



European Materials Research Society

2023 Spring Meeting May 29 | June 2

40th Anniversary

Congress & Exhibition Centre, Strasbourg, France

SYMPOSIUM G

Flexible bioelectronics: a rising star for in situ bioanalysis

Symposium Organizers:

Wolfgang KNOLL, AIT, Vienna, Austria

Annalisa BONFIGLIO, University of Cagliari, Italy

Sabine SZUNERITS, Université de Lille, France

Tanja WEIL, MPIP Mainz, Germany

Monday May 29

G01

Session 1

Chairperson(s) : KNOLL Wolfgang - SZUNERITS Sabine

Londres 1 (Ground floor)

08:45	938	INV	Wearable organic biosensing on textiles	ISMAILOVA Esma
09:15	220		On-Skin Biosensors: Wearable Sweat-analytics for Healthcare (WISH)	YANG Le
09:30	401		Integration of flexible sensors with 3D-printed structures for the development of customized in vitro monitoring platforms	SANDOVAL BOJORQUEZ Diana Isabel
09:45	1916		Laser-based micro-Fabrication of stretchable neural probes for peripheral nerve stimulation	ELMAHMOUDY Mohammed

Monday May 29

G02

Session 2

Chairperson(s) : KNOLL Wolfgang - SZUNERITS Sabine

Londres 1 (Ground floor)

10:30	2825	INV	Lab-on-a-thread for tissue embedded sensing and drug delivery	SONKUSALE Sameer
11:00	237		Towards high performing self-healing electronics: hydrogen bonded conjugated polymers via Ureidopyrimidinone	WESTWOOD Megan
11:15	682		Integrated Enzymatic Bioelectrodes/ Biopolymer-Microneedle Devices for Transdermal Electrochemical Sensing	DARMAU Bastien
11:30	1161		Field-Effect Transistor with a Plasmonic Gate Electrode as a Multivariable Biosensor Device	HASLER Roger
11:45	2368		Direct Recording of Action Potentials of Cardiomyocytes Through Solution Processed Electrolyte-Gated Field-Effect Transistors	KYNDIAH Adrica

Monday May 29

G03

Session 3

Chairperson(s) : BONFIGLIO Annalisa - MACCHIA Eleonora

Londres 1 (Ground floor)

13:30	2403	INV	Chemical and physical sensing with low-dimensional materials	SAMORÌ Paolo
14:00	402		A multi-scale mechanical behavior study of an electrical interconnection solution stretchable and removable for flexible electronic components for biomedical applications	DESPAX-FERRERES Auriane
14:15	871		Printed human machine interfaces using touchless interaction via magnetic fields	OLIVEROS MATA Eduardo Sergio
14:30	925		Biodegradable microneedle-based electrode interface for robust biopotential measurements	TEXIER Isabelle
15:00	1771		PEDOT:Curcumin Electrodes in Neural Interfacing	EL MERHIE Amira
15:30	1927		Silk microelectrodes as deep brain implants	MOUSAVI Hajar
15:45	1649		Thermal drawing of graphene-embedded PVDF fiber for improved performance in wearable triboelectric nanogenerator	ORDU Mustafa

Monday May 29

G_P

Poster session

Etoile (1st floor) - 4.30 p.m to 6.30 p.m

01_1034	Modification of properties of AMPS-based hydrogels prepared by electron-beam-initiated copolymerization with acrylic monomers	SHIN Seunghan
02_1397	Electrolyte gated organic field-effect transistor for point-of-care tests	ORTIZ-AGUAYO María Jesús
03_1609	Robust wireless power transfer system for implantable bioelectronics	YOO Seungwon

04_1653	MoS ₂ -embedded polyvinylidene fluoride flexible nanocomposite fibers for triboelectricity generation via thermal drawing technique	ORDU Mustafa
05_1686	Optimizing Electrode Design for Flexible and Stretchable Displays: A Stress Analysis Study	PARK Ah-Young
06_1965	Kinematic Reliability Evaluation of Sport Motion for Knitted E-textile Sensor at Joint	LEE Jonghan
07_263	A Porous Microneedle Electrochemical Aptamer-Based Sensor for Continuous and Real-Time Creatinine Monitoring	LIU Ta-Chung
08_2151	Intelligent colorimetric sensor for kidney failure assessment in veterinary practice	CHILIBON Irinela

Tuesday May 30

G04

Session 4

Chairperson(s) : SONKUSALE Sameer - SZUNERITS Sabine

Londres 1 (Ground floor)

10:15	317	Single-molecule bioelectronic sensor: improving reliability with machine learning approaches	MACCHIA Eleonora
10:30	1656	Electrolyte-Gated Field-Effect Transistors for sensing an Alzheimer's disease biomarker	RUIZ-MOLINA Sara
10:45	1671	On-Textiles Organic Microfluidic Biosensing via Additive Manufacturing	GALLIANI Marina
11:15	1989	Molecular Layer Deposition of Flexible Hybrid Materials	NOLAN Michael
11:30	2058	Organic and flexible X-ray detectors for medical dosimetry and diagnosis applications	MARTINEZ-DOMINGO Carmen
11:45	2160	Large area flexible conductive cardiac scaffolds by direct laser writing	FARID Nazar

Tuesday May 30

G05

Session 5

Chairperson(s) : KNOLL Wolfgang - WEIL Tanja

Londres 1 (Ground floor)

13:30	2409	From disposable to wearable bioelectronics using paper-derived laser induced graphene	PINHEIRO Tomás
13:45	2837	Printing wearable and bioelectronic sensors with microfibr	WANG Wenyu Andy
14:00	270	Multimodal machine learning enables improved label-free biosensing: COVID-19 diagnostics	YUNDA Jhonny
14:15	788	Capacitive BaTiO ₃ -PDMS hand-gesture sensor and its signal classification using machine learning	FERNANDEZ Frances Danielle
14:30	1225	Capacitive Coupling Phenomenon in Multi-Conductive Layer Bioelectronic Devices	CORNUEJOLS Remy

14:45	1642	MXene-Fluoropolymer nanocomposite fibers as piezoelectric nanogenerators	HASAN Md Mehdi
15:00	2088	Microfluidic Device Integrated Electrochemical Sensor for Detection of Peroxynitrite Anion	KUMAR Vijayesh
15:30	2840	Colorimetric pH sensing via onsite fiber spinning	SHUI Molly Yuan

Tuesday May 30

G06

Session 6

Chairperson(s) : HASLER Roger - ISMAILOVA Esma

Londres 1 (Ground floor)

16:30	912	Development of a novel, cost-effective paper-based SERS substrate fabricated using GLAD with improved enhancement for the detection of nosocomial infection causing bacteria	SENAPATI Sneha
16:45	2543	Conductive, recyclable, and biocompatible vitrimer ink for skin-contact applications	NAJAFI Maedeh
17:00	2421	Fabrication Strategy Using Aerosol Jet Printer for Flexible Bioelectronic Devices	JING Qingshen
17:30	258	Impedance-based eutectogel artificial skin with wireless readout system for smart prosthetics	OWYEUNG Rachel

