



European Materials Research Society

2024 Spring Meeting

May 27 - 31 / Strasbourg Convention Centre

SYMPOSIUM V

6th E-MRS & MRS-K bilateral symposium "X-tronics":
Optoelectronic and Bioelectronic - From Materials to Devices

Symposium Organizers:

Antonio GUERRERO, University Jaume I, Institute of Advance Materials (INAM), Spain

Byungha SHIN, Korea Advanced Institute of Science and Technology (KAIST), South Korea 34141

Hyacinthe RANDRIAMAHAZAKA (Main organizer), Université Paris Cité - CNRS, PRINTUP Institute, France

In-Hwan LEE, Korea University, Seoul 02841, Republic of Korea



Thursday May 30
V01_Session X-tronics

LONDRES 1 - GROUND FLOOR

Chairperson(s) : IN-HWAN Lee - RANDRIAMAHAZAKA Hyacinthe

09:00	87	INV	ACQ-Free Graphene Quantum Dot for Blue LED Applications	JEON Seokwoo
09:30	1107	INV	Advances in Sn-based Perovskites Solar Cells	MORA-SERÓ Iván

Thursday May 30
V02_Session X-tronics

LONDRES 1 - GROUND FLOOR

Chairperson(s) : SHIN Byungha

10:30	3079	INV	Titanium oxide supported Ir catalyst for sustainable hydrogen production	CHO Eunae
11:00	2911	INV	Advanced carbon electrodes for sustainable electrochemical systems: thin-film studies and novel bioinspired strategies	COLAVITA Paula
11:30	2632	INV	Harnessing Solar Energy for Fuel Production via Photoelectrochemical Methods	SIM Uk
12:00	3071	INV	Plant bioelectronics for high resolution monitoring and electronic control of plant processes	STAVRINIDOU Eleni

Thursday May 30
V03_Session X-tronics

LONDRES 1 - GROUND FLOOR

Chairperson(s) : GUERRERO CASTILLEJO Antonio

14:00	1563	20	All-printed, flexible Organic Thermoelectric Generators	MATTANA Giorgio
14:20	3078	20	Digital Manufacturing of Ceramic and Composite Structures via Digital Light Processing 3D Printing	KIM Miso
14:40	2469	20	van der Waals integration of solution-processed 2D nanosheets for electronics	KANG Joohoon

15:00	2440	20	Conjugated polymer nanoparticles as photoactive transducers to control cell metabolism in vitro and in vivo	ANTOGNAZZA Maria Rosa
15:20	669	20	InGaN Nanorod Integrated Nano-photonics: Epitaxy, Device, and Display Application	RA Yong-Ho
15:40	2853	20	Coating ZnO nanoparticles/nanowires with nucleobases layers for interface engineering in organic optoelectronics	BREAZU Carmen

VP01_Poster session

ETOILE - FIRST FLOOR

16:30	01_1033	120	01_1033 Anti-Stokes Luminescence in Multi-Resonance-Type Thermally-Activated Delayed Fluorescence Molecules	KOHATA Shintaro
16:30	02_1188	120	02_1188 Transparent and stretchable poly(urethane-imide) films	KIM Jinsoo
16:30	03_1192	120	03_1192 The switching performance of MoS ₂ based Resistive Random Access Memory (RRAM) devices for Neuromorphic AI device applications	ARUN Nimmala
16:30	04_1246	120	04_1246 Bayesian Approach for High Performance of Dual Stacked Oxide Semiconductor Thin Film Transistors	YOU Wonho
16:30	05_1264	120	05_1264 Eco-friendly Synthesis of Salt type Photosensitive Polyimide Precursor	WON Jong Chan
16:30	06_1316	120	06_1316 Highly Macroporous Polyimide with Chemical Versatility Prepared from Poly(amic acid) Salt-Stabilized High Internal Phase Emulsion Template	PARK Jongmin
16:30	07_1319	120	07_1319 Extending Cluster Expansion to Multi-Component Alloy: W-Ta-Vacancy System	PANDEY Dhanshree
16:30	08_1380	120	08_1380 Large-supercell Empirical Tight-Binding simulations for disordered random semiconductor alloys	PHAN Anh Luan
16:30	09_1509	120	09_1509 Time dependent capacitive and inductive behaviors in Halide Perovskite memristors	PENDYALA Naresh Kumar
16:30	10_1648	120	10_1648 Advancements in Honeycomb-Type Artificial Retina device via Smart CMOS Integration and Na-doped Iridium Oxide Electrodes	TSO Kuang-Chih

16:30	11_1677	120	11_1677 Reconfigurable elastomeric actuator based on spatial electric field control	CHOI Moon-Young
16:30	12_1679	120	12_1679 Effects of van der Waals corrections on phonon spectra of the cubic phase of cesium lead halide perovskites	KACHMAR Ali
16:30	13_1734	120	13_1734 Combining reduced-graphene oxide transistor and CRISPR/Cas13a ribonucleic particles as a tool for amplification-free RNA detection	GUERMONPREZ Pierre
16:30	14_1743	120	14_1743 Opto-physical unclonable function using surface random wrinkles based on optical anisotropic matter	KIM Kitae
16:30	15_1835	120	15_1835 Bayesian Approach for High Performance of Dual Stacked Oxide Semiconductor Thin Film Transistors	YOU Wonho
16:30	16_1854	120	16_1854 Inducing out-of-plane magnetocrystalline anisotropy by chemical doping in 2D multiferroic CuCrP2S6	YADAV Anita
16:30	17_1877	120	17_1877 Optimizing a-SiC Film Chemical Resistance for Long-Lifetime All-SiC Neural Interfaces	GREENHORN Scott
16:30	18_1992	120	18_1992 Crystallization of thick polycrystalline layers of hybrid perovskites on pixel matrices: specific opportunities and challenges for direct X-ray detection	ZACCARO Julien
16:30	19_2111	120	19_2111 SWCNT functionalised with poly(vinyltriazole) polymers : a low-cost method to determine the optimal stoichiometry through adsorption kinetics and isotherms	USGODARACHCHI Leshan
16:30	20_2135	120	20_2135 Specific and label-free bioFET sensing of the interaction between the electrically neutral small estriol molecule and its antibody in a microliter drop of diluted serum	SHUBHAM Babbar
16:30	21_2147	120	21_2147 Addressing the challenge of solution gating in biosensors based on field-effect transistors	GARIKA Vijay Kumar
16:30	22_2249	120	22_2249 Optical stimulation of living cells mediated by micro/nanostructured conjugated polymers	TULLII Gabriele
16:30	23_231	120	23_231 Phonon engineering for facile switching of bulk-strong polarization in Si-compatible vertical superlattices	KUMAR Pawan
16:30	24_2369	120	24_2369 An efficient multispectral perovskite photodetector based on light trapping engineering	DJEFFAL Faycal

16:30	26_2688	120	26_2688 Specific and label-free bioFET sensing of the interaction between the electrically neutral small estriol molecule and its antibody in a microliter drop of diluted serum	SHUBHAM Babbar
16:30	27_2717	120	27_2717 Energy Balance Approach for Analyzing the Electrochemical Impedance Spectroscopy Responses During Water Oxidation Catalyzed by Assembled Nanoparticles	RANDRIAMAHAZAKA Hyacinthe
16:30	28_2749	120	28_2749 Passive daytime radiative cooling with thermal energy storage using phase change n-octadecane/SiO ₂ nanobeads	WOO Ho Young
16:30	29_2754	120	29_2754 Ultrathin, High Aspect-Ratio Bismuth Sulfohalide Nanowire Bundles for Highly Efficient, Solution-Processed Flexible Photodetectors	LEE Da Won
16:30	30_2760	120	30_2760 Synthesis of thermally reconfigurable vanadium dioxide-based colloidal nanoparticles	CHOI Yoonjoo
16:30	31_2762	120	31_2762 Polymer Dispersed Liquid Crystal Imprinted by Microlens Array for Enhanced External Light Extraction of Bottom-Emitting Organic Light Emitting Diode	CHOI Yoonseuk
16:30	32_2901	120	32_2901 Addressing the challenge of solution gating in biosensors based on field-effect transistors	GARIKA Vijay Kumar
16:30	33_2904	120	33_2904 PRINTUP INSTITUTE: Multidisciplinary Approach Towards Printed Electronic Healthcare Devices	RANDRIAMAHAZAKA Hyacinthe
16:30	34_2927	120	34_2927 Carbon thin films as substrates for correlative single entity electrochemical & physical characterization	COLAVITA Paula
16:30	35_2948	120	35_2948 Flexible nanostructured bio-organic field effect transistor	PETRE Gabriela
16:30	36_2970	120	36_2970 Material-Dependent Dynamics of Soliton Interactions in Nonlinear Optical Fibers: A Comprehensive Investigation	ABHISEK ROY Abhisek
16:30	37_2975	120	37_2975 Material-Dependent Dynamics of Soliton Interactions in Nonlinear Optical Fibers: A Comprehensive Investigation	ABHISEK ROY Abhisek
16:30	38_2977	120	38_2977 Exploring Ultra-broad Supercontinuum Generation Using Chalcogenide Fiber	ROY Protik
16:30	39_348	120	39_348 Contact Resistances in low-dimensional Organic ElectroChemical Transistors	SANAUR Sébastien

16:30	40_384	120	40_384 Impact of Ion Species on Synaptic Functionality in Electrolyte-Gated Transistors: An Electrochemical Study	HAEYEON Lee
16:30	41_389	120	41_389 Lithium-Modulated 3-Terminal Artificial Synapse with Long-Term Memory Function Induced by Fluorinated Self-Assembled Monolayer	JIN Minho
16:30	42_390	120	42_390 First-Principles investigation of ferroelectric properties of doped ZrO ₂	GUPTA Dipti
16:30	43_609	120	43_609 Photoferroelectrics for artificial optical neuromorphics and photonic devices	KUNDYS Bohdan
16:30	44_708	120	44_708 Thermally Evaporated Perovskite Light-Emitting Diode with Molybdenum Disulfide-Based Thin-Film Transistors for Active-Matrix Display Device	SEOL Myeong Jin
16:30	45_756	120	45_756 Optical dynamic diffractive image recognition based on artificial intelligence module	RAJACKAITE Erika
16:30	46_76	120	46_76 Sonochemical process for the synthesis of BaTiO ₃ powder	LIM Young Soo
16:30	47_871	120	47_871 Novel Solvent-Dipping Method for Sulfur Vacancy Control for MoS ₂ Synaptic Memristor	KIM Jiyeon
16:30	49_903	120	49_903 A Study on the Fabrication and Characteristics of Biodegradable Materials for Application to Biodegradable Electronic Devices	KIM Kyung-Hyun