



# 20<sup>th</sup> International Conference on Electroanalysis

## Conference Program



# Conference Program

## Sunday, June 7

*Sala dos Passos Perdidos* Faculty of Medicine, NOVA University Lisbon

16:30 – 17:00

**Registration**

17:00 – 19:00

**Welcome Reception**

## Monday, June 8

*Auditorium (Room 3.2.14)*

8:40 – 9:10

**Opening**

Chair: Felipe Conzuelo

9:10 – 9:55

**Plenary Lecture (PL-1)**  
**Fabiana Arduini**

Paper-Based Electrochemical (Bio)Sensors as Sustainable and Smart Devices

9:55 – 10:25

**Keynote Lecture (KN-1)**  
**Joseph Wang**

Long Journey Towards Wearable Bioelectronic Platforms

*Auditorium (Room 3.2.14)*

Chair: Fabiana Arduini

10:25 – 10:45

**IN-1: Ulrich Rant**  
Electroactuated DNA Origami Nanolevers Enable Molecular Friction Sensing of Ligand-Induced Protein Conformational Changes

*Lecture Hall (Room 3.2.15)*

Chair: Joseph Wang

**IN-2: Hua Cui**  
Flexible Wearable Electrochemiluminescence Chip for Sweat Metabolite Detection

|               |   |  |
|---------------|---|--|
| 10:45 – 11:00 | <b>OP-1: Yan Du</b><br>Pathogen Diagnosis Relying on Electrochemical Techniques   | <b>OP-2: Xiurong Yang</b><br>Development of Electrochemiluminescence System Based on Co-reaction Accelerator Signal Amplification for the Detection of Alzheimer's Disease Biomarker |
| 11:00 – 11:15 | <b>OP-3: Elena Ferapontova</b><br>Cellulase-Linked Aptamer Sensors for Cancer Biomarker Discovery and Point of Care Testing   | <b>OP-4: Samuel Stewart</b><br>Spatially Resolved Wire-Free Electrochemiluminescence on Carbon Electrodes  |
| 11:15 – 11:30 | <b>OP-5: Lara Z. Heyns</b><br>Surface-Captured-Protein Voltammetric Graphene Aptasensor Strategy for Direct Signal-on Detection of Proteinic Biomarkers   | <b>OP-6: Jun-Jie Zhu</b><br>Electrochemiluminescence Imaging for Bioanalytical Application   |
| 11:30 – 11:50 | <i>Coffee Break</i>   |  |
|               | <i>Auditorium (Room 3.2.14)</i><br>Chair: Ulrich Rant   | <i>Lecture Hall (Room 3.2.15)</i><br>Chair: Hua Cui  |
| 11:50 – 12:05 | <b>OP-7: Michael López Mujica</b><br>A Universal Platform for Fast fM Electroanalysis of Nucleic Acids Exploiting O <sub>2</sub> -Dependent Electrocatalytic Hemin–G4 Beacons on Magnetic Beads | <b>OP-8: Franziska Kühling</b><br>Bipolar Electrodes in Microfluidic Devices   |
| 12:05 – 12:20 | <b>OP-9: Noemí de-los-Santos-Álvarez</b><br>Key Features in the Design of Robust Temperature-Independent Aptasensors for Continuous Monitoring  | <b>OP-10: Lin Zhang</b><br>Design of Enzyme-Functionalized Janus Particles for Enzymatic Reactions at the Oil/Water Interface  |
| 12:20 – 12:35 | <b>OP-11: Vasiliki Papantoniou</b><br>3D-Printed Gold-Coated Microneedle-Based Electrochemical Aptasensors: A Two-Way Street Towards In-Vivo Monitoring   | <b>OP-12: Sara Grecchi</b><br>Wireless Colorimetric pH-Sensing for the Quantification of Chiral Analytes   |
| 12:35 – 12:50 | <b>OP-13: Slađana Đurđić</b><br>rGO/La <sub>2</sub> O <sub>3</sub> -based Electrochemical Aptasensor for the Detection of <i>Bacillus cereus</i> Spores   | <b>OP-14: Anastasios Papavasileiou</b><br>Lighting up TLC Platforms through Wireless Electrochemistry  |

12:50 – 14:00 *Lunch*

*Auditorium (Room 3.2.14)*

Chair: Christine Kranz

14:00 – 14:30

**Keynote Lecture (KN-2)**  
**Leyla Soleymani**

Real-Time Electrochemical Monitoring of  
Aptamer–Target Binding in Vitro and in Vivo

*Auditorium (Room 3.2.14)*

Chair: Christine Kranz

*Lecture Hall (Room 3.2.15)*

Chair: Leyla Soleymani

14:30 – 14:50

**IN-3: Taek Dong Chung**  
In Situ Real Time Monitoring of Zinc  
Bromine Batteries by  
Electrochemical Impedance  
Spectroscopy

**IN-4: Suna Timur**  
Electrochemical Capture and  
Analysis of Exosomes on Functional  
Surfaces in Complex Biological  
Matrices

14:50 – 15:05

**OP-15: Wolfgang Schuhmann**  
Micro- and Nanoelectroanalytical  
Tools for Electrocatalysis

**OP-16: Jaymi January**  
Nanobody-Sensitised  
Immunosensors for Persistent Viral  
Reservoir Biomarker and  
Macrophage-Capping Protein

15:05 – 15:20

**OP-17: Mohsen Shakouri**  
X-ray Spectroscopic Techniques for  
Probing Electrochemical Interfaces  
and Energy Materials at the  
Canadian Light Source

**OP-18: Almira Ramanaviciene**  
Gold Nanostructures-Based  
Electrochemical Immunosensor for  
Detecting Antibodies to the SARS-  
CoV-2 Spike Protein

15:20 – 15:35

**OP-19: Elena Daboss**  
Investigating Hot-Electron-  
Mediated Electrochemistry at  
Plasmonic Gold Nanorods on ITO  
Electrodes

**OP-20: Pablo Rioboó-Legaspi**  
Development of an Electrochemical  
Vertical Flow ImmunoAssay for the  
Fast Determination of Glial Fibrillary  
Acidic Protein (eVFIA-GFAP)

15:35 – 16:00 *Coffee Break*

*Auditorium (Room 3.2.14)*

Chair: Taek Dong Chung

*Lecture Hall (Room 3.2.15)*

Chair: Suna Timur

16:00 – 16:15

**OP-21: Christine Kranz**  
Localized Studies on Light-Driven H<sub>2</sub>  
Evolution of Photosensitizer-  
Catalyst Matrixed Langmuir  
Blodgett and Langmuir Schaefer  
Films

**OP-22: Estefanía Costa-Rama**  
ElectrochemCap for Integrated  
Immunochemical  
Determination of S100B Protein

|               |  |   |
|---------------|--|---|
| 16:15 – 16:30 | <b>OP-23: Harry B. Swan</b><br>Long-Range Scanning Electrochemical Cell Microscopy (SECCM): Large Area Structure–Activity Mapping of the Hydrogen Evolution Reaction (HER) on Polycrystalline Platinum | <b>OP-24: Alessandro Puzzello</b><br>Development of Microneedle-Based Electrochemical Biosensors for the Detection of Neurodegenerative Diseases Biomarkers |
| 16:30 – 16:45 | <b>OP-25: Steffen Hardt</b><br>Accelerated Hydrogen Evolution at Polymer-Functionalized Gold – Insights by Combining <i>Operando</i> Microscopy with Simulation  | <b>OP-26: Ana Fernández-Quesada</b><br>Pin-Based Electrochemical ELISA Readout: A Cost-Effective Portable Alternative to Conventional Microplate Readers    |
| 16:45 – 17:00 | <b>OP-27: Assil Guessab</b><br><i>Operando</i> Characterization of Bioelectrodes by Electrochemistry and (Super Resolution) Fluorescence Microscopy  | <b>OP-28: Haesik Yang</b><br>Robust Two-Electrode Immunosensing Enabled by a Kinetically Stable and Potential-Guiding Redox System                          |
| 17:00 – 17:15 | <b>OP-29: Pedro H. Alves Damasceno</b><br>Nanostructured Platinum-Black Based Sensors for Ascorbate Monitoring using SECM  | <b>OP-30: Teodor A. Enache</b><br>Real-Time Electrochemical Monitoring of Superoxide in Cellular Wound Models   |
| 17:15 – 17:30 | <b>OP-31: Iustina Botezatu</b><br>Investigating Bioenergetic Activities of Single Mitochondria by AFM-SECM Functional Nanoscopy  | <b>OP-32: Paula Martínez-Pérez</b><br>Cas12a Electrochemical Biosensors for Enhanced RNA Detection in Plants  |
| 17:30 – 19:00 | <b>Poster Session 1</b>  |   |

## Tuesday, June 9

*Auditorium (Room 3.2.14)*

Chair: Susana Campuzano

|              |  |   |
|--------------|--|---|
| 9:00 – 9:45  | <b>Plenary Lecture (PL-2)</b><br><b>Justin Gooding</b> | Nanoparticles that Mimic the Three-Dimensional Architecture of Enzymes: The Role of Nanoconfinement in Enhancing Activity and Selectivity |
| 9:45 – 10:15 | <b>Keynote Lecture (KN-3)</b><br><b>Neus Sabaté</b>    | Development of Liquid Triggered Batteries for Sustainable Low Power Electronics   |

*Auditorium (Room 3.2.14)*

Chair: Justin Gooding

*Lecture Hall (Room 3.2.15)*

Chair: Neus Sabaté

|               |   |   |
|---------------|---|---|
| 10:15 – 10:35 | <b>IN-5: Goretí Sales</b><br>Self-Powered (Bio)Sensing  | <b>IN-6: Simona Baluchová</b><br>Exploring 3D Printing of Polymer Composite and Metal Electrodes for Electroanalysis  |
| 10:35 – 10:50 | <b>OP-33: Greg M. Swain</b><br>Diamond Microelectrodes for Probing Neurosignaling Processes in the GI Tract   | <b>OP-34: Christos Kokkinos</b><br>Tailor-Made Filaments for 3D Printed Electrochemical (Bio)Sensing Devices  |
| 10:50 – 11:05 | <b>OP-35: Alexander G. Zestos</b><br>Metal Organic Framework (MOF)-Modified Carbon Fiber Microelectrodes for Enhanced Neurochemical Detection                 | <b>OP-36: Elena Bernalte</b><br>Customized Conductive Filaments Functionalized with Metallic Nanoparticles for High-Performance 3D Printed Electrochemical Sensors – A New Frontier |
| 11:05 – 11:20 | <b>OP-37: Hui Gu</b><br>Two-Nanosensor Electrochemical Profiling of Catecholamine Vesicle Interactions with Acute and Chronic Stress Granules in Living Cells | <b>OP-38: Francesca Polli</b><br>Systematic Optimization of Gold Electrodeposition Procedures on 3D-Printed Conductive Architectures for Enhanced Electrochemical Sensing           |
| 11:20 – 11:40 | <i>Coffee Break</i>   |   |

**Auditorium (Room 3.2.14)**

Chair: Goreti Sales

|               |   |   |                         |
|---------------|---|---|-------------------------|
| 11:40 – 11:55 | <b>OP-39: Lisa Deflandre</b><br>Electrochemical Aptamer-Based Biosensor for Neurotransmitter Mapping and Quantification Using Scanning Electrochemical Microscopy | <b>Lecture Hall (Room 3.2.15)</b>   | Chair: Simona Baluchová |
| 11:55 – 12:10 | <b>OP-41: Romana Jarosova</b><br>Probing Chemobrain with Electrochemistry: Neurotransmitter Dynamics and Preventative Strategies in Zebrafish                     | <b>OP-40: Bruno C. Janegitz</b><br>Designing Electrochemical Sensors for Sustainability and Circularity   |                         |
| 12:10 – 12:25 | <b>OP-43: Noha Shalabny</b><br>Electrochemical Sensor for Orthogonal Analysis of Neurochemicals   | <b>OP-42: Georgina K. Rhodes</b><br>Electrochemical Insights from Microscale Electrical Conductivity and Electrochemical Activity Mapping of 3D Printed Carbon Black – Polylactic Acid Composite Electrodes |                         |
| 12:25 – 12:40 | <b>OP-45: Ana Maria Oliveira-Brett</b><br>Curcumin Interaction with Amyloid- $\beta$ Peptides: Electrochemical and AFM Characterisation                           | <b>OP-44: Michele Abate</b><br>Polyester Based Toner and Filaments for Assembling Paper-Based and 3D Printed Metal Leaves Electrodes  |                         |
| 12:40 – 12:55 | <b>OP-47: Francesca Lembo</b><br>NeuroSens: Wire-free Electroceuticals for Multianalyte Diagnosis of Neurodegenerative Disease                                    | <b>OP-46: Panagiota Kalligosfyri</b><br>Fully 3D-Printed Electrochemical Devices for (Bio)Sensing Applications  |                         |
| 12:55 – 14:00 | <i>Lunch</i>  |   |                         |

**Auditorium (Room 3.2.14)**

Chair: Rasa Pauliukaitė

|               |  |  |
|---------------|--|--|
| 14:00 – 14:30 | <b>Keynote Lecture (KN-4)</b><br><b>Nako Nakatsuka</b> | Aptamer-Based Nanoscale Electrochemical Sensors for Neurochemical Detection in the Brain |
|---------------|--|--|

**Auditorium (Room 3.2.14)**

Chair: Nako Nakatsuka

**Lecture Hall (Room 3.2.15)**

Chair: Rasa Pauliukaitė

14:30 – 14:50

**IN-7: Mamas Prodromidis**

Generation of Nanomaterials via Spark Discharge: An In-Situ Liquid-Free Green-Chemistry Technology for Advanced Electrochemical (Bio)Sensing Devices for Decentralized Analysis

**IN-8: Pedro Estrela**

Electrochemical Biosensors and Biodevices for Medical Diagnosis and Water Monitoring

14:50 – 15:05

**OP-49: Saimon M. Silva**

An Electrochemical Platform that Exploits Lectin Interactions with a Cancer Glycocalyx Model for Rapid Glycomic Analysis

**OP-50: Damion K. Corrigan**

Measuring Antibiotic Susceptibility in the Hospital Environment Using a Rapid Electrochemical Impedance-Based Approach

15:05 – 15:20

**OP-51: Rebeca M. Torrente-Rodríguez**

Advanced Bioelectroanalytical Approaches for Methylation and Telomerase Activity Profiling in Tumor Cells

**OP-52: Beatriz Sequeira-Antunes**

AptaFET-Based Creatinine Biosensor for Real-time Urinalysis

15:20 – 15:35

**OP-53: Derya Yaman**

Carbon PCB-Based Electrochemical Lateral Flow Assay for Multiplexed Liver Biomarker Analysis

**OP-54: Victor C. Diculescu**

Impedance Modulation in Hybrid Fiber Interfaces for Nucleic Acids Detection

15:35 – 16:00

*Coffee Break*

**Auditorium (Room 3.2.14)**

Chair: Mamas Prodromidis

**Lecture Hall (Room 3.2.15)**

Chair: Pedro Estrela

16:00 – 16:15

**OP-55: Yu-Nan Lu**

Electrochemical Monitoring of Cancer Biomarkers via Simultaneous Multiplexing with Gold-Coated Magnetic Nanoparticles

**OP-56: Daniel Mandler**

How Can the Sensitivity of Sensors Be Significantly Increased? The Story of the Nanoparticle-Imprinted Matrix (NAIM)

16:15 – 16:30

**OP-57: María Gamella**

Charting Across the Omics Cancer Epigenetic Landscape via Electrochemical and Proteomic Bioanalysis

**OP-58: Ali Kemal Ateş**

Construction of an Electrochemical Sensor based on Molecularly Imprinted Polymer for Voltammetric Determination of Empagliflozin

|               |   |   |
|---------------|---|---|
| 16:30 – 16:45 | <b>OP-59: Jiri Barek</b><br>Modern Electroanalytical Methods<br>in Monitoring of Cancer Biomarkers  | <b>OP-60: Henri P.A. Nouws</b><br>Molecularly Imprinted Polymer<br>Paper-Based Sensor for<br>Electrochemical Analysis of<br>Genistein in Food Products                      |
| 16:45 – 17:00 | <b>OP-61: Sumaya Ishtiaq</b><br>Improving Antifouling of Protein<br>Biosensing Surface by Surface<br>Optimization and Electrical Pulsing                          | <b>OP-62: José Luiz da Silva</b><br>A Low-Cost PPy-MIP/rGO Screen-<br>Printed Carbon Sensor for Selective<br>Electrochemical Monitoring of<br>Pyrazinamide                  |
| 17:00 – 17:15 | <b>OP-63: Flavia Di Scala</b><br>A Biosensor with Simplified Target<br>Recognition for Early Detection of<br>Leprosy from Serum of Household<br>Contacts          | <b>OP-64: Valentina Pifferi</b><br>Bimodal (Photo)Electrochemical<br>Approach to Enantiomeric<br>Tryptophan Detection Using<br>Modified MWCNT/Oligo-Thiophene<br>Electrodes |
| 17:15 – 17:30 | <b>OP-65: Seda Nur Topkaya</b><br>Portable Electrochemical<br>Biosensors for Point-of-Care<br>Pathogen Identification and<br>Antibiotic Susceptibility Assessment | <b>OP-66: Nahush Modak</b><br>Engineered Reaction Centers Enable<br>Multi-Residue Herbicide Sensing at<br>EU Maximum Residue Limits   |
| 17:30 – 19:00 | <b>Poster Session 2</b>   |   |

## Wednesday, June 10

*Auditorium (Room 3.2.14)*

Chair: Wolfgang Schuhmann

|               |  |  |
|---------------|--|--|
| 9:00 – 9:45   | <b>Plenary Lecture (PL-3)</b><br><b>Alexander Kuhn</b>   | Electroanalysis-Unplugged  |
| 9:45 – 10:15  | <b>Keynote Lecture (KN-5)</b><br><b>Alberto Escarpa</b>  | Adaptive Electrochemistry: Paper and 3D Printing as Enablers of Next-Generation Analytical Devices   |
|               | <i>Auditorium (Room 3.2.14)</i>  | <i>Lecture Hall (Room 3.2.15)</i>  |
|               | Chair: Alexander Kuhn  | Chair: Alberto Escarpa   |
| 10:15 – 10:35 | <b>IN-9: Rodrigo A. A. Muñoz</b><br>Plasma Treatment Enhances the Electrochemical Performance of Additively Manufactured Electrodes  | <b>IN-10: Johan Bobacka</b><br>Utilizing the Pseudocapacitance of PEDOT to Improve the Performance of Solid-Contact Ion-Selective Electrodes |
| 10:35 – 10:50 | <b>OP-67: Flavio Della Pelle</b><br>Smart Strategies for the Integration of Laser-Nanostructured Sensing Surfaces in Paper-based and 3D-Printed (Bio)Electroanalytical Devices | <b>OP-68: Alessandra Bonanni</b><br>Electroanalytical Strategies for the Detection of Micro- and Nanoplastics in Aqueous Systems             |
| 10:50 – 11:05 | <b>OP-69: Stefano Cinti</b><br>Paper-Based Electroanalysis: The Best is Yet to Come  | <b>OP-70: Melinda David</b><br>Tailoring Nanomaterials Towards the Specific Detection of PFAS using Electrochemical Sensing Surfaces         |
| 11:05 – 11:20 | <b>OP-71: Anastasios Economou</b><br>Multi-Folding Electrochemical Paper-Based Devices for (Bio)Sensing Applications   | <b>OP-72: Giulia Moro</b><br>AI-Ready Yes/No Perfluoroalkyl Substances Screening in Drinking Water   |
| 11:20 – 11:40 | <i>Coffee Break</i>  |  |

**Auditorium (Room 3.2.14)**

Chair: Rodrigo A. A. Muñoz

**Lecture Hall (Room 3.2.15)**

Chair: Serena Arnaboldi

11:40 – 11:55

**OP-73: Christopher M.A. Brett**  
New Polymer-Modified-Electrode  
Electrochemical Sensors and  
Biosensors: the Role of Deep  
Eutectic Solvents

**OP-74: Danjela Kuscer**  
Electrochemical Detection of  
Environmental Pollutants in a Flow-  
Based Analytical Sensor Platform

11:55 – 12:10

**OP-75: Rasa Pauliukaite**  
Investigation of New Redox  
Polymers for Application in  
Electrochemical Sensing

**OP-76: Alexandr Stratulat**  
A Generalizable Machine Learning  
Framework for Voltammetric  
Detection of Chemical Threats

12:10 – 12:25

**OP-77: Verdiana Marchianò**  
Bioinspired Edible Hydrogels for In  
Situ Gastrointestinal Glucose  
Detection

**OP-78: Pauline Kiefer**  
Prediction of Glucose  
Electrochemical Enzymatic  
Biosensor's Sensitivity Using  
Machine Learning

12:25 – 12:40

**OP-79: Mercè Pacios**  
TMD-Polymer Nano-Architectures  
as Smart Platforms: From Stimuli-  
Responsive Environmental  
Remediation to Biomedical  
Applications

**OP-80: Julia Mazurkó**  
Electrochemical Fingerprinting  
Beyond Pattern Recognition:  
Establishing Structural Origins of  
Voltammetric Response

12:40 – 12:55

**OP-81: Livia Alexandra Dinu**  
Graphene Nanocomposite-based  
Electrochemical Sensors Fabricated  
on Silicon Substrate for Food  
Applications

**OP-82: Eduardo Laborda**  
From Feedback Regimes to  
Architecture Characterisation:  
Theory-Guided Redox Cycling in  
Two-Electrode Sensors

12:55 – 14:00

*Lunch*

14:00 – 18:00

**Excursion**

19:30 – ...

**Gala Dinner**

## Thursday, June 11

*Auditorium (Room 3.2.14)*

Chair: Elena Ferapontova

|              |   |  |
|--------------|---|--|
| 9:00 – 9:45  | <b>Plenary Lecture (PL-4)</b><br><b>Kristina Tschulik</b> | Bridging From Art to Application –<br>Electrocatalytic Insights From Pico- to Ampere<br>Levels |
| 9:45 – 10:15 | <b>Keynote Lecture (KN-6)</b><br><b>Paolo Actis</b>       | Structural Analysis of Ribosomes with Solid-<br>State Nanopores                                |

*Auditorium (Room 3.2.14)*

Chair: Kristina Tschulik

*Lecture Hall (Room 3.2.15)*

Chair: Paolo Actis

|               |   |   |
|---------------|---|---|
| 10:15 – 10:35 | <b>IN-11: María Isabel Pividori</b><br>Electrochemical Biosensing<br>Platform Enabled by Biofunctional<br>and Biomimetic Magnetic Particles.<br>From Fever Triage to Exosomes and<br>Waterborne Pathogens | <b>IN-12: Jay D. Wadhawan</b><br>Field Effects at Electro-Bio-Geo<br>Interfaces and their Applications    |
| 10:35 – 10:50 | <b>OP-83: Eduardo M. Richter</b><br>Rapid and Reproducible Robotic<br>Cleaning of Glassy Carbon<br>Electrodes   | <b>OP-84: Conor F. Hogan</b><br>Ultra-low cost Voltammetric<br>Sensing using Smartphone Audio<br>Hardware |
| 10:50 – 11:05 | <b>OP-85: Albert Schulte</b><br>Pyrolytic Graphene Electrodes with<br>Electrodeposited Copper Surface<br>Modification for Water<br>Nitrate/Nitrite Analysis   | <b>OP-86: Áine Brady</b><br>Spatially Controlled, Wirefree, Drug<br>Release Along a Single PEDOT Film     |
| 11:05 – 11:20 | <b>OP-87: Celia Toyos-Rodríguez</b><br>Electrochemical Monitoring of<br>Riboflavin in Fortified Food Matrix<br>Using Tailored Graphene-Based<br>Aerogels  | <b>OP-88: Guobao Xu</b><br>Electrochemical Detection Based on<br>Simple Pre-Reaction                      |

11:20 – 11:40 *Coffee Break*

*Auditorium (Room 3.2.14)*

Chair: María Isabel Pividori

*Lecture Hall (Room 3.2.15)*

Chair: Jay D. Wadhawan

11:40 – 11:55  
**OP-89: Serena Arnaboldi**  
Wireless Bipolar Electrochemistry  
at Chiral Polymer Interfaces: A New  
Paradigm for Analytical  
Microreactors

**OP-90: Frank-Michael Matysik**  
Electrochemical Strategies for  
Capillary Flow Systems: Inlet,  
Outlet, and MS Coupling

11:55 – 12:10  
**OP-91: Konrad Rudnicki**  
Electrochemical Approaches at the  
Liquid–Liquid Interfaces for  
Ensuring Food Quality Control

**OP-92: Mariusz Pietrzak**  
Valve-free Lab-on-a-Foil  
Microsystem for Electrochemical  
Immunodetection of Neutrophil  
Gelatinase-Associated Lipocalin

12:10 – 12:25  
**OP-93: M. Asunción Alonso-Lomillo**  
Contactless Sensor for Long-term  
Amperometric Detection of Volatile  
Thiols in Wine

**OP-94: Robert P. Johnson**  
Pharmaceutical Analysis with  
Nanopores in Non-Aqueous Solvent

12:25 – 12:40  
**OP-95: Joseany M. S. Almeida**  
Electroactive Poly(Brilliant Cresyl  
Blue) Films by Electropolymeriza-  
tion in Ethaline Deep Eutectic  
Solvent on Graphene Quantum Dot  
Modified Carbon Electrodes for  
Dipyrene Sensing

**OP-96: Bengisu Yöney**  
Impedance-Based Detection and  
Monitoring of Biofilm Development  
by *Staphylococcus aureus* and  
*Staphylococcus epidermidis*

*Auditorium (Room 3.2.14)*

12:40 – 13:20 **Closing Ceremony**

# Poster Presentations

## Poster Session 1

Posters P-1 to P-84

On display Monday, June 8

|             |                             |  |
|-------------|-----------------------------|--|
| <b>P-1</b>  | <b>Menasria Abdelmouaiz</b> | Binder-Free Ni–Cu Oxide Nanoarchitectures Grown on Nickel Foam for Enhanced Non-Enzymatic Glucose Sensing  |
| <b>P-2</b>  | <b>Izri Yasmine</b>         | Grass-Like CuCo Oxide Nanowire Arrays on Nickel Foam for Sensitive and Wide Range Non-Enzymatic Glucose Sensing  |
| <b>P-3</b>  | <b>Margarida António</b>    | Electrodeposition-Based Integration of Zinc-Tin Oxide Nanostructures for High-Sensitivity pH Sensors   |
| <b>P-4</b>  | <b>Murat Aydemir</b>        | Electrochemical Sensor Application of 1T-MoS <sub>2</sub> QDs/BD-g-C <sub>3</sub> N <sub>4</sub> Heterojunction Structure                                  |
| <b>P-5</b>  | <b>Mia Ambuski</b>          | Electroanalytical Approach to Uncover Neurochemical Changes Induced by Persistent Organic Pollutants   |
| <b>P-6</b>  | <b>Nicola Furlan</b>        | Development of 3D Electroactive Scaffolds for <i>In-Situ</i> Electrochemical Neurotransmitter Detection  |
| <b>P-7</b>  | <b>Yaroslav Bazel</b>       | Pyranter-sensitive Potentiometric Sensors Based on Ion Pairs of Some Xanthene Reagents   |
| <b>P-8</b>  | <b>Doratheia S. Lee</b>     | First Electrochemical Characterization of Lorlatinib Enabling Investigation of Chemotherapy-Induced Cognitive Decline                                      |
| <b>P-9</b>  | <b>Rowan S. Blake</b>       | Electrostatic Interaction Between Gentamicin and the Ferri/Ferrocyanide Redox Couple as a New Potential Detection Methodology                              |
| <b>P-10</b> | <b>Mariola Brycht</b>       | Thin Organic Film Electrodes as a Promising Tool for The Investigation of The Anticancer Drug Vincristine  |
| <b>P-11</b> | <b>Clara Pérez-Ràfols</b>   | Toward Practical pH Sensing: Commercial Gold SPEs for Electrochemical Applications   |
| <b>P-12</b> | <b>Núria Serrano</b>        | Pulsed Amperometric Detection as a Versatile Tool for HPLC Analysis of Multistep Redox Compounds   |
| <b>P-13</b> | <b>Alessandra Cutaia</b>    | A Voltammetric e-MIP-Modified Screen-Printed Sensor for the Determination of L-Tryptophan in Human Serum   |
| <b>P-14</b> | <b>Sevinc Kurbanoglu</b>    | Molecularly Imprinted Electrochemical Sensor Based on Polyaniline Decorated Strontium-Metal Organic Framework Nanocomposite for the Detection of Ibrutinib |

|             |                                 |   |
|-------------|---------------------------------|---|
| <b>P-15</b> | <b>Carolina Neves Lourenço</b>  | Magnetic MIPs: A Promising Tool for PFOA Sensing  |
| <b>P-16</b> | <b>Mandana Amiri</b>            | Electrochemiluminescence Sensors Based on Engineered Carbon Quantum Dot Luminophores  |
| <b>P-17</b> | <b>Mamas Prodromidis</b>        | Screen-Printed Electrochemiluminescence Modules Utilizing Novel Luminophores for Environmental and Clinical Applications                          |
| <b>P-18</b> | <b>Paula Caldevilla-Collado</b> | Unmodified Screen-Printed Electrodes for Sensitive and Direct ECL Detection of Fentanyl   |
| <b>P-19</b> | <b>Eun Joong Kim</b>            | Electrochemical Detection of Fentanyl and Morphine Using Au–NiO <sub>x</sub> -Modified Screen-Printed Carbon Electrodes                           |
| <b>P-20</b> | <b>José Luiz da Silva</b>       | Voltammetric Analysis of Pyrazinamide at a Graphene Oxide-Modified Screen-Printed Carbon Electrode  |
| <b>P-21</b> | <b>Lucio Angnes</b>             | Sustainable Electrochemical Sensors from Bamboo Bark  |
| <b>P-22</b> | <b>Ammara Aziz</b>              | Laser-Induced Graphene Electrodes for the Detection of <i>Cryptosporidium parvum</i>  |
| <b>P-23</b> | <b>Carina S.P. Vieira</b>       | Electrochemical Assessment of CYP3A4 Catalysis Using a Do-it-Yourself Laser-Induced Graphene Electrode Platform                                   |
| <b>P-24</b> | <b>Celia Toyos-Rodríguez</b>    | Carbon-Based Aerogels as Advanced Electrode Materials for Non-Enzymatic Glucose and Acetaminophen Detection                                       |
| <b>P-25</b> | <b>José Manuel Díaz-Cruz</b>    | Commercial Screen-Printed Carbon Electrodes for the Continuous On-site Monitoring of Organic UV Filters in Studies of Adsorption by Microplastics |
| <b>P-26</b> | <b>Njoroge Serah</b>            | Advanced Analysis of L-Lysine Electro-Grafting Conditions on Carbon Electrodes  |
| <b>P-27</b> | <b>Drochss Pettry Valencia</b>  | Graphene-Based Electro-Fenton Electrochemical Sensors for the Determination of Total Emerging Contaminants in Water                               |
| <b>P-28</b> | <b>Oisín Foley Doyle</b>        | Sculpting Electric Fields for Spatial Control in Three-Dimensional Bipolar Electrochemistry   |
| <b>P-29</b> | <b>Deanna Saunders</b>          | Structural Analysis of Ribosome with Solid-State Nanopores  |
| <b>P-30</b> | <b>Ho-Sub Bae</b>               | Solar-Driven Waste Valorization with Concurrent Hydrogen Production on TiO <sub>2</sub> Nanorods in Seawater                                      |
| <b>P-31</b> | <b>Tuan Kiet Nguyen</b>         | Covalent Organic Frameworks Modified-Electrode Designed for PFAS Treatment via Electrochemical Method   |
| <b>P-32</b> | <b>Sarang Kim</b>               | Beyond Water Oxidation: Selective Biomass Valorization Enables Unassisted PEC H <sub>2</sub> O <sub>2</sub> Production on Iron Oxide Photoanodes  |
| <b>P-33</b> | <b>Yoanna Penkova</b>           | Electrochemically Synthesized Cobalt-Tungsten Oxides as Photo-Anodes for Photo-Electrochemical Water Splitting                                    |

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| <b>P-34</b> | <b>Vittorio Ricci</b>          | Chemically Stable SnSe <sub>2</sub> /TiO <sub>2</sub> Photoanode Heterostructure for Efficient Solar to Energy Conversion in Neutral Electrolyte            |
| <b>P-35</b> | <b>Ieva Barauskienė</b>        | The Influence of Iron Oxide Phase on the Electrocatalytic Activity of Ni- and Co-Doped Iron Oxides for AEM Electrolysis                                     |
| <b>P-36</b> | <b>Youngkook Kwon</b>          | Designing and Understanding Interfaces for CO <sub>2</sub> Electrolysis   |
| <b>P-37</b> | <b>Krzysztof Mech</b>          | Efficiency and Stability of Thermally Evaporated Cu@GDE Electrodes for eCO <sub>2</sub> RR  |
| <b>P-38</b> | <b>Sidra Muzaffar</b>          | Evaluating the Stability, Selectivity and Activity of Cu-Ag Bimetallic Catalysts for Electrochemical Reduction of CO <sub>2</sub>                           |
| <b>P-39</b> | <b>Katarzyna Wielondek</b>     | Nonmetalated Hypercrosslinked Polymer Oxygen Sponges for ORR Electrocatalysis   |
| <b>P-40</b> | <b>Metka Benčina</b>           | Electrochemical Synthesis of Nanotubular TiO <sub>2</sub> Structures Using Environmentally Friendly Electrolytes  |
| <b>P-41</b> | <b>Akın Baysal</b>             | Investigation of the Electrochemical Properties of Optically Active Transition Metal-Amido-Phosphide Complexes  |
| <b>P-42</b> | <b>Djamel Eddine Kadri</b>     | Synergistic Electrocatalysis in NiMoO <sub>4</sub> /PANI Nanorod Arrays: a Hybrid Electrode for Efficient Methanol Oxidation                                |
| <b>P-43</b> | <b>Nahush Modak</b>            | Reaction-Center Immobilisation in Redox Hydrogels Improves Operational and Storage Stability for Herbicide Sensing  |
| <b>P-44</b> | <b>Anne de Poulpiquet</b>      | Visualization of the Electrode/Electrolyte Interface by <i>Operando</i> Fluorescence Microscopy: Characterization of the Local Electro-Enzymatic Reactivity |
| <b>P-45</b> | <b>Rosa Maria Matteucci</b>    | Electrochemical Investigation of Charge Transfer and Redox Regulation in Nanoparticle–Purple Bacteria Biohybrid Systems                                     |
| <b>P-46</b> | <b>Kornelia Bobrowska</b>      | Investigation of Bilirubin Oxidase Adsorption Processes on Porous Gold Layer – Kinetic and Thermodynamic Approach   |
| <b>P-47</b> | <b>Paula Calli Falcowski</b>   | Study of Oxygen Consumption by Bioluminescent <i>K. phaffii</i> Yeast with a Platinized Platinum Microelectrode and a 3D-Printed Electrochemical Cell       |
| <b>P-48</b> | <b>Alessandro Cacia</b>        | Evaluation of Biophotovoltaic Activity of Electrodes Modified with <i>Synechocystis</i> sp. Cells Isolated and Stored for Prolonged Time                    |
| <b>P-49</b> | <b>Sebastian Freko</b>         | Towards a “Digital” Readout for Cell-Free Biosensors Using Single Impact Electrochemistry   |
| <b>P-50</b> | <b>Byung-Kwon Kim</b>          | Single-Entity Electrochemistry for Metal Ion Sensing: Direct Nanoparticle Generation and Emulsion-Assisted Ion Trapping                                     |
| <b>P-51</b> | <b>Daniela S. Flamino</b>      | A Novel Amperometric Immunosensing Amyloid-Based Bioplatfrom  |
| <b>P-52</b> | <b>Araceli González-Cortés</b> | Electrochemical Biosensing Platforms: A Valuable Strategy for Microbiome Screening  |

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| <b>P-53</b> | <b>Viktorija Liustrovaite</b> | MXene-based Electrochemical Immunosensor for the Detection of SARS-CoV-2 Spike Protein  |
| <b>P-54</b> | <b>María Pedrero</b>          | Integrated Sustainable Silk Fibroin-Based Electrochemical Immunoplatfrom for TIM-1 Determination in Oncological and Allergy Scenarios   |
| <b>P-55</b> | <b>Kristina Sobol</b>         | Polydopamine-Modified $Ti_3C_2T_x$ MXenes for Electrochemical Immunosensing   |
| <b>P-56</b> | <b>Michele Abate</b>          | A 3D-Printed Portable Smartphone-Based Analytical Device for Dual Spectrophotometer and Electrochemical Monitoring of $\beta$ -Galactosidase Activity   |
| <b>P-57</b> | <b>Estefanía Costa-Rama</b>   | Evaluation of 3D-Printed Electrochemical Cells Based on Conductive Filaments for Electroanalytical Applications   |
| <b>P-58</b> | <b>Anesa M. Martin</b>        | 3D-Printed Electrodes for Low-Cost Point-Of-Care $CO_2$ Monitoring  |
| <b>P-59</b> | <b>Maria Trachioti</b>        | Micropillar-Based 3D-Printed Electrodes to Deliver Highly Sensitive and Heavy-Duty Wearable Sensors   |
| <b>P-60</b> | <b>Flavio Della Pelle</b>     | 3D-Printed Analytical Device Integrating Functional Paper Components for Direct Amitraz Sensing   |
| <b>P-61</b> | <b>Grzegorz Kowalski</b>      | Electrochemical Platform for Electroanalysis of Codeine: Which Does it Better?  |
| <b>P-62</b> | <b>Veerappan Mani</b>         | Low-Cost Scalable Printed Electrodes for Early Aquaculture Health Assessment  |
| <b>P-63</b> | <b>Leticia Siqueira</b>       | 3D-Printed Carbon Black Electrode for Electrochemical Analysis of Agricultural Compounds  |
| <b>P-64</b> | <b>Robert D. Crapnell</b>     | The Next Generation of Additive Manufacturing Electrochemistry: Bespoke Polymers and Multifunctional Filaments  |
| <b>P-65</b> | <b>Callum V. A. Crockford</b> | Iteratively Prototyping 3D Printed Cells with Integrated Electrodes for <i>In-situ</i> Radical Generation and Detection via Electrochemical-Electron Paramagnetic Resonance Spectroscopy (EC-EPR) |
| <b>P-66</b> | <b>Rafael Del Caño</b>        | Evaluation and Development of New Electrochemical Platforms Based on 3D Printing  |
| <b>P-67</b> | <b>Serafina Coupe</b>         | Barcoded DNA Origami for Multiplexed Single Molecule Biosensing   |
| <b>P-68</b> | <b>Yingxi Long</b>            | Accurate Aptamer Assays for Blood-Circulating Forms of HER-2/neu  |
| <b>P-69</b> | <b>Bruno Lourenço</b>         | Development and Analytical Study of an Amperometric Aptasensor for Label-Free Detection of Uric Acid  |
| <b>P-70</b> | <b>Giuseppina Rea</b>         | Sub-Femtomolar Detection of Serum HER-2/neu Via Electrocatalytic Reduction of Ferricyanide by Methylene Blue and Ruthenium Hexamine at PEG-Blocked Aptamer Electrodes                             |

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| <b>P-71</b> | <b>Sara Reguera-Riera</b>             | Quinone-Based Electrogenerated Coatings for Covalent Immobilization of DNA Probes in Electrochemical Genosensing   |
| <b>P-72</b> | <b>Víctor Ruiz-Valdepeñas Montiel</b> | Multimodal Electroanalytical Biotechnologies for Unraveling the Multifunctionality of Non-canonical G-quadruplex Structures in Human Biopsies  |
| <b>P-73</b> | <b>Senyao Wang</b>                    | Dual-Channel Electrochemical Signal Conversion on Interdigitated Electrodes for Rapid Small-Molecule Analysis in Biofluids   |
| <b>P-74</b> | <b>Lianxin Xu</b>                     | Electroanalytical Fingerprinting of Aptamer-Nanopore Surface Chemistry for Robust Neurochemical Biosensing   |
| <b>P-75</b> | <b>Lorenzo Zarini</b>                 | A Functional Polymer Coating Enabling Stable and Oriented DNA Immobilization on Electrochemical Electrodes   |
| <b>P-76</b> | <b>Alexander Frey</b>                 | Electrolyte Potential Control Schemes for Redox-Cycling  |
| <b>P-77</b> | <b>Joaquín Gonzalez</b>               | Dos and Don'ts in the Measurement of Kinetics Influences of Electrochemical Responses Obtained Under Spatial Confinement   |
| <b>P-78</b> | <b>Jian F.S. Pereira</b>              | Beyond Equations: Experimental Insights into Detection Limits in Electroanalysis   |
| <b>P-79</b> | <b>Milkica Janeva</b>                 | Theoretical and Experimental Study of Electrode Mechanisms in Drug Analysis with Square-Wave Voltammetry   |
| <b>P-80</b> | <b>Javier López-Asanza</b>            | Square-Wave Voltammetry in Reference-Free Redox-Cycling: Model-Assisted Design and Optimisation  |
| <b>P-81</b> | <b>Maria Jassibe Hernandez</b>        | Use of a Machine Learning Model of Impedance Spectroscopy Data for Acrylamide Prediction in Roasted Coffee   |
| <b>P-82</b> | <b>Daan Vangerven</b>                 | Electrochemical Analysis for On-Site Explosive Identification: From Raw Signals to Reliable Sensing  |
| <b>P-83</b> | <b>Aleksander Jaworski</b>            | Multi-Frequency AC Staircase Voltammetry Coupled with Four-Way Chemometrics as an Ultimately Relevant Approach for On-Line Monitoring of Electroplating Baths in Semiconductor Manufacturing |
| <b>P-84</b> | <b>Rasa Pauliukaitė</b>               | UV-Assisted Matrix Decomposition for Ultra-Trace Rhodium Determination in Automotive Exhaust Samples Using Differential Pulse Adsorptive Stripping Voltammetry                               |

## Poster Session 2

Posters P-85 to P-165

On display Tuesday, June 9

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| <b>P-85</b>  | <b>Sara R. Gaspar</b>            | Development of a New Amperometric Sensor for TAN Quantification Based on the Berthelot Reaction                               |
| <b>P-86</b>  | <b>Ana Maria Chiorcea Paquim</b> | Electrochemical and AFM Investigation of POT1–Telomeric DNA Interactions at Carbon Interfaces                                 |
| <b>P-87</b>  | <b>Jelena Vujančević</b>         | Tailoring Electrochemical Deposited Nickel Hydroxide/Oxyhydroxide Morphology on Screen-Printed Electrodes for Glucose Sensing |
| <b>P-88</b>  | <b>Pavlinka Kokoskarova</b>      | Development of a Voltammetric Strategy for the Detection of Uric Acid, Bilirubin, and Albumin in Human Serum                  |
| <b>P-89</b>  | <b>Giulia Moro</b>               | Opto-Impedimetric Screening of Sub-5 $\mu\text{m}$ Polystyrene Microplastics Using a Peptide-based Biorecognition Layer       |
| <b>P-90</b>  | <b>Andrzej Krempniński</b>       | Electrochemical Behavior of Sunset Yellow FCF at the Electrified Liquid-Liquid Interface                                      |
| <b>P-91</b>  | <b>Karolina Kwaczyński</b>       | Unmasking Street Amphetamine  |
| <b>P-92</b>  | <b>Emilia Powalka</b>            | Towards Electrochemical Determination of Psilocybin Using ITIES   |
| <b>P-93</b>  | <b>Clara Pérez-Ràfols</b>        | Integrating Electroanalysis into Dual-Sensing Strategies for Complex Optical Systems  |
| <b>P-94</b>  | <b>Ivana Novak Jovanović</b>     | Electrochemistry Meets Designer Drugs: Voltammetric Determination of Synthetic Cannabinoids in Herbal Products and e-Liquids  |
| <b>P-95</b>  | <b>Lucie Pražáková</b>           | Comparison of On-line EC–MS and Off-line Batch and Flow Approaches for Electrochemical Oxidation of Pharmaceuticals           |
| <b>P-96</b>  | <b>Salah Samir</b>               | Monometallic Oxide Deposited on Nickel Foam for Electrochemical Cocaine Sensor  |
| <b>P-97</b>  | <b>Núria Serrano</b>             | Cyclic Voltammetry Fingerprints as a Tool to Authenticate Honeys  |
| <b>P-98</b>  | <b>Krittamate Buppasirakul</b>   | A Rapid Dose-Response Toxicity Bioassay Using Ferricyanide-Mediated Two-Electrode Electroanalysis                             |
| <b>P-99</b>  | <b>Christopher M. A. Brett</b>   | Green-Synthesised MIP-Nanohybrid Sensors for the Electrochemical Monitoring of Emerging Pollutants                            |
| <b>P-100</b> | <b>Valérie Gaudin</b>            | Aptasensors and MIP-Based Electrochemical Sensors for the Detection of Chloramphenicol in Foodstuffs                          |

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| <b>P-101</b> | <b>Soodabeh Hassanpour</b>     | Determination of Antidepressant Drugs Using a Surface Molecularly Imprinted MMM/GO-Modified Carbon Paste Electrode   |
| <b>P-102</b> | <b>Henri P.A. Nouws</b>        | Inkjet-Printed Paper-Based Electrode Modified with a Molecularly Imprinted Polymer for the Analysis of Sulfamethoxazole  |
| <b>P-103</b> | <b>Feyyaz Durap</b>            | Investigation of Electrochemical Behavior of Molnupiravir Using 2D-0D Heterojunction Structures as an Electrode Material   |
| <b>P-104</b> | <b>Slađana Đurđić</b>          | Metal-Functionalized Graphitic Carbon Nitride Nanosheets: Synthesis, Structural, Morphological, and Electrochemical Characterization                                     |
| <b>P-105</b> | <b>Beshara S. Isaacs</b>       | Highly Sensitive Nanocomposite Iridium-Doped Graphitic Carbon Nitride Electrochemical Sensor for Wastewater Estrogens  |
| <b>P-106</b> | <b>Saara Sippola</b>           | Exploring the Nature of Dopamine Adsorption on SWCNTs for Electrochemical Sensing  |
| <b>P-107</b> | <b>Rafaela C. de Freitas</b>   | Wearable Electrochemical Sensor for Sport Monitoring   |
| <b>P-108</b> | <b>Isha Basumatary</b>         | Microneedle-Integrated $W_2TiC_2T_x$ MXene@WSe <sub>2</sub> Nanocomposite for Real-Time In-Vivo Electrochemical Glucose Monitoring                                       |
| <b>P-109</b> | <b>Anton Popov</b>             | Fabrication of Polymeric Nanofibers Membranes Coated with MXenes and Gold Nanorods Nanoconjugates  |
| <b>P-110</b> | <b>Njoroge Serah</b>           | Rapid Multi-Detection of Drugs in Water by a Cost-Efficient Electrochemically Activated GCE  |
| <b>P-111</b> | <b>José Manuel Díaz-Cruz</b>   | Analytical Applications of UV-Vis Spectroelectrochemistry with Screen-Printed Electrodes   |
| <b>P-112</b> | <b>Zoraida González</b>        | Carbon Quantum Dots as Active Materials for Electrochemical Sensing of Biological Targets and Water Pollutants   |
| <b>P-113</b> | <b>Ehsan Mohammadi</b>         | Engineering Fe <sub>2</sub> O <sub>3</sub> -TiO <sub>2</sub> -Carbon Dot Heterostructures for Enhanced Photoelectrochemical Water Oxidation                              |
| <b>P-114</b> | <b>YoungWoon Kang</b>          | Optimization of an Analytical Method for the Determination of MOSH and MOAH in Food Samples using On-Line LC-GC-FID  |
| <b>P-115</b> | <b>Miguel A. Jimenez-Munoz</b> | NanoLuc Bioelectrochemical Sensor on Unmodified Screen-Printed Carbon Electrodes as a Low-Cost Alternative for Enzyme Kinetics Determination and Small Molecules Sensing |
| <b>P-116</b> | <b>Yong-Wook Choi</b>          | Investigating Faradaic Efficiency Analysis for Anodic Electrocatalysis   |

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| <b>P-117</b> | <b>Katherine S. Bettencourt</b> | <i>Ortho or Para?</i> The Role of Quinones in Organic Cathodes for Sodium-Ion Batteries  |
| <b>P-118</b> | <b>Nikolas Franke</b>           | Modulated Electrochemical AFM for Nanoscale Analysis of Ion Intercalation in Battery Materials   |
| <b>P-119</b> | <b>Lana Regent</b>              | Validation of TLM Fitting Parameters of Symmetric Cells from Harvested NMC Cathodes  |
| <b>P-120</b> | <b>Lana Regent</b>              | Low-frequency EIS of Degraded Commercial NMC-Graphite Li-ion Cells   |
| <b>P-121</b> | <b>Kyosik Hwang</b>             | Quantifying Alkaline pH Generation in Bipolar Membrane Electrodialysis under Continuous Once-Through Operation                               |
| <b>P-122</b> | <b>Ebrahim Sadeghi</b>          | Shaping Low-Iridium IrRuO <sub>x</sub> Electrocatalysts with Structural and Electronic Modulation for Proton Exchange Membrane Electrolyzers |
| <b>P-123</b> | <b>Luca Marie Sicking</b>       | Novel Electrode Design to Couple Theory and Experiment for the Investigation of H <sub>2</sub> Transport under Confinement                   |
| <b>P-124</b> | <b>Ji-Hyung Han</b>             | Electroanalytical Insight into Porous Mg(OH) <sub>2</sub> Formation under Seawater Acidification in Bipolar Membrane Electrolysis            |
| <b>P-125</b> | <b>Nikita Griscenko</b>         | Corrosion of Al Waste for Hydrogen Production  |
| <b>P-126</b> | <b>Mirela Santos</b>            | Temperature Effects on Localized Corrosion of Copper in Chloride Solutions   |
| <b>P-127</b> | <b>Berrabha Samar Kenza</b>     | Development and Study of the Protective Efficacy of New Corrosion Inhibitors Based on Plant Extracts   |
| <b>P-128</b> | <b>Francesca Rizzo</b>          | Bioelectrochemical Investigation of the W-Dependent Formate Dehydrogenase from <i>Desulfovibrio vulgaris</i> Hildenborough                   |
| <b>P-129</b> | <b>Douglas P.M. Saraiva</b>     | Oxygen Permeability of Contact Lenses Probed by Scanning Electrochemical Microscopy  |
| <b>P-130</b> | <b>Nuno M. Machado</b>          | A Sulfate-Reducing Bacterium as a Biocatalyst for Green Electrosynthesis   |
| <b>P-131</b> | <b>Ivan Osipenko</b>            | Combined Detection of Biofilm Formation of <i>Staphylococcus epidermidis</i>   |
| <b>P-132</b> | <b>Ricardo J.B. Leote</b>       | Electrochemical Characterization of Conjugated Polymer Photoelectrodes for Biophotovoltaic Applications                                      |
| <b>P-133</b> | <b>Zeynep Elcim Koru</b>        | Detecting Exosomes Through Electrochemical Biosensors in Health Applications   |
| <b>P-134</b> | <b>Lei Oscar Cuasay</b>         | Dual-mode Sensing of Breast Cancer-derived Extracellular Vesicles Using Electrochemical Impedance Spectroscopy and Surface Acoustic Waves    |

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| <b>P-135</b> | <b>Marcela A. Segundo</b>       | Concanavalin A-Based Impedimetric Biosensor for Glycoprotein Analysis: From Model System to Rituximab Detection                       |
| <b>P-136</b> | <b>Cinthy P. Felix-Navarro</b>  | Electrochemical Optimization of a Gold-Modified Screen-Printed Carbon Electrode Platform for <i>Loxosceles</i> Spider Venom Detection |
| <b>P-137</b> | <b>Benediktas Brasiūnas</b>     | The Prospects of Using MXenes in the Design of Electrochemical Immunosensor for SARS-CoV-2 Spike Protein Detection                    |
| <b>P-138</b> | <b>Lilian Collins</b>           | Found in Translation: Nanoparticle Bioconjugation as a Tool for Tailored Functionalisation to Gold Sensor Surfaces                    |
| <b>P-139</b> | <b>Pablo Fagúndez</b>           | Cyclic Voltammetry as a Reliable Tool for the Step-by-Step Assessment of Bioconjugate Nanoparticles                                   |
| <b>P-140</b> | <b>Sanja Lazarova</b>           | Green and Sustainable Synthesis of Silver Nanoparticles Using Grape Seeds for Overcoming Aggregation Through a Heterogeneous Protocol |
| <b>P-141</b> | <b>Maria Trachioti</b>          | Poly(4-vinylpyridine)-Based Electrodes as pH Sensors for the Prompt and Sensitive Detection of Carbapenemases                         |
| <b>P-142</b> | <b>Anastasios Papavasileiou</b> | Empowering Near-Patient Diagnostics in Surgical Room Through Electrochemical Sensing  |
| <b>P-143</b> | <b>Elena Bernalte</b>           | Edible Oils as Bio-Plasticizers for Sustainable Additive Manufactured Electrochemical Platforms                                       |
| <b>P-144</b> | <b>Luca Sartorelli</b>          | PEDOT:PSS as Additive in Photopolymerization-Based 3D Printing  |
| <b>P-145</b> | <b>Lucía Quintana</b>           | Graphene-Based Inkjet Printed Electrochemical Sensors for Detecting Water Contaminants of Emerging Concern                            |
| <b>P-146</b> | <b>Magno A.G. Trindade</b>      | All-in-One 3D-Printed Microfluidic Electroanalytical Platform   |
| <b>P-147</b> | <b>Ana Fernández-Quesada</b>    | Draw, Flow, Detect: A Do-It-Yourself Paper-Based Microfluidic Platform with Integrated Electrochemical Detection                      |
| <b>P-148</b> | <b>Daciana Botta</b>            | Rational Design for Reliable Microfluidic Electrochemical Devices   |
| <b>P-149</b> | <b>Liliana P. T. Carneiro</b>   | From Glucose to Diagnosis: A Paper-Based Fuel Cell Platform for Interleukin-6 (IL-6) Detection in Endometriosis Disease               |
| <b>P-150</b> | <b>Amanda Neumann</b>           | Comparative Evaluation of Multiplexed Electrochemical Screen-Printed Sensor Systems for Drug Detection                                |
| <b>P-151</b> | <b>Željka Boček</b>             | Potentiometric pH Measurement in an Organ-on-a-Chip System Using Polyaniline Functionalized Inkjet-Printed Electrodes                 |

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| <b>P-152</b> | <b>Anna Secundo</b>          | Systematic Characterization and Batch-to-Batch Reproducibility of Commercial Screen-Printed Carbon Electrodes  |
| <b>P-153</b> | <b>Sofiia Ivakh</b>          | Design, Development, and Characterization of Screen-Printed Amalgam Electrodes for Cathodic Determination of Salinomycin   |
| <b>P-154</b> | <b>Jaroslav Filip</b>        | Ruthenium Red as a Modifier of Glassy Carbon Electrodes for H <sub>2</sub> O <sub>2</sub> Sensing  |
| <b>P-155</b> | <b>Jeewoo Kim</b>            | Electrochemical Determination of Polymer Molecular Weight Based on the Mark–Houwink–Sakurada Equation  |
| <b>P-156</b> | <b>Miriam Chávez</b>         | Standardizing Molecular Interfaces for Low-Cost Electrochemistry: Functional Ethylene-Glycol Coatings <i>with</i> and <i>for</i> Electrochemical Quality Control |
| <b>P-157</b> | <b>Sara Krivačić</b>         | Pyrolysis-Induced Enhancement of Capacitance and Hydrophobicity in Fullerene-Stabilised ZIF-67 Solid Contacts for Screen-Printed Ion-Selective Electrodes        |
| <b>P-158</b> | <b>Yoonji Kim</b>            | Electrochemical Evaluation of Enzymatic Degradation Kinetics of Polyester: A Quantitative Platform for Real-Time Monitoring                                      |
| <b>P-159</b> | <b>Aaron Mena-Rodríguez</b>  | Amperometric Biosensors Based on Engineered Glycine Oxidase Variants for Glyphosate Detection  |
| <b>P-160</b> | <b>Adam Hughes-Buchanan</b>  | Electrochemical Detection of Chitin using a Novel Enzyme Combination   |
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