by Professor Mussini – one of the current Vice-Chairs of the ISE Molecular Electrochemistry Division. The session concluded with instructive lectures by Professor Gorton (on electronic communication between bacterial cells), Professor Bilewicz (on liquid crystalline phases for enzymic entrapment with application to biofuel cells), and a hugely enjoyable talk by Dr. Jönnson-Niedziółka on pyrene-functionalised carbon nanotubes.

The second session commenced with a talk by Professor Schuhmann on nanoscale SECM, followed by an excellent talk by the recently habilitated Professor Bron regarding the electrodeposition of metalloporphyrins. After a captivating lecture by Professor Walcarius on the interests and limitations of silica-based mesoporous materials in electroanalysis, Dr. Marken energised the audience by delivering a superb lecture on the electronic conduction *within* mesoporous films and nanoparticle assemblies, introducing elegant Faradaic coupling processes therein, and was followed by an enjoyable lecture by Ms. Sara Shariki of Bath University regarding ion association processes observed in acetonitrile of cellulose-poly(diallyldimethylammonium) membranes. In an exhilarating lecture after lunch, Professor Haga expounded, during a tutorial lecture, his recent research on multi-electron transfers within supramolecular nano-objects immobilised on electrode surfaces, followed by an enjoyable lecture by Professor Ferapontova on DNA and RNA in electroanalysis. This action-packed day continued with a breathtakingly-exquisite lecture by Professor Limoges on electrochemical enzyme biosensors, an enjoyable lecture by Professor Vagin on biomolecular detection at soft interfaces and a confident presentation by Mr. Andrew Collins from Bath University on photoelectrochemistry at the triple-phase boundary. The theme of biphasic electron transfer continued with an excellent and solid performance by Dr. Niedziółka- Jönnson on the electrosynthesis of an ionic liquid covalently bound to a mesoporous silicate material, followed by an elegant exploration into CO_2 sensing at the three-phase junction by Mr. Norahim Ibrahim of Bath University.

The third session commenced with an overview of protein immobilisation for biosensing by Leeds University's Professor Millner, and was followed by an outstanding lecture by Mr. Nikolaos Daskalakis from Professor Jeuken's group at Leeds University. Daskalakis, a former student from the Warwick Electrochemistry Group, enthralled the audience with his research on electron and proton transfer within the biological membranes of vesicles immobilised on electrode surfaces. Professor Szunerits followed with a wonderfully enjoyable and pedagogically-delivered lecture on short and long range sensing on plasmonic interfaces. The excitement continued with Professor D'Souza's talk on bioinspired supramolecular nano-self assemblies for light energy conversion, and enjoyable, well-presented and enlightening talks by Mr. Charles Cummings and Mr. Richard Webster, both from Bath University, on $MoSe_2$ substrates for the electrodeposition of copper indium diselenide semiconductor films, and silver nanoparticle-catalysed nitrate reduction respectively.



A salt lake within the salt mine near Cracow.

The last session commenced with an excellent tutorial by Professor Brand on surface spectroscopy for structural studies of biologically-relevant films, followed by an excellent lecture by Professor Oyama on the tuning of nanostructured electrode interfaces. Mr. Sho Fuji of Chuo University, Japan "wowed" the audience with his work on the surface manipulation and immobilisation of single DNA wires on gold surfaces, followed by an elegantly-exquisite lecture on the translocution diffusion of phospholipids on surfaces by Professor Blanchard.

Fully exhilarated, better educated, and absolutely exhausted (as well as being worried that the flight back would be disrupted due to fog), we all left the conference venue, having enjoyed the opportunity to re-meet old friends and forge new collaborations, based on buzzing new ideas, and (at least for me) hoping not to bump into the wild boars roaming around the surrounding forest!

jw
Kingston-upon-Hull

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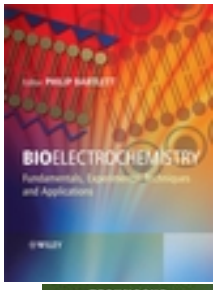

Bioelectrochemistry: Fundamentals, Experimental Techniques and Applications
P. N. Bartlett (ed.)
Wiley-VCH, 2008
ISBN: 9780470843642
Cost: 143.80 €
478 pages

Capteurs Electrochimiques : Fonctionnement, Utilisation, Conception, Cours et Exercices Corrigés
P. fabry, C. Gondran
Ellipses, 2008
ISBN: 9782729839970
Cost: 39.00 €
306 pages

The essence of Electrochemistry is that it is a subject which sits at the overlapping frontiers of many traditional and separate sciences, so that there is always a need to emphasise the cross-fertilisation of ideas from one subject to another. These two books do this very well for their general areas (electrochemistry with biology, and electrochemistry with general analytical science technology), with both books being useful for final year undergraduates, postgraduates and those who are interested in learning more about these areas.

The book edited by Professor Bartlett is quite exceptional. It commences with an introduction to bioenergetics and biological electron transport, and serves as a useful reminder of the essentials to those who may have studied Chemistry with Biological Chemistry as part of their degree programmes. This is then followed by a well-written chapter by Professor Rusling on the electrochemistry of oxidoreductases, and a subsequent chapter on biological membranes and membrane mimics by Professor Hianik is, for me, one of the most delightful chapters in the text – it is an elegant chapter in membrane biophysics, and of great interest to anyone who enjoys such excitement. The next third of the book covers biosensors – a section which includes NAD(P)-based biosensors, glucose biosensors, phenolic biosensors and whole-cell biosensors, with the latter including developments in lab-on-a-chip devices at the single-cell level. This section concludes with a chapter written by, *inter alia*, Professors Bartlett and Calvo, on biosensor models, penned in their characteristic and authoritative style, which includes an overview of numerical simulation techniques, and with a welcomed pedagogic influence from Professor Albery's contribution on *Amperometric enzyme electrodes: theory and practise*, in the Turner, Karube, Wilson 1987 volume on *Biosensors*. The final third of the book is devoted to other applications, such as bioelectrosynthesis (a delightfully holistic chapter written by Professor Pletcher), biofuel cells and *in vivo* applications, electrochemical immunoassays and DNA assays. This last chapter, written by Professor Oliveira-Brett notably ensures that readers do not make the mistake of equating E_p^{Ox} for the DNA bases with their formal electrode potentials.

The second book is a beautiful and pedagogically-structured text written in French, and contains material to a greater depth that that detailed on Professor Fabry's teaching website. It starts with general analytical chemistry concepts, definitions, and sensor characteristics, set along side historical developments, and includes electrochemistry basics. This is followed by a section on impedance-based sensors for gases using semiconductors and biosensors (enzyme and immunoassay), and then subsequent sections on Faradaic electrochemical sensors, gas probes and potentiometric sensors (the latter section constitutes about 20% of the text). Interleaved throughout the text are questions and corrected exercises and examples, making this text one of the most enjoyable to work through, after the French text on chemical biophysics by Quintus (the "Group of Five" from Paris V). Each chapter concludes with a selection of exercises, thereby empowering the reader to assess the strengths and limits of his/her knowledge-uptake.

Both books are well-written and well-structured, and are useful for every electrochemistry library – the amount of enjoyment each provides (normalised by their cost) ensures their success on the commercial markets.

jw
Kingston-upon-Hull

pseudoMATHS

(After an original idea developed by Christine Oudin.) Solve the problems to discover a su-do-ku grid...

	A							B
	C				D	E		
F			G		H			I
		J	K				L	
M								N
O					P	Q		
R			S		T			U
		V	W				X	
		Y					Z	

$$\frac{\varepsilon-1}{2\varepsilon+1}=\frac{1}{J}-\frac{G}{L\varepsilon}+\frac{M}{C\varepsilon^2}-\frac{Q}{W^J\varepsilon^3}+\ldots$$

$$\int_0^\infty x^3e^{-4x}dx=\frac{K+S}{J^p}$$

The area of a triangle with (x,y) vertices $(0,0),(5,3),(2,6) = JE$ square units

$$7R+9X+Y+8Z=128$$
$$9R+3X+4Y+5Z=94$$
$$5R+7X+2Y+3Z=94$$
$$5R+2X+8Y+7Y=128$$

$$I=\frac{C}{Z}$$

$$V=I-G$$

$z=x^3-3x+xy^2$ has a saddle point at: $x=N-O$, $y=\sqrt[I]{N}$

$H=divgrad(\varphi)$ at $(2,4,1)$ where $\varphi=xyz-2y^2z+x^2z^2$

The area of the surface $z=\sqrt{x^2+y^2}$ over the region bounded by $x^2+y^2=1$ is: $\pi\sqrt{F-G}$

The total mass of a solid sphere of radius 7 units enclosed by the surface $x^2+y^2+z^2=49$ and having variable density $c=1+r|z|$, where r is the distance of any point from the origin, is:

$$\frac{2\pi A^3}{T+U}\left\{\frac{1}{2}\left(\sqrt{B}+\sqrt{D}\right)^2+MA^J\right\}$$

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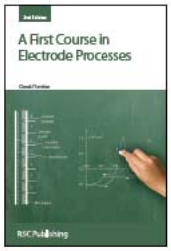

A First Course in Electrode Processes

Author: Derek Pletcher

Series: A First Course in Electrode Processes
Publisher: Royal Society of Chemistry
ISBN: 9781847558930
Price: £39.99
Publication date: 2009
Target audience: Professional and Scholarly

Format: BB Hardback
Size: 234mm x 156mm
Pages: 316
Illustrations: Black & White
BIC: PNRH, PNF, PN

Synopsis

This book provides a basis for an introductory course on electrochemistry. Uniquely, little or no background knowledge of mathematics is required to follow the course, as concepts are clearly emphasised throughout. The first edition has been adopted by university course across the globe and remains highly sought after. This second edition has been completely revised and expanded, and will continue to appeal to undergraduate and postgraduate students of chemistry and related disciplines, Professionals wishing to apply electrochemical methods in their work will also find the book invaluable.

The text is supported by a large number of figures which illustrate key points. A final chapter contains problems with fully worked answers to test reader's understanding.

Brief Contents

For more information please contact:

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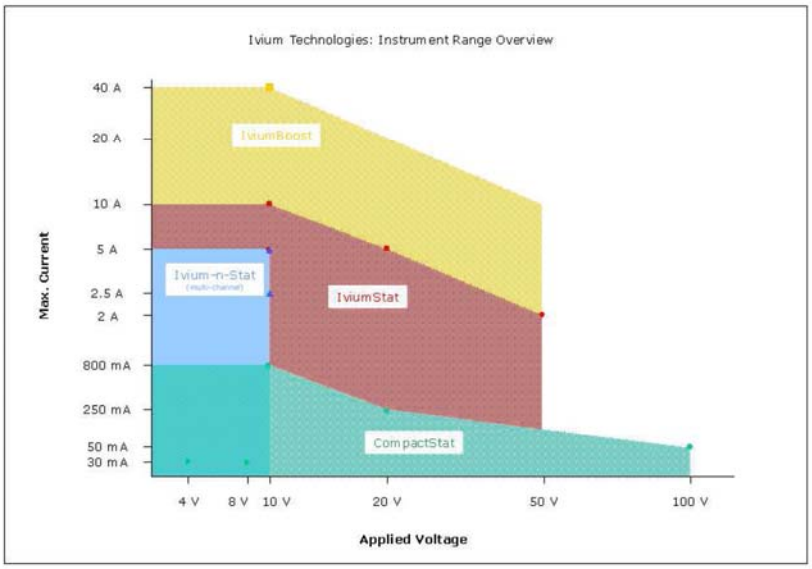

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Ivium Technologies was founded in 2001 and is based in the Netherlands.
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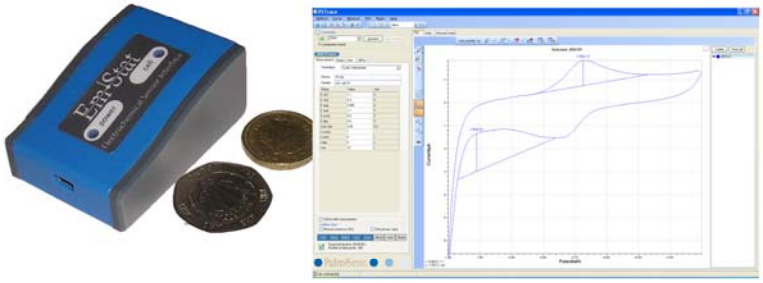

- USB-powered
- Cyclic and Linear Sweep Voltammetry (CV, LSV), Square Wave Voltammetry (SWV), Differential Pulse Voltammetry (DPV), etc
- 2V/4.5V & 10mA max
- Includes. Powerful PSTrace software; test cell & cell cables.

"At £1199, the Emstat is low-cost yet surprisingly capable. It is excellent for teaching and less demanding applications – but it still has nanoamp measurement capabilities! Call us for a demo." – Steve Fryatt, Alvatek Ltd.

Alvatek Ltd. Gloucestershire
Tel. 01666 500991 E-mail: sales@alvatek.co.uk

A *NEW* AUTOLAB - Dedicated to Research

Entry level

AUTOLAB/PGSTAT101

The entry level in the Autolab range of electrochemical instruments, the Autolab/PGSTAT101 in combination with the powerful NOVA software, can be used for most of the standard electrochemical techniques. Autolab/PGSTAT101 is an affordable potentiostat/galvanostat without compromising on quality and specifications, making it an ideal instrument for students and educational purposes.

The small footprint allows you to place a high quality potentiostat/galvanostat on a crowded workbench. Analog and digital inputs and outputs for interfacing and controlling external devices are available. The Autolab/PGSTAT101 comes with an internal dummy cell.

KEY FEATURES

• Electrode connections	2, 3 and 4
• Potential range	+/- 10 V
• Compliance voltage	+/- 10 V
• Maximum current	+/- 100 mA
• Current ranges	10 mA to 10 nA, in 7 decades
• Potential accuracy	+/- 0.2 %
• Potential resolution	3 µV
• Current accuracy	+/- 0.2 %
• Current resolution	0.0003 % (of current range)
• Input impedance	> 100 GOhm
• Potentiostat bandwidth	1 MHz
• Computer interface	USB
• Control software	NOVA

windsorscientific

Windsor Scientific Ltd, 264 Argyll Avenue, Slough Trading Estate, Slough, Berkshire, SL1 4HE.
Tel: +44(0)1753-822522 Fax: +44(0)1753-822002 E-mail: sales@windsorscientific.co.uk
Web: www.windsorscientific.co.uk

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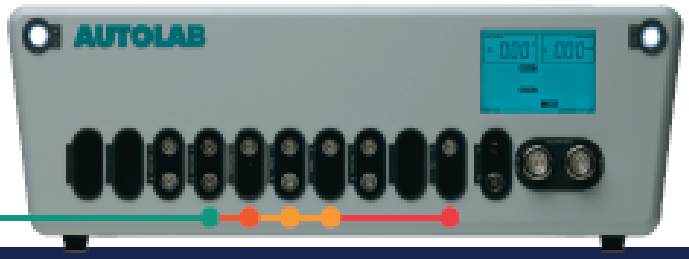
AUTOLAB



- AUTOLAB/PGSTAT302N
- ADC10M - ULTRA FAST SAMPLING MODULE
  Shortest interval time 100 ns /1 Million points
- SCAN250 - TRUE LINEAR SCAN GENERATOR
  Scan rates up to 250 kV/s
- FRA2 - FREQUENCY RESPONSE ANALYZER
  10 µHz - 1 MHz / Single and multiple sine
- BA - DUAL MODE BIPOTENTIOSTAT
  7 Current ranges10 nA - 10 mA/Maximum current 50

NOVA

Electrochemical

Software

Windsor Scientific Ltd., 264 Argyll Avenue, Slough Trading Estate, Slough, Berkshire SL1 4E
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	Analytical	battery / fuel cell	Nanotechnology	Microelectrodes	Corrosion and coatings	Fundamental research
High performance 'Plug & Play' modules	●	●	●	●	●	●
64 MS/s smooth scan - LSV, LSP, CV	●	●	●	●		●
Up to 1 MS/s data acquisition - pulse, CV	●	●	●	●		●
100 aA current resolution	●		●	●	●	●
Up to ±25 A current - scan / pulse		●			●	●
±100 V compliance and polarization	●	●	●			●
10 μΩ impedance measurement		●	●			●
>100 TΩ impedance measurement	●		●	●	●	●
Multiple high-speed EIS techniques	●	●	●	●	●	●

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uniscan instruments

Rotator Controller

RC10V

The RC10V Rotator Controller accessory connects the BiStat 3200, PG580RM or PG580 potentiostat to an electrode rotator and remotely controls the rotational speed of the unit.

- Support for Pine Research and Princeton Applied Research rotators
- Small footprint enclosure
- Connects to USB port of computer or Uniscan potentiostat
- Software support from UiEChem™ and UiECorr™
- Software graphing of Levich and Koutecky-Levich plots
- Automated Levich analysis

Application Areas

- Erosion enhanced corrosion resistance studies
- Structures and activity of nanoparticles
- RDE and RRDE electrodeposition studies
- Catalysts for mixed-reactant fuel cell
- Electrochemical kinetics studies

uniscan instruments

www.uniscan.com

Diffusion

18-21 May 2010
XII YuCorr International Conference
Corrosion, Materials Protection and Environmental Protection
Tara, Serbia
sitzams@eunet.rs
http://www.sitzam.org.rs/

31 May – 2 June 2010
2010 International Conference on Advanced Capacitors (ICAC2010)
Kyoto, Japan
Chairs: Junji Ozaki, Masayuki Morita
Secretary General: K. Naoi
capatech@cc.tuat.ac.jp
http://capacitor.electrochem.jp/ICAC2010/

6-10 June 2010
2nd Regional Symposium on Electrochemistry – South-East Europe
Belgrade, Serbia
Chair: Vesna Mišković-Stanković
office@rse-see.net
http://rse-see.net

6-11 June 2010
8th International Symposium on Electrochemical Impedance Spectroscopy
Carvoeiro, Algarve, Portugal
Co-chairs: J.C.S. Fernandes, M.F. Montemor
eis2010@eis2010.org
http://www.eis2010.org

7-11 June 2010
Solid State Ionics: Exploring Chemical and Structural Complexity of
Novel Ionic Conductors (E-MRS Spring Meeting)
Strasbourg, France
Co-chairs: R. Merkle, J. Irvine, P. Knauth, S. Ramanathan
r.merkle@fkf.mpg.de
http://www.emrs-strasbourg.com

13-18 June 2010
5th Forum on New Materials (CIMTEC 2010) – FC. Fuel Cells: Materials and
Technology Challenges; FD. Electrochemical Energy Storage Systems: The Next Evolution
Montecatini, Italy
congress@technagroup.it
www.cimtec-congress.org/2010/

20-23 June 2010
Electrochemistry in Interfacial Nanoscience (6th ECHEMS Meeting)
Sandbjerg, Denmark
Chair: K. Daasbjerg
echems@chem.au.dk
http://www.chem.au.dk/echems

20-25 June 2010
International Conference on Electrified Interfaces
Geneva, NY, USA
Contact: Daniel Scherson
dxs16@po.cwru.edu
http://icei2010.com/

27 June - 2 July 2010
XIX Meeting of the Iberoamerican Society of Electrochemistry
Alcala de Henares (Madrid), Spain
Chair: M.Á. Esteso Díaz
19sibae@fgua.es
http://www.19sibae.fgua.es

4-8 July 2010
1st International Conference on Materials for Energy 2010
Karlsruhe, Germany
Secretariat: Claudia Martz
martz@dechema.de
www.dechema.de/enmat2010

12-14 July 2010
AB Initio Electrochemistry
Lausanne, Switzerland
Co-chairs: M. Sprik, M. Koper
Contact: m.koper@chem.leidenuniv.nl
http://www.cecam.org/workshop-481.html

1-6 August 2010
2010 Gordon Conference on Electrodeposition
New London, NH, USA
Co-Chairs: Peter Searson, Andy Gewirth
searson@jhu.edu, agewirth@uiuc.edu
http://www.grc.org/programs.aspx?year=2010&program=electrodep

22-25 August 2010
Electrocatalysis: Molecular Level Approach to Modern Applications
Kloster Irsee, Germany
Co-chairs: L.A. Kibler, G. Jerkiewicz, G. Tremiliosi-Filho, S. Mitsushima
http://www.uni-ulm.de/electrocatalysis

29 August-3 September 2010
12th International Symposium on Polymer Electrolytes (ISPE-12)
Padua, Italy
Chair: Vito Di Noto
ispe12@chimica.unipd.it
www.chimica.unipd.it/ispe12

6-8 September 2010
Analysis for Healthcare Diagnostics and Theranostics (Faraday Discussion 149)
Edinburgh, UK
Chair: Andrew Mount
A.Mount@ec.ac.uk
http://www.rsc.org/ConferencesAndEvents/RSCConferences/FD149/index.asp

13-15 September 2010
Electrochemistry 2010 "From microscopic understanding to global impact"
Bochum, Germany
Co-chairs: Wolfgang Schuhmann, Gunther Wittstock
electrochemistry2010@ruhr-uni-bochum.de
gunther.wittstock@uni-oldenburg.de
Contact: Claudia Bickner
tg@gdch.de
http://www.gdch.de/vas/tagungen/tg/5407/prog__e.htm

13-17 September 2010
EUROCORR 2010
Moscow, Russia
Chair: A.V. Muradov
eurocorr2010@gubkin.ru
eurocorr@dechema.de
http://www.eurocorr.org/eurocorr_2010.html

14-15 September 2010
Electrochem 2010
Wolverhampton, Telford, UK
Chair: C. Oduoza
conferences@soci.org
susan.fitzgerald@soci.org
http://www.soci.org/General-Pages/Display-Event?EventCode=ECTG072

19-22 September 2010
Progress in MEA components for Medium and High Temperature Polymer Electrolyte Fuel Cells
La Grande Motte, France
Chair: Deborah Jones
Deborah.Jones@univ-montp2.fr
http://www.progressmea.org

21-24 September 2010
8th International Symposium on Electrochemical Micro & Nanosystem Technologies (EMNT 2010)
Cannes Mandelieu (Nice), France
Chair: P. Marcus; *Co-chairs*: A.W. Hassel, M. Pierre
emnt2010@chimie-paristech.fr
http://www.chimie-paristech.fr/emnt2010

26 September-1st October 2010
61st Annual Meeting of the International Society of Electrochemistry
Electrochemistry from Biology to Physics
Nice, France
Chair: Bernard Tribollet
events@ise-online.org
http://event10.ise-online.org/

3-7 October 2010
6th Workshop on Scanning Electrochemical Microscopy
Villa Clythia, Frejus, France
Contact: Philippe Hapiot
philippe.hapiot@univ-rennes1.fr

10-15, October 2010
218th Meeting of The Electrochemical Society (ECS)
Las Vegas, Nevada, USA

24-29 October 2010
9th International Frumkin Symposium Electrochemical Technologies and Materials for 21st Century
Moscow, Russia
Contact: Alexey Danilov
danilov@phyche.ac.ru
http://phyche.ac.ru/frumkinsymp/

3-5 November 2010
International Symposium on Portable Fuel Cells
Changxing, Zhejiang, China
Chair: Pei Kang Shen
Secretariat: Hui Meng
stonyps@yahoo.com.cn
http://www.fuelcellscn.com

16-19 November 2010
2nd Regional Electrochemistry Meeting of South-East Asia (REMSEA) 2010
Bangkok, Thailand
Contact: Orawon Chailapakul
corawon@chula.ac.th
http://www.remsea2010.com/

21-26 November 2010
4th International Conference on Electroactive Polymers: Materials & Devices (ICEP-2010)
Surajkund (Suburb of New Delhi), India
Chair: Suresh Chandra
icep2010@gmail.com
http://www.icep2010.org

1-4 December 2010
Solar Fuels/Photochemistry Conference 2010
Puerto Morelos, Mexico
info@zingconferences.com
http://www.zingconferences.com/z.cfm?c=77

2-4 December 2010
9th International Symposium on Advances in Electrochemical Science and Technology (ISAEST-9)
Chennai, India
Secretariat: G. Sozhan
saestkkd@yahoo.com
http://www.saest.com

19-21 January 2011
Fundamentals and Developments of Fuel Cells Conference 2011
Grenoble, France
Contact: Frédéric MAILLARD
frederic.maillard@lepmi.inpg.fr
http://fdfc2011.lepmi.grenoble-inp.fr/

1-6 May 2011
219th Meeting of The Electrochemical Society (ECS)
Montreal, Canada

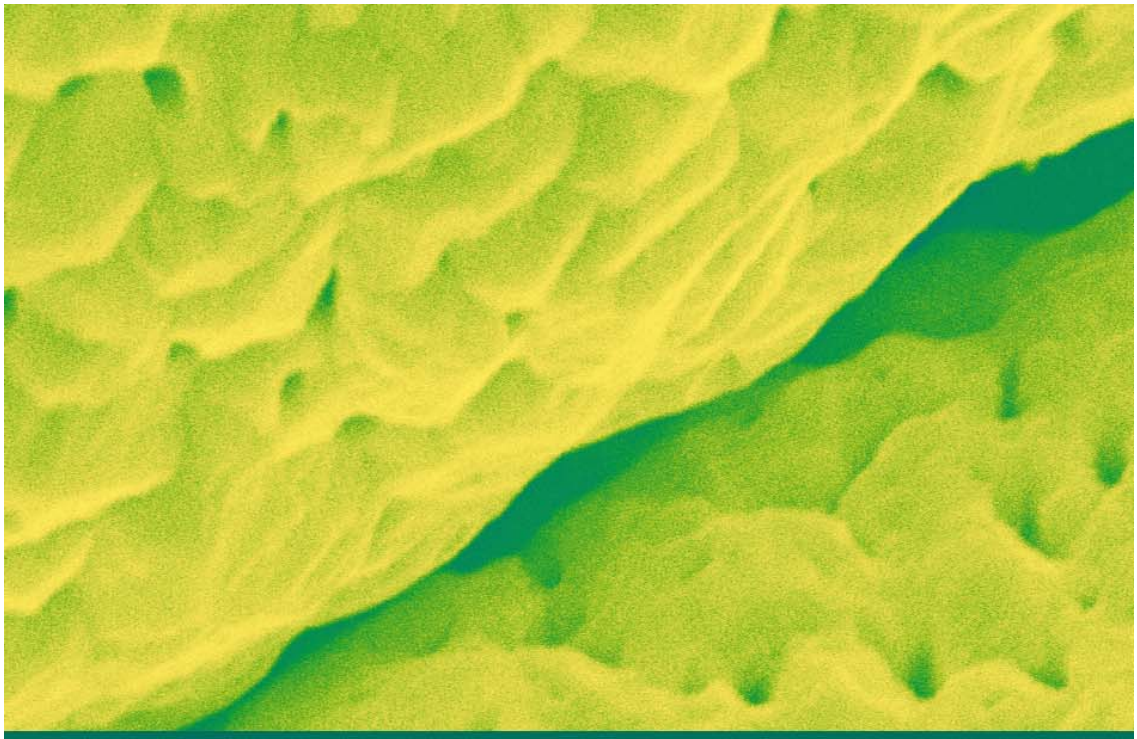
8-11 May 2011
9th Spring Meeting of the International Society of Electrochemistry
Electrochemical Sensors: From Nanoscale Engineering to Industrial Applications
Turku-Åbo, Finland
Chair: Johan Bobacka
johan.bobacka@abo.fi
http://spring11.ise-online.org

3-8 July 2011
18th International Conference on Solid State Ionics (SSI-18)
Warsaw, Poland
Chair: Franciszek Krok
fkrok@mech.pw.edu.pl
http://www.ssi-18.net

11-16 September 2011
62nd Annual Meeting of the International Society of Electrochemistry
Electrochemical Frontier for Global Environment and Energy
Niigata, Japan
Chair: Tetsuya Osaka
events@ise-online.org

9-14 October 2011
220th Meeting of The Electrochemical Society (ECS)
Boston, MA, USA

4-7 December 2011
Fray International Symposium on Metals and Materials Processing in a Clean Environment
Cancun, Mexico
Chair: Florian Kongoli
fkongoli@flogen.com
http://www.flogen.com/FraySymposium



RSC Electrochemistry Group

This RSC Group is part of the Faraday Division, involved in all aspects of electrochemical processes (fuel cells, energy sources, analytical devices and sensors, electrochemical planting and synthesis, fundamental research etc).

Activities:

- The Group organises the annual 'Electrochem' meetings (Faraday Medal) to reward outstanding international scientists. For up-to-date information, go to the RSC's web pages for the Electrochemistry Group.
- The Electrochemistry newsletter: available quarterly, in pdf, from our RSC web pages, it highlights events' reports and general sector's news and insights.
- Student bursaries: to support/encourage graduate students giving lectures on their PhD work at national and/or international conferences.
- Outreach: activities involving the public and schools to raise awareness of the fundamental importance of electrochemical processes today.

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