

MONDAY 13TH JUNE

BALL ROOM

08:40 OPENING CEREMONY

Chair: J. Wang

09:00 **PLENARY: Probing redox reactions at the single molecule level with surface-enhanced Raman spectroscopy and tip-enhanced Raman spectroscopy**

Richard van Duyne, Northwestern University, USA

Presentation of the RSC Theophilus Redwood Award

09:45 **KEYNOTE: Size, charge and time dependent penetration of metallic and soft nanoparticles into lipid layers**

Ritu Katakya, Durham University, UK

Coffee break

Chair: A. Lewenstam

10:30 **INVITED: Multiplexing of cancer reporters in complex samples using advanced electrochemical scaffolds**

J.M. Pingarron, Universidad Complutense de Madrid, Spain

10:50 **New approaches to voltammetric and amperometric monitoring of selected tumor biomarkers**

J. Barek, Charles University, Czech Republic

11:10 **Quantum dots-linked immunosensor based on mercury and bismuth film electrode for detection of multiple ovarian cancer biomarkers**

L. Korecka, Pardubice, Czech Republic

Coffee break

11:50 **Improved immunoassay based detection using inkjet printed multiplexed sensors**

M. Jović, École Polytechnique Fédérale de Lausanne, Switzerland

12:10 **Electrochemical flow through immunosensor for pneumonia detection**

L. Blanco-Covian, University of Oviedo, Spain

12:30 **Auro-quant: design and fabrication of an electrochemical immunosensor (immuno-CAP) for bovine progesterone assessment**

A. Delaney, Institute of Technology Tallaght, Ireland

12:50 **Affinity sensing protocols for GMO biomarkers, agal toxins and estrogenic endocrine disruptors**

E. Iwuoha, University of the Western Cape, South Africa

Lunch

Chair: A. Economou

15:00 **KEYNOTE: Aptamer- and DNA-based biosensors relying on electronic properties of nucleic acids**

Elena Ferapontova, Aarhus University, Denmark

15:30 **Robust surface chemistry strategies for sensitive and selective aptasensors**

P. Estrela, University of Bath, UK

15:50 **Behavior of DNA at electrically charged surfaces: Effects of structure and chemical modification**

M. Fojta, Institute of Biophysics of the AS CR, Czech Republic

16:10 **Reporter strands, labeled primers, molecular beacons – osmium tetroxide as a versatile electroactive DNA label**

A. Sedova, University at Albany, USA

Coffee break

16:50 **Electrochemical molecular detection of *Salmonella* using DNA-coated indium-tin-oxide electrodes as sensing platform**

S. Barreda-Garcia, University of Oviedo, Spain

17:10 **Phthalocyanine layer-by-layer assemblies for impedimetric sensing of DNA hybridization**

C.L. Manzaneres-Palenzuela, Universidade de São Paulo, Brazil

MONDAY 13TH JUNE

TEA ROOM

Chair: *F. Lisdat*

10:30 **Coupling raman confocal microscopy and electrochemistry for the studies of charge transfer at the interface between two immiscible electrolyte solutions**

G. Herzog, Université de Lorraine, France

10:50 **Different approaches regarding the electrochemical detection of dopamine**

C. Cristea, Iuliu Hațieganu University of Medicine and Pharmacy, Romania

11:10 **Photo-renewable electroanalytical sensor for neurotransmitters detection: The role of silver ion nanoparticles**

V. Pifferi, Università degli Studi di Milano, Italy

Coffee break

11:50 **Development of a novel, screen printed glutamate biosensors for food, serum analysis and toxicity studies**

G. Hughes, University of the West of England, UK

12:10 **A reagentless electrochemical biosensor for monitoring L-malic acid produced in the malolactic fermentation of red wines**

P. Gimenez-Gomez, Instituto de Microelectrónica de Barcelona, Spain

12:30 **Electrochemical fingerprint of street samples for fast on-site screening of cocaine in seized drug powders**

K. De Wael, University of Antwerp, Belgium

12:50 **A "shoot and sense" janus micromotors-based strategy for the simultaneous degradation and detection of persistent organic pollutants in food and biological samples**

B. Jurado-Sanchez, University of Alcalá, Spain

Lunch

Chair: *J. Barek*

15:30 **Biosensors for food analysis based on conducting polymers composed from b-group vitamins**

R. Pauliukaite, Center for Physical Sciences and Technology, Lithuania

15:50 **A thiamine biosensor based on oxidative trapping of transketolase-substrate intermediate**

C. Mousty, Université Blaise Pascal, France

16:10 **Voltammetric analysis of vitamin B₁ B₂ & B₆ using screen printed carbon electrodes**

K. Westmacott, University of the West of England, UK

Coffee break

16:50 **New analytical pathways with bipolar electrochemistry**

A. Kuhn, University of Bordeaux, France

17:10 **Simultaneous independent stability assessment at individual poles of a bifunctional catalyst with bipolar electrochemistry**

V. Eßmann

TUESDAY 14TH JUNE

BALL ROOM

Chair: F. Marken

09:00 **PLENARY: From molecules to organisms: bioanalytical sensors for multiscale systems**

Robert J. Forster, Dublin City University, Ireland

09:45 **KEYNOTE: Electrochemistry and micro/nanomachines**

Martin Pumera, Nanyang Technological University, Singapore

Coffee break

Chair: J. Pingarron

10:30 **Stretchable and self-healed electrochemical sensors and biofuel cells based on novel materials for wearable applications**

J. Wang, University of California San Diego, USA

10:50 **Towards epidermal sensing**

A. Morrin, Dublin City University, Ireland

11:10 **EQCM reaction to volume phase transition in thermoresponsive poly(*N*-isopropylacrylamide) under various conditions**

Z. Stojek, University of Watsaw, Poland

Coffee break

11:50 **Microfabricated (bio)sensing devices**

A. Economou, University of Athens, Greece

12:10 **3D printed polystyrene - graphite/nano-carbon composite electrodes for electroanalytical processes**

Z. Rymansaib, University of Bath, UK

12:30 **Enzymatic biosensors based on new simple electrochemical platforms for FIA systems**

H. Kanso

12:50 **Electrochemical detection of reactive oxygen / nitrogen species released by cell populations within microfluidic devices**

L. Thouin, Ecole Normale Supérieure, France

Lunch

Chair: A. Kuhn

15:00 **KEYNOTE: Applications of capillary and microchip electrophoresis with electrochemical detection to *in vivo* monitoring and cell analysis**

Susan M. Lunte, University of Kansas, USA

Craig Lunte Memorial Lecture

15:30 **Advances in electrochemically assisted injection in combination with capillary electrophoresis - mass spectrometry**

F.-M. Matysik, University of Regensburg, Germany

15:50 **Mimicking of the metabolism of pesticides using a home-made electrochemical cell on-line hyphenated with a mass spectrometer**

J. Jaklová Dytrtová, Academy of Sciences of the Czech Republic, Czech Republic

16:10 **Amino acids related metabolic diseases direct determination by chromatography coupled to a highly efficient nanostructured electrochemical detector**

M. Revenga-Parra, Universidad Autónoma de Madrid, Spain

Coffee break

16:50 **Towards potentiometric measurement of hydrogen carbonates**

A. Lewenstam, AGH - University of Science and Technology, Poland

17:10 **Ion-exchange polymers modified electrodes for electroanalytical applications**

L. Falciola, Università degli Studi di Milano, Italy

17:30 **POSTER SESSION AND WINE RECEPTION sponsored by Gamry Instruments**

TUESDAY 14TH JUNE

TEA ROOM

Chair: *M. Fojta*

10:30 **2D and 3D pyrolytic carbon microelectrodes for electrochemistry**

S. Hemanth, DTU Nanotech, Denmark

10:50 **Flexible PEDOT:PSS/reduced graphene oxide film for printable devices**

T.A. Babkova, Tomas Bata University in Zlin, Czech Republic

11:10 **Novel catalytic microporous heterocarbon nanofilm electrodes derived from intrinsically porous polymer hosts**

Yuanyang Rong, University of Bath, UK

Coffee break

11:50 **Printed polyaniline nanoparticle sensors for the determination of aqueous ammonia**

N.T. Brannelly, University of the West of England, UK

12:10 **Conducting polymers nanoparticles based electrochemical sensors**

A. Michalska, University of Warsaw, Poland

12:30 **'SWEATCH': A fully integrated wearable watch-type platform for real-time sweat analysis and collection**

T. Glennon, Dublin City University, Ireland

12:50 **The stripping voltammetric determination of metal ions at silver electrodes fabricated from compact discs**

K. Honeychurch, University of the West of England, UK

Lunch

Chair: *R. Pauliukaite*

15:30 **Development and use of electrochemical room temperature ionic liquid-based microprobes for analysis of gaseous species**

S. Daniele, University of Udine, Italy

15:50 **Novel electrochemical gas sensor for formaldehyde detection**

E. Menart, National Institute of Chemistry, Slovenia

16:10 **A novel versatile micro-biosensor for H₂ detection in scanning photoelectrochemical microscopy**

F. Zhao, Ruhr-Universität Bochum, Germany

Coffee break

16:50 **Electrochemical microfluidic biosensors for rapid detection of prostate cancer biomarkers**

C. Mercer, NUI Galway, Ireland

17:10 **Graphene as a catalyst support for electroanalysis**

S. Bagheri, University of Malaya, Malaysia

WEDNESDAY 15TH JUNE

BALL ROOM

Chair: L. Gorton

09:00 **PLENARY: Electrodes based on graphene – processing and device fabrication**

Gordon Wallace, University of Wollongong, Australia

09:45 **KEYNOTE: Hybrid scanning electrochemical microscopy for life science applications**

Christine Kranz, Ulm University, Germany

Coffee break

Chair: E. Iwuoha

10:30 **Nanoparticles imprinted matrices (NAIM): Speciation of nanoparticles**

D.Mandler, The Hebrew University of Jerusalem, Israel

10:50 **High-resolution scanning electrochemical microscopy for imaging of one-dimensional nanomaterials**

P. Vatsyayan, University of Regensburg, Germany

11:10 **2D and 3D diamond nanoparticles – lactate oxidase arrangements for improved lactate biosensors**

E. Lorenzo, Universidad Autónoma de Madrid, Spain

Coffee break

11:50 **Electrochemical glycoprofiling applicable in diagnostics**

J. Tkac, Sloval Academy of Sciences, Slovakia

12:10 **Optimising electrochemical biosensors for protease detection**

E. González-Fernández, University of Edinburgh, UK

12:30 **Microwell array integrating ring nanoelectrodes for the monitoring of metabolic responses at isolated mitochondria**

S. Arbault, University of Bordeaux, France

12:50 **Nanomechanical properties of protein-DNA layers**

G. Nöll, University of Siegen, Germany

TEA ROOM

Chair: D. Arrigan

10:30 **Bismuth film electrode for measuring Ag(I) in the presence of silver nanoparticles and polyvinylpyrrolidone**

S.B. Hočevar, National Institute of Chemistry, Slovenia

10:50 **Carbon-gold nanoparticles thin-film electrode for the determination of mercury in sea water**

L. Asturias-Arribas, Institute of Materials Science of Barcelona, Spain

11:10 **Prussian blue screen printed electrode as specific biosensor for K⁺**

S. Dixon, Autotelic Inc., USA

Coffee break

11:50 **Underpotential deposition at heated gold electrodes**

G.-U. Fleischig, University at Albany, USA/Gensoric GmbH, Germany

12:10 **Electrochemical sensors applied to pyrometallurgical obtaining of copper**

I. Pedre, Universidad de Buenos Aires, Argentina

12:30 **Copper film electrode for stripping voltammetric determination of trace toxic elements**

V. Jovanovski, National Institute of Chemistry, Slovenia

12:50 **Achieving effective inherently chiral electroanalysis on chiral and achiral screen-printed supports**

S. Arnaboldi, Università degli Studi di Milano, Italy

THURSDAY 16TH JUNE

BALL ROOM

Chair: *P. Estrela*

09:00 **PLENARY: Basic electrochemistry meets electroanalysis: The origin of medium effects on the electrode response**

Galina Tsirlina, Moscow State University, Russia

09:45 **KEYNOTE: Bioenergy production from waste, using microbial fuel cells - from lab testing to implementation and commercialisation**

Ioannis Ieropoulos, University of the West of England

Coffee break

Chair: *S. Hocevar*

10:30 **Direct electron transfer between cellobiose dehydrogenase and electrodes as basis for 3rd generation biosensors/bioanodes**

L. Gorton, Lund University, Sweden

10:50 **Phenothiazine and phenoxazine modified redox hydrogels for the electrical wiring of enzymes: synthesis and applications**

Adrian Ruff, Ruhr-Universität Bochum, Germany

11:10 **Biomacromolecular architectures on electrodes based on fructose dehydrogenase and cytochrome c**

F. Lisdat, Technical University of Applied Sciences Wildau, Germany

Coffee break

11:50 **Bioelectrocatalytic reactions of enzymes and heme peptides at meso and nanostructure modified electrodes**

U. Wollenberger, University of Podstam, Germany

12:10 **Electrochemical communication between *Enterococcus faecalis* cells and electrodes via osmium redox polymers**

G. Pankratova, Lund University, Sweden

12:30 **Effect of the surface chemistry of carbon nanoparticles on the stability of biocathodes for implantable enzymatic fuel cell**

A. Zebda, University of Grenoble, France

12:50 **Spectro-electrochemical investigation of alumina-capped orthosilicate nanocomposite cathode for application in lithium-ion batteries**

C.O. Ikpo, University of the Western Cape, South Africa

13:10 **CLOSING CEREMONY**

TEA ROOM

Chair: *A. Morrin*

10:30 **En route to the electroanalytical opportunities of water | ionic liquid microinterfaces**

D.W.M. Arrigan, Curtin University, Australia

10:50 **Ion flow in novel materials**

E. Madrid, University of Bath, UK

11:10 **Electrochemical detection of dna damage caused by reactive oxygen and nitrogen species**

V. Vyskočil, Charles University in Prague, Czech Republic

Coffee break

11:50 **Novel strategies for wider utilization of bismuth-based sensing systems**

T. Zidarič, National Institute of Chemistry, Slovenia

12:10 **Electrochemical pretreatment of boron doped diamond electrode for the determination of small organic molecules**

F. Bottari, University of Antwerp, Belgium

12:30 **Electroanalysis of biological selenium analytes**

M.C. Buzzeo, Columbia University, USA