

Wearable and Implantable
Sensors and
Electrochemical Devices

November 27-29, 2024

Lyon, France

<https://wised2024.univ-lyon1.fr>

wised2024@univ-lyon1.fr

Université Claude Bernard



Lyon 1

Congrès



Lyon 1

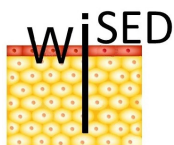


La Région
Auvergne-Rhône-Alpes



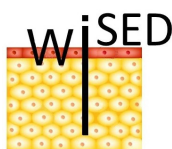
Inserm
La science pour la santé
From science to health





November 27th

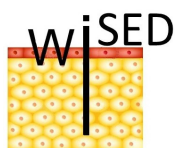
12h35-14h00	Welcome
14h00-14h35	Parastoo Hashemi <i>Ex vivo</i> electrochemical platform for antidepressant screening O01 (Chairperson: S.Marinesco)
14h35-15h35	Session Wearable (chairperson: S.Marinesco) Chloé Aymard Development of a new wearable auto-calibrated electrochemical biosensors for multi-target detection in sweat samples O02 Melissa Hexter The characterization of simple laser-induced carbon electrodes for fast scan cyclic voltammetry O03 Rémy Séquestra A hormonal monitoring device for detection of ovulation in cows O04
15h35-16h00	Coffee Break
16h00-16h35	Martin Peacock Four commercial cgm case studies: an analysis of success and failure O05 (Chairperson: A.Errachid)
16h35-17h35	Session Implantable/ In Vitro Sensors (Chairperson: A.Errachid) Seiya Tsujimura Immobilization of redox mediators for a fungal fad-dependent glucose dehydrogenase electrode O06 Riccarda Antiocha Wearable electrochemical microneedles-based sensor for real-time continuous catecholamine detection O07 Marc Parrilla Wearable 3D-printed microneedle voltammetric sensor for uric acid monitoring in interstitial fluid O08
17h35	Welcome Cocktail



November 28th

9h00-9h35	Serge Cosnier Bioelectrocatalytic materials based on carbon nanotubes from design to <i>In vivo</i> applications O09 (Chairperson: S. Tsujimura)
9h35-10h35	Session Implantable Sensors (Chairperson: S. Tsujimura) Adam Milam Investigating glucose oxidation cascades for self-powered glucose biosensors O10 Thomas Lecourt Optimization of implantable glucose biofuel cells (Gbfcs) based on gold nanostructures O11 Nicole Jaffrezic-Renault VOC Biosniffers for food quality control and breath monitoring O12
10h35-11h00	Coffee Break
11h00-11h35	Pierre Yves Benhamou Diabetes and glucose monitoring: medical perspectives O13 (Chairperson: A. Zebda)
11h35-12h35	Session Implantable Sensors (Chairperson: A. Zebda) Niels Erik Olesen Microneedle-based porous gold electrochemical sensor for real-time levodopa monitoring O14 Etienne Le Bourdonnec Microelectrode fiber sensors: advancing chemical sensing for implantable and wearable applications O15 Shuting Chen Brain tissue oxygen pressure monitoring using polyphenylenediamine-polyurethane-coated carbon fiber microelectrodes O16
12h35-14h00	Lunch Break
14h00-14h35	Pankaj Vadgama Challenges of biocompatibility for implantable electrodes O17 (Chairperson: P.Mailley)

14h35-15h35	Session Implantable / In Vitro Sensors (Chairperson: P. Mailley) Onur Parlak Transdermal sensing of disease biomarkers enabled by epidermal microneedle patch O18 Boudewijn Van Der Sanden In Vivo biocompatibility, stability and immuno-isolation analysis of new matrixes for an artificial pancreas O19 Sponsor Presentation
15h35-16h00	Coffee Break
16h00-16h35	Shelley Minteer Enzymatic bioelectrodes for a contact lens lactate biofuel cel O20 (Chairperson: I. Shintanda)
16h35-17h35	Session In Vitro Sensors (Chairperson: I. Shintanda) Gauthier Menassol Electrochemical multisensor platform for bioproduction O21 Marc Zelsmann Nanostructured electrodes for amino acid detection O22 Muhammad Iqbal Development of nicu – mof for electrochemical immunosensor applications to detect denv – 3 O23
17h35	Poster Presentation
20h00	Gala Dinner



November 29th

9h00-9h35	Roger Narayan Electrochemical wearable technology and implementation of ai O24 (Chairperson: P.Hashemi)
9h35-10h35	Session Wearable (Chairperson: P.Hashemi) Pauline Kiefer Prediction of glucose electrchemical enzymatic biosensor's sensitivity using machine learning O25 Robert Marks Estimating accrued air toxicity using a wearable luminescent biosensor patch array O26 Sponsor Presentation
10h35-11h00	Coffee Break
11h00-11h35	Session Implantable Sensors (Chairperson: P. Vadgama) Andrew J. Gross Hydrogel microneedle arrays for transdermal bioelectrochemical monitoring with matrix protection O27 Samuel Mugo Transdermal wearable sensors for mental health analytics O28 Laurabelle Gautier Monitoring circulating metabolic markers through microneedle arrays for animal welfare O29 Award Ceremony
12h35-14h00	Lunch Break
14h00-14h35	Isao Shitanda Applications of screen-printed electrodes to wearable biosensing devices O30 (Chairperson: S. Cosnier)
14h35-15h35	Session (Chairperson: S. Cosnier) Mohamed Rezki Rational design of redox active metal organic frameworks for improved enzyme electrode performance O31 Adélèyè Chogolou Towards the development of a wearable biocompatible sensor for dialysis monitoring O32 Anastasia Berezovska Integration and optimisation of electrical impedance sensors in organ-on-chip for monitoring of organoids viability O33
15h35-16h00	Closing Ceremony

P01 Printable mediated glucose biosensor development for wearable devices coupled with skin electrodermal activity [Aoife Newman](#), Benne Dirk Johannes Reinoud Fennema, Eithne Dempsey

P02 Optimization of prussian blue layers on gold and carbon electrodes for lactate biosensor development [Yuki Oguri](#), Chloe Aymard, S. Tsujimura, Abdelkader Zebda

P03 Nanomaterial-based electrochemical sensors for ascorbic acid detection in biomedical and food applications [Sophie Tingry](#), Ines Santiago, Zakia Adaidi, Abdelkader Zebda, Yaovi Holade

P04 Improving the performance of an optical sensor for advanced applications [Abdelkader Aissat](#), Nabil Hafi, Mathieu Halbwax, Samuel Dupont, Jean Pierre Viltot

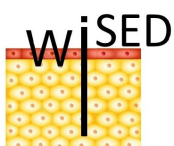
P05 Towards an integrated multiparametric electroanalytical platform for organ-on-chip monitoring [Marie-Helene Steger-Polt](#), Nathalie Demoncheaux, Joris Kaal, Yohann Thomas, Pascale Pham, Pascal Mailley

P06 Ring resonator for glucose determination [Anthony Biard](#), Nicolas Corrao, Thierry Lacrevez, Olivier Lavastre, Edouard Rochefeuille, Tân-Phu Vuong, Pascal Xavier, Gregory Houzet, Valentino Liva

P07 Electrochemical detection of brain dopamine release evoked by electrical or focused ultrasound stimulation [Sarvenaz Khodayari](#), Ivan Suarez-Castellanos, Tom Aubier, Magali Perier, Parastoo Hashemi, Alexandre Carpentier, W. Apoutou N'Djin, Stephane Marinesco

P08 Direct printed electrodes for bioelectronics [Kornelia Bobrowska](#), Marcin Urbanowicz, Marek Dawgul, Kamila Sadowska

P09 Wearable patch based on 3D-printed aolid microneedle potentiometric pH sensor for plant monitoring [Marc Parrilla](#), Annemarijn Steijlen, Phil Clerx, Regan Watts, Karolien De Wael



Abstract book

