Monday 7 July 2025

08:00 -	**Registration**
09:00-09:30 **CH**	**Welcome and Opening** **S. Logothetidis, ISFOE25 Chairman**
09:30-11:00 **CH**	ISFOE 25 7-10 July 2025 **OLAE Materials 1** **Chairs: A. Laskarakis**
09:30-10:00 **KEYNOTE**	**Polymers, electronics and the genesis of polymer printed flexible electronics** **G. Hadziioannou** *University of Bordeaux, International member of the US NAE, Member of the EurASc and Academia Europaea, Laboratoire de Chimie des Polymères Organiques (LCPO) Bordeaux France*
10:00-10:30 **INVITED**	**Impact of dopant strength and shape on the ionization efficiency in organic semiconductors** M. Berteau-Rainville[1], S. Charoughchi[2], E. Orgiu[1], **I.Salzmann[2,3]** *[1]Institut national de la recherche scientifique (INRS), Varennes, QC, Canada* *[2]Department of Chemistry and Biochemistry, Concordia University, Montreal, QC, Canada* *[3]Department of Physics, Concordia University, Montreal, QC, Canada*
10:30-10:45	**Sputtered ITO Top Electrode for Semi-Transparent Organic Solar Cells** **J. Capdevila,** S. Chambon, M. E. Gueunier-Farret *University of Bordeaux, CNRS, Bordeaux INP, IMS, Talence, France*
10:45-11:00	**Simulation of Morphology Formation in Solution-Processed Organic Active Layers** **M. Siber[1,2]**, O. J. J. Ronsin[1], J. Harting[1,2,3] *[1] Helmholtz Institute Erlangen-Nürnberg for Renewable Energies Germany* *[2] Department of Chemical and Biological Engineering Germany* *[3] Department of Physics (Friedrich-Alexander-Universität Erlangen-Nürnberg), Germany*

11:00-11:30 — **COFFEE BREAK** — Grand Pietra Exhibition Hall — ISFOE 25 POSTERS — EXPO 25 Exhibition & Networking

11:30-13:30 **CH**	ISFOE 25 7-10 July 2025 **OLAE Materials 2** **Chairs: E. Loidorikis**
11:30-12:00 **KEYNOTE**	**Photons Powering a Sustainable Green Technology Revolution** **S. Ravi P. Silva** *Advanced Technology Institute and Institute for Sustainability, University of Surrey, UK*
12:00-12:30 **INVITED**	**Polymer Semiconductors for Organic Electronics** **A. K. Andreopoulou[1,2]**, K. C. Andrikopoulos[1], C. Anastasopoulos[1], S. Giosi,[1] M. Karra,[1] K. Koumoutsou,[1] J.K. Kallitsis[1,2] *[1] Department of Chemistry, University of Patras, Greece* *[2] FORTH/ICE-HT, Patras, Greece*
12:30-13:00 **INVITED**	**COPE-Nano Center of Excellence for Innovation and Sustainability in Organic Electronics, Nanotechnology and Bioelectronics** **A. Laskarakis[1,2]** *[1] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece*
13:00-13:30 **INVITED**	**Poly(3-hexylthiophene) nanoparticles as visible-light photoinitiators and photosensitizers in 3D printable acrylic hydrogels for photodynamic therapies** **I. Abdel Aziz[1]**, R. Natera Abalos[2], M. Caverzan[2], A. Sosa Lochedino[2], L. E. Ibarra[3], A.Gallastegui[1], C. A. Chesta[2], M. L. Gómez[2] , D. Mecerreyes[1,4], R. E. Palacios[2], M. Criado-Gonzalez[1,5] *[1]POLYMAT, University of Basque Country UPV/EHU, Donostia-San Sebastián, Spain; [2] IITEMA, Universidad Nacional Río Cuarto (UNRC), CONICET, Campus Universitario, Argentina* *[3]Inst Biotecnología Ambiental Salud (INBIAS), UNRC, CONICET, Argentina; [4]Ikerbasque, Basque Foundation for Science, 48013 Bilbao, Spain; [5]Institute of Polymer Science and Technology (ICTP-CSIC), Madrid, Spain*

13:30-15:00 — **LUNCH BREAK** — Grand Pietra Exhibition Hall — ISFOE 25 POSTERS — EXPO 25 Exhibition & Networking

15:00-17:30 CH	**ISFOE 25 7-10 July 2025 OLEDs, OTFTs and Wearables 1** **Chair: A. K. Andreopoulou**
15:00-15:30 INVITED	**Organic Solid-State Memories and Their Neuromorphic Application** **C.-H. Kim** *School of Electrical Engineering and Computer Science, University of Ottawa, Canada*
15:30-16:00 INVITED	**Advancements in Sustainable Perovskite-Based Memristive Devices for Neuromorphic Computing** **E. Kymakis** *Department of Electrical & Computer Engineering, Hellenic Mediterranean University, Heraklion, Crete, Greece.*
16:00-16:15	**Environmentally Friendly Printable Conductive and Piezoresistive Sensing Functional Materials to Conformable Electronics** **P. Costa[1],** C.R. Tubio[2], R. Lima[1], L. Amorim[1], N. Pereira, S. Lanceros-Mendez[1,2,3] *[1] Center of Physics, and LaPMET - Laboratory of Physics for Materials and Emergent Technologies, Campus de Gualtar, University of Minho, Braga, Portugal* *[2] BCMaterials, Basque Center for Materials, Applications and Nanostructures,UPV/EHU Science Park, Bilbao, Spain* *[3] IKERBASQUE, Basque Foundation for Science, Bilbao, Spain*
16:15-16:30	**Heterojunction-Driven Stochasticity: Bi-Heterojunction Noise-Enhanced Negative Transconductance Transistor in Image Generation** **J. Song[1],** Y. Han[2], and H. Yoo[2] *[1]Department of Semiconductor Engineering, Gachon University, Seongnam-si, Gyeonggi-do, Republic of Korea* *[2]Department of Electronic Engineering, Hanyang University, Seoul, Republic of Korea*
16:30-16:45	**Identifying the origin of delayed electroluminescence in a polariton organic light-emitting diode** A. G. Abdelmagid[1], H. A. Qureshi[1], M. A. Papachatzakis[1], O. Siltanen[1], **M. Kumar[1],** A. Ashokan[2], S. Salman[2], K. Luoma[3], K. S. Daskalakis[1] *[1]Department of Mechanical and Materials Engineering, University of Turku, Finland* *[2]Chemistry Department, Clark Atlanta University, Atlanta, USA* *[3]Department of Physics and Astronomy, University of Turku, Finland*
16:45-17:00	**Optical Waveguides from Polymer Structures and Organic Meso-Structures** **A. Handelman** *Faculty of Electrical Engineering, Holon Institute of Technology, Holon, Israel*

17:00-17:30	**COFFEE BREAK** Grand Pietra Exhibition Hall	ISFOE 25 POSTER Session	EXPO 25 Exhibition & Networking

17:30- CH	**ISFOE 25 7-10 July 2025 OPVs 1** **Chair: S.Kassavetis**
17:30-18:00 INVITED	**Degradation mechanisms of Biorenewable Based OPVs** **J. Panidi** *School of Engineering, University of Edinburgh*
18:00-18:30 INVITED	**From Lab to the City: Characterizing Organic Solar Cells for Urban Applications** **S. Riera-Galindo** *Institute of Materials Science of Barcelona (ICMAB-CSIC), Spain*
18:30-19:00 INVITED	**Integration of OPVs in Buildings: Bridging Power Generation and Architectural Design** **I. Gkaragkos[1]**, E. Mekeridis[1], S. Logothetidis[1] *[1] OET Energy Technologies P.C. 20th KM Thessaloniki - Tagarades, Thermi, Greece*

19:00-20:30	**COFFEE BREAK** Grand Pietra Exhibition Hall	ISFOE 25 POSTER Session	EXPO 25 Exhibition & Networking

21:00-	**ISFOE25 KEYNOTE & INVITED SPEAKERS** **OFFICIAL DINNER**

Tuesday 8 July 2025

09:30-11:00 **TH1**	**OLAE Materials 3** **Chair: D. Tselekidou**		
09:30-10:00 **KEYNOTE**	**Energy level manipulation in van der Waals heterostructures of 2D materials with organic molecules** **N. Koch** *Humboldt University of Berlin, Germany*	**10:00-11:00** **TH2**	**Open Innovation, Standardization & Digital Passport** **Chair: A. Laskarakis**
10:00-10:30 **INVITED**	**Materials modelling for next-generation energy applications** **G. Volonakis** *Université de Rennes, France*	**10:00-10:15** **INVITED ORAL**	**Open Innovation Modelling: MUSICODE Project** **E. Loidorikis** *University of Ioannina, Greece*
		10:15-10:30 **INVITED ORAL**	**Facilitating better understanding of Nanomaterial Risks through Digital Material and Product Passports** **S. Saliakas** *Innovation in Research and Engineering Solutions (IRES), Belgium*
10:30-10:45	**Optimized Laser-Assisted Fabrication of Colloidal Silver Nanoparticles for Enhanced Properties in PEDOT:PSS Nanolayers** **C. Kapnopoulos[1,2]**, S. Kassavetis[1,2], C. Stavraki[1,2], A. Paliagkas[1,2], E. Mekeridis[3], A. Laskarakis[1,2], S. Logothetidis[1,2,3] *[1] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies P.C. (OET), Thermi, Greece*	**10:30-10:45** **INVITED ORAL**	**Engineering Digital Product Passports: From Policy to Prototype** **H. Ibrahim** LIST, Luxembourg
10:45-11:00	**Soft, flexible, green electronic components with minimal environmental impact** **A. Athanassiou[1]**, P. Cataldi[1], S. Hamed[1], G. Corigliano, M. Najafi[1], A. Ajoudani[2] *[1]Smart Materials Group, IIT, Italy* *[2]Human-Robot Interfaces and Interaction, Istituto Italiano di Tecnologia, Genoa, Italy*		

11:00-11:30 — **COFFEE BREAK**
Grand Pietra Exhibition Hall

ISFOE25 POSTERS

EXPO25 Exhibition & Networking

11:30-13:30 **TH1**	**Artificial Intelligence, ML, Intelligent Manufacturing and Automation 1** **Chair: G. Volonakis**					
11:30-11:35	**Welcome & Opening Remarks** **S. Logothetidis** **ISFOE25/NN25 Chairman**					
11:35-12:00 **KEYNOTE**	**Digitalization of every step in the production value chain: How to get from digital twins to Coating as a service** **T. Kolbusch** *COATEMA Coating Machinery GmbH, Germany*					
12:00-12:30 **KEYNOTE**	**Engineering Sensors and AI Technologies To Read The Human Body** **L. G.Occhipinti** *University of Cambridge, UK*			**12:00-13:30** **DS1**	ISFOE25 NN25	**Bioelectronics 1** **Chair: C. Pitsalidis**
12:30-13:00 **INVITED**	**In line, Integrated and Real-time Metrology for Quality Control of Nano-Manufacturing in Semiconductor and Photovoltaic field**	**12:30-13:30** **TH2**	ISFOE25 **OLEDs, OTFTs and Wearables 2** **Chair: M. Gioti**	**12:00-12:30** **KEYNOTE**	**Bioadhesive and immune-compatible polymer bioelectronics** **S. Wang[1]**	

	C. Defranoux, F.Korsos, P.Basa, T.Brigancz *Semilab Co. Ltd., Budapest, Hungary*				*Pritzker School of Molecular Engineering, The University of Chicago Chicago, Illinois, USA*
		12:30-13:00 INVITED	**Biodegradable Electronics: From Wearable Sensors to Therapeutic Applications** **S.-K. Kang** *[1] Dept. Materials Science & Engineering, Seoul National University, Republic of Korea* *[2] Interdisciplinary Program of Bioengineering, Seoul National University, Republic of Korea* *[3] RIAM, Seoul National University, Republic of Korea* *[4] Nano Systems Institute SOFT Foundry, Republic Korea*	**12:30-13:00 INVITED**	**Advancing bioelectronic technologies for metabolic control** **A. Güemes[1],** A. J. Boys[2,3], G. G. Malliaras[1], R. M. Owens[3] *[1]Department of Engineering Department of Clinical Neurosciences, University of Cambridge; UK* *[2]Thayer School of Engineering, Dartmouth College; Hanover, NH, USA* *[3]Department of Chemical Engineering & Biotechnology, University of Cambridge, UK*
13:00-13:15	**Exploring Ultrafast Laser Ablation as a scalable solution for surface modification of Ti6Al4V orthopedic implants** **A. Orlandini[1],** F. Impaziente[1], A. De Corso[2], A. Castrovinci[2], A. Valente[1] *[1]SUPSI, Inst. Systems and Technologies for Sustainable Production, Switzerland* *[2]SUPSI, Inst. Mechanical Eng. & Materials, Switzerland*	**13:00-13:15**	**Gaussian Distribution by means of Split-Gate Thin-Film Transistors** **M. Kim[1]**, Y. Han[2], and H. Yoo[2] *[1]Department of Semiconductor Engineering, Gachon University, Republic of Korea* *[2]Department of Electronic Engineering, Hanyang University, Seoul, Republic of Korea*	**13:00-13:30 INVITED**	**Engineering 2D Materials with Biological Identity** **A.-M. Pappa** *Department of Biomedical Engineering, Khalifa University, Abu Dhabi, UAE*
13:15-13:30 EU PROJECT	**Roll-to-roll manufacturing of NFA-based organic solar cells** **M. Fahland[1],** P. Schlenz[1] C. Brabec[2], S. Meyer[3], F. Linardi[4], I. McCulloch[5] , S. Ashby[6] *[1]Fraunhofer FEP, Dresden, Germany, [2]Friedrich-Alexander-University Erlangen-Nuernberg, Erlangen, Germany, [3]ASCA GmbH&Co KG, Kitzingen, Germany, [4]Avantama AG, Laubisruetistrasse 50, Staefa, Switzerland, [5]University of Oxford, Oxford, UK, [6]Mylar Specialty Films, UK*	**13:15-13:30**	**Assessing the mechanism of NH_3 sensing in flexible carbon-nanotube based sensors via photoemission spectroscopy** **C. Gatsios[1]**, C. Tomasi Cebotari[1], S. Vasquez[2], A. Mascia[3], P. Cosseddu[3], L. Gregoratti[4], M. Amati[4], Z. Milosz[4], L. Petti[2], M. Timpel[1], M. V. Nardi[1] *[1]IMEM-CNR, Inst. Materials for Electronics Magnetism,* Trento, Italy, *[2]Sensing technologies laboratory (STL), Free University Bozen-Bolzano, Italy* *[3]Department of Electrical and Electronics Engineering, University of Cagliari, Italy* *[4]Elettra Sincrotrone Trieste S.C.p.A., s.s., Italy*		
13:30-13:45	**AI-Technology and Digital Twins for Next-Generation Manufacturing of Organic PVs/Perovskites and OLEDs. Implementation of AI-Enhanced Process Control Tools in OVPD Cluster PPL for Energy Device Fabrication** **M. Chatzidis[1,2]**, A. Zachariadis[1,2], V. Tziaras[1,2], E. Mekeridis[3], P.K. Baumann[4], A. Laskarakis[1,2], M. Gioti[1,2], S. Logothetidis[1,2,3] *[1] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies P.C. (OET), Thermi, Greece* *[4] AIXTRON SE, Aachen, Germany*				

13:30-15:00	**LUNCH BREAK** Grand Pietra Exhibition Hall	ISFOE 25 POSTERS	EXPO 25 Exhibition & Networking

15:00-17:00 TH2	ISFOE25 7-10 July 2025 OPVs 2 Chair: E. Loidorikis	15:00-17:00 TH1	AI3D25 8-10 July 2025 AI, ML, Intelligent Manufacturing & Automation 2 Chair: P. Keliris	15:30-17:00 DS1	ISFOE25 7-10 July 2025 NN25 8-11 July 2025 Bioelectronics 2 Chair: A. Güemes
15:00-15:30 **KEYNOTE**	**TÜV Rheinland specification on the I-V characterization of perovskite-based PV modules – lab experience** **C. Monokroussos**, G. Bardizza, C. W. Xu, Y. Zhang, J. Gao, W. Hermann *TUV Rheinland Group, China*	**15:00-15:30** **INVITED**	**Machine learning approaches in materials characterization and soft matter molecular simulation: Challenges and Perspectives** **V. Constantoudis[1,2]**, N. Vergadou[1] *[1] Inst. Nanosc. Nanotechnology, NCSR Demokritos, Greece* *[2] Nanometrisis p.c., TEPA Lefkippos Agia Paraskevi, Greece*	**15:30-16:00** **INVITED**	**Electroconductive Synthetic and Bioderived 3D Architectures for Use in Wound Monitoring and Therapy** **C. Pitsalidis[1,2]** *[1] Dept. Physics, Khalifa University, Abu Dhabi, UAE* *[2] Advanced Research and Innovation Center (ARIC), Khalifa Univ. of Science & Technology, Abu Dhabi, UAE*
15:30-16:00 **INVITED**	**OPV Global Technology Leadership Opportunities & Challenges** **E. Margaritis** *Organic Electronic Technologies (OET), Greece*	**15:30-16:00** **INVITED**	**GenAI as the Industrial Force Multiplier: Real Applications in Data Analysis** **T. Naskos** *Atlantis Engineering SA, 12km Thessaloniki-Moudania, Greece*	**15:30-16:00** **INVITED**	**In Vivo Formation of Organic Mixed Conductors for Soft Bioelectronic Interfaces** **X. Strakosas** *Linkoping University, Sweden*
16:00-16:15	**PFAS-free encapsulation for optoelectronics: a sustainable alternative for high-performance applications** **P. Schlenz** *Fraunhofer FEP, Dresden, Germany*	**16:00-16:30** **INVITED**	**Analog-input reconfigurable Threshold Logic Gates for real time learning and classification** B. Paroli, F. Borghi, M.A.C. Potenza, and **P. Milani*** *CIMAINA—Interdisciplinary Centre for Nanostructured Materials and Interfaces, Department of Physics "Aldo Pontremoli", Università degli Studi di Milano, Milano, Italy*		
16:15-16:45 **INVITED**	**Transforming Agriculture: The Role of Agrivoltaics and the Integration of OPVs** **S. Michailidou**, S. Logothetidis *Organic Electronic Technologies P.C. 20th KM Thessaloniki - Tagarades, Thermi, Greece*	**16:30-17:00** **INVITED**	**Pb-free Perovskite and 2D Transition Metal Dichalcogenides for Reservoir Computing** **D. G. Georgiadou** *School of Electronics and Computer Science & Optoelectronics Res. Centre, Univ. of Southampton, Highfield Campus, Univ. Road, Southampton UK*	**16:30-16:45**	**Predicting Pain Flares from Wearable Sensor Data and Patient Reports: Initial Insights from the ADVANTAGE Study** **M. Vinicio Alban-Paccha[1,2]**, N. Shenker[3], C. Geoffrey Woods[4], G. G Malliaras[2] *[1] Div. Anaesthesia, Dept. Medicine, Univ. Cambridge, UK* *[2] Electrical Engineering Division, Department of Engineering, University of Cambridge, UK* *[3] Div. Rheumatology, Dept. Medicine, Univ. Cambridge* *[4] Department of Medical Genetics, Univ Cambridge, UK*
16:45-17:00	**Comprehensive study on molecular doping to enhance optoelectronic performance and efficiency in fully printed flexible organic solar cells** **A. Paliagkas[1,2],** C. Stavraki[1,2], C. Kapnopoulos[1,2], A. Zachariadis[1,2], V. Heben[1,2], E. Rabota[1,2], E. Paraschoudi[1,2], S. Logothetidis[1,2,3], A. Laskarakis[1,2] *[1] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2]Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), Greece* *[3] Organic Electronic Technologies (OET), Greece*			**16:45-17:00**	**Precise & High Sensitive Detection of Virus using Integrated Graphene FET Array** **K. Matsumoto** *SANKEN, Osaka University, Japan*

17:00-18:30	**COFFEE BREAK** Grand Pietra Exhibition Hall	ISFOE25 POSTER Session EXPO25 Exhibition & Networking

18:30	**Official Opening Ceremony** nanotexnology 2025	
18:30-18:45		**Welcome to NANOTEXNOLOGY 2025** **Prof. S. Logothetidis** **NANOTEXNOLOGY2025 Chairman**
18:45-19:00	**Official Salutations**	
	PLENARY SESSION	
19:00-19:45		**Physics Approaches to Organic Light Source Enhancements** **Prof. Donal Bradley** **President, NEOM Education, Research & Innovation Foundation and Vice-President for Research and Innovation, NEOM University, Saudi Arabia**
19:45-20:30		**MXenes and Assembled 2D Nanosheets Redefine What Materials Can Do** **Prof. Yury Gogotsi** *Distinguished University and Charles T. and Ruth M. Bach Professor of Materials Science and Engineering, Director, A. J. Drexel Nanomaterials Institute, Drexel University, USA*
21:00	**OFFICIAL NANOTEXNOLOGY GALA DINNER** **PORTO PALACE CONFERENCE CENTRE & HOTEL - ROOF GARDEN**	

Wednesday 9 July 2025

09:00-11:00 TH2 — OPVs & Perovskite PVs 3
Chair: H. Roehm

09:00-09:30 INVITED
Device Engineering Concepts for High Performance Perovskite Photovoltaics
S. A. Choulis
Dept. Mechanical Engineering and Materials Science and Engineering, Cyprus University of Technology, Cyprus

09:30-10:00 INVITED
Crystal Growth Modulation of Tin-Lead Halide Perovskites via Chaotropic Agent
Y. Dong[1], W.-X. Zhu[2], D.-T. Wu[2], X. Li[4], R. J. E. Westbrook[5], C.-J. Huang[2], Z. Min[4], W. Hong[4], G. Min[1], S. Sathasivam[6], M. Palma[4], S. Dimitrov[4], C.-T. Lin[2,3*], **T. J. Macdonald[1]**
[1]Department of Electronic & Electrical Engineering, Roberts Building, University College London, UK; [2]Department of Chemical Engineering, National Chung Hsing University, Taichung; [3]Innovation and Development Center of Sustainable Agriculture, National Chung Hsing University; [4]Department of Chemistry, Queen Mary University of London, UK; [5]Department of Chemistry, University of Washington, Seattle, USA; [6]School of Engineering, London South Bank Univ. UK

10:00-10:30 INVITED
Transparent OPV Modules and Perovskite Solar Cells with Carbon Electrodes
U. Wuerfel
Fraunhofer ISE, Freiburg, Germany

10:30-11:00 INVITED
The Role of the Hole Transport Layer in Hybrid Sn-Pb Perovskite Solar Cells
C.-T. Lin
[1]Department of Chemical Engineering, National Chung Hsing University, Taiwan
[2]Innovation and Development Center of Sustainable Agriculture, National Chung Hsing University, Taiwan

09:30-11:00 TH1 — Computational Modeling of Materials, Devices & Processes
Chair: P. Keliris

09:30-10:00 INVITED
Properties of Nanostructured Systems Through Simulations and Machine-Learning Methods: From Atoms to the Design of Advanced Materials
V. Harmandaris
The Cyprus Institute, Cyprus

10:00-10:30 INVITED
2D Chalcogenides for Waste Heat Recovery: A Computational Perspective
N. Singh, S. Suresh Nair
Dept. Physics, Khalifa University, United Arab Emirates

10:30-11:00 INVITED
Topology of Non-Rotating States in Layers
I. Milosevic[1], M. Damnjanovic[2]
[1]Faculty of Physics, University of Belgrade, Serbia
[2]Serbian Academy of Sciences and Arts, Serbia

09:30-11:00 DS2 — Bioelectronics 3
Chair: X. Strakosas

09:30-10:00 INVITED
Organic semiconductors for regenerative medicine: optical modulation of the cell fate
M. R. Antognazza
Center for Nano Science and Technology, Italian Institute of Technology Via Rubattino 81, 20134 Milan, Italy

10:00-10:30 INVITED
Prof. Paulo Rocha, Univ. of Coimbra, Portugal
Sensors for real-time monitoring of electroactive cyanobacteria

10:30-11:00 INVITED
Organic materials for bioelectronic devices
D. A. Koutsouras
Department of Electronic and Electrical Engineering, University of Bath, UK

11:00-11:30 COFFEE BREAK — Grand Pietra Exhibition Hall

ISFOE25 POSTERS

EXPO25 Exhibition & Networking

11:30-13:30 DS2 — Bioelectronics 4
Chair: P.Rocha

11:30-12:00 KEYNOTE
Novel Materials and Device Architectures for Wearables
G. Malliaras
University of Cambridge, UK

12:00-13:30 TH2 — OLAE Materials 4
Chair: A. Agreda

12:00-13:30 DS2 — Bioelectronics 4
Chair: P. Rocha

11:30-13:30 TH1 — Artificial Intelligence, ML, Intelligent Manufacturing and Automation 3
Chair: V. Harmandaris

12:00-12:30 INVITED	**Organics for all-optical polariton logic devices and analogue quantum simulations** **R. F. Mahrt** *IBM Research – Zurich, Säumerstrasse 4, 8803 Rüschlikon, Switzerland*	**12:00-12:30 INVITED**	**Enhancing the accuracy of bioelectronic point-of-care tests through machine learning** V. Mongelli[1], M. Caputo[1], F. Intranuovo[1], L. Sarcina[2], L. Torsi[2,3,4], **E. Macchia**[1,3,4] *[1]Department of Pharmacy, University of Bari, Bari, Italy* *[2] Department of Chemistry, University of Bari, Bari, Italy* *[3] The Faculty of Science and Engineering, Åbo Akademi University, Turku, Finland* *[4] CSGI (Center for Colloid and Surface Science), Bari, Italy*	**12:00-12:15 EU Project**	**EU-Project on AI-Powered Manipulation System for Advanced Robotic Service, Manufacturing and Prosthetics** **P. Panagiotou**, D. Gutu *Bavarian Research alliance, Germany*
				12:15-12:30	**AI-Driven VLC Framework for Efficient Airport Navigation and Traffic Management** **M. Vieira[1,2,3]** , M. A. Vieira[1,2], G. Galvão[1], A. Fantoni[1,2], P. Vieira[1,4] , M. Véstias[1,5], P. Louro[1,2] *[1]Electronics Telecommunication and Computer Dept. ISEL, Portugal* *[2] UNINOVA –CTS and LASI, Caparica, Portugal.* *[3] NOVA School of Science and Technology, Quinta da TorrePortugal.* *[4] Instituto de Telecomunicações, Instituto Superior Técnico, Portugal* ***[5] INESC-ID, Instituto Superior Técnico, Universidade de Lisboa, Portugal***
12:30-12:45	**Roll-to-Roll Spatial ALD: Enabling Advanced Materials for Next-Generation Flexible Electronics** **S. Wiegman** *Kalpana Systems, Delft, The Netherlands*	**12:30-13:00 INVITED**	**Organic Mixed Ionic–Electronic Conductors for Circumferential Spinal Cord Interfacing** **S. El Hadwe** *Univ. of Cambridge, UK*	**12:30-12:45**	**Hybridizing machine learning and physics-based modelling of plasma etching process in semiconductor manufacturing** E. Boniakou[1], S. Mouchtouris[1,2], T. Boura[3], A. Kondi[2], **V. Constantoudis[2]**, E. Gogolides[2], G. Kokkoris[1] *[1]School of Chemical Engineering, NTUA, Greece* *[2]Inst. of Nanoscience and Nanotechnology, NCSR Demokritos Greece* *[3]Inst. of Informatics & Telecommunications, NCSR Demokritos, Greece*
12:45-13:00	**Advanced Photodetectors and Modulators Enabled by LIFT-Based 2D Material Integration** **K. Magoula[1]**, F. Zacharatos[1], A. Zurutuza[2], A. Centeno[2], T. Hirvenoja[3], O. P. Kilpi[3], L. Tsetseris[1], and I. Zergioti[1] ***[1] School Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece; [2] Graphenea SA, Spain; [3] VTT, Finland***			**12:45-13:00**	**Cyber Physical Integration: Advanced Visible Light Communication and AI Techniques for Autonomous Guided Vehicles** **P. Louro[1,2]**, G. Galvão[1,3], M. A. Vieira[1,2,] M. Vieira[1,2,3], M. Véstias[1,4] *[1]Electronics Telecommunication and Computer Dept. ISEL, Portugal* *[2] UNINOVA –CTS and LASI, Portugal.* *[3] NOVA School of Science and Technology, Quinta da Torre, Portugal.* *[4] INESC-INOV, Instituto Superior Técnico, Universidade de Lisboa, Portugal*
13:00-13:15	**BM10 - A Scalable and Highly Reproducible Active Layer System Delivering 10% Power Conversion Efficiency for Commercial Photovoltaics** **A. Hendsbee** *Brilliant Matters Organic Electronics, Canada*	**13:00-13:15**	**Organic Artificial Soma for Classification of Electromyographic signals** **I. Sergi[1,2]**, F. Rondelli[1,2], F. Torricelli[1], F. Velluto[1,2], A. De Salvo[1], M. Di Lauro[1], L. Fadiga[1,2],F. Biscarini[1,3]. *[1] Center Translational Neurophysiology of Speech and Communication, IIT-CTNSC, Italy* *(2) Physiology Section Department of Neuroscience and Rehabilitation, University of Ferrara, Italy* *(3) Department of Life Sciences, University of Modena and Reggio Emilia, Italy*	**13:00-13:15**	**Machine Learning-Based sEMG Classification for Scaled-Down Bioelectronic Systems and Nanotechnology-Enhanced Wearable Interfaces** **C. Tsemekidis[1]**, A. Arvanitidis[1], K. Mitsopoulos[1], V. Fiska[1], V. Mantiou[1], P.D. Bamidis[1] and A. Athanasiou[1] *[1]Lab of Medical Physics & Digital Innovation (iMedPhysLab), School of Medicine, Faculty of Health Sciences, Aristotle Univ. Greece*
13:15-13:30	**Impact of Modified Hole Transport Layer Functionalization on the Performance of Printed Perovskite Solar Cells** **A. Kostopoulou[1,2]**, C.Stavraki[1,2], C. Kapnopoulos[1,2], E. Paraschoudi[1,2], P.Rampota[1,2], K. Papadopoulos[1,2], S. Kassavetis[1,2], E.Mekeridis[3], S.Logothetidis[1,2,3], A. Laskarakis[1,2] *[1]Nanotechnology Lab LTFN, AUTh, Greece*	**13:15-13:30**	**Influence Of Electrolyte Solution Composition On Charge Transport Properties Of PEDOT:PSS Thin Film In Electrolyte-Gated Transistor Architectures** **M Genitoni[1,2]**, F. Rondelli[1,2], M. Di Lauro[2], F. Zerbetto[3], L. Fadiga[1,2],F. Biscarini[2,4] *[1] Univ. of Ferrara, Italy.* *[2] Center for Translational Neurophysiology of Speech and Communication, Italian Inst. of Technology, Italy.*	**13:15-13:30**	**A Scalable AI-VLC Framework for Safe and Efficient Traffic Control** **M. A. Vieira[1,2]**, G. Galvão[1], M. Vieira[1,2,3] , P. Vieira[1,4] , M. Véstias[1,5], P. Louro[1,2] *[1]Electronics Telecommunication and Computer Dept. ISEL, R. Conselheiro Emídio Navarro, 1959-007 Lisboa, Portugal* *[2] UNINOVA –CTS and LASI, Quinta da Torre, Portugal.* *[3] NOVA School of Science and Technology, Quinta da Torre, Portugal.* *[4] Instituto de Telecomunicações, Instituto Superior Técnico, Portugal*

	[2]Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), Greece [3] Organic Electronic Technologies (OET), Greece		[3] Chemistry Dept. "Giacomo Ciamician",Italy. [4] Life Science Dept., Univ. Modena & Reggio Emilia, Italy.		[5] INESC-ID, Instituto Superior Técnico, Universidade de Lisboa, Portugl
				13:30-13:45	**Optoelectronic-Driven Traffic Management: Integrating AI and Visible Light Communication for Smarter Cities** G. Galvão[1], **M. A. Vieira[1,2]**, M. Vieira[1,2,3], M. Véstias[1,5], P. Louro1,2 [1]Electronics Telecommunication and Computer Dept. ISEL, Portugal [2] UNINOVA –CTS and LASI, Quinta da Torre, Portugal. [3] NOVA School of Science and Technology, Quinta da Torre, Portugal. [4] Instituto de Telecomunicações, Instituto Superior Técnico, Portugal [5] INESC-ID, Instituto Superior Técnico, Universidade de Lisboa, Portugl

13:30-15:00	**LUNCH BREAK** Grand Pietra Exhibition Hall	ISFOE25 POSTERS	EXPO25 Exhibition & Networking

15:00-17:00 **TH2**	ISFOE25 7-10 July 2025 **OLEDs, OTFTs and Wearables 3** **Chair: M. McLachlan**	**15:00-17:00** **TH1**	AI3D25 8-10 July 2025 **3D Printing & Bioprinting, Digital & Additive Manufacturing** **Chair: C. Gravalidis**
15:00-15:30 **KEYNOTE**	**Printable Hydrogen Sensor for Distributed Monitoring Applications** **T. Anthopoulos** *University of Manchester, UK*	**15:00-15:30** **INVITED**	**Laser Printing: A Key Tool for the fabrication of Flexible Electronics and Photonic Integrated Circuits** **I. Zergioti** *National Technical University of Athens, Greece*
15:30-15:45	**Validation study of a knitted breathing sensor** **K.M.B. Jansen**, R.B. Groeneveld *Faculty of Industrial Design Engineering, Delft University of Technology, Delft, The Netherlands*	**15:30-16:00** **INVITED**	**Engineering 3D bioprinted grafts for bone tissue regeneration** **S. Alimperti** *Georgetown Univ., USA*
15:45-16:00	**Multimodal, multi-analyte wearable sensing platform using organic electrochemical transistors** **L. Gatecliff[1]**, M. Alban Paccha[2,1], S. Kissovsky[3], C. Slaughter[1], R. Ruiz-Mateos Serrano[1], S. Keene[4], S. Han[5], G. Malliaras[1] *[1] Dept Engineering, Univ. Cambridge, UK; [2] Dept Medicine, Univ. Cambridge, UK; [3] Dept. Chem. Eng. & Biotechnology, Un. Cambridge, UK; [4] Dept.Materials Science & NanoEng., Rice Univ., USA; [5] Dept. Nano-Bioengineering, Incheon National University, Republic of Korea*		
16:00-16:15	**Enabling Laser-Induced Graphene Formation on Fabrics via Biopolymer Treatment for high-strain motion monitoring Sensors** **M. Setti**, S. Scaravonati, V. Vezzoni, N. Ahmad, A. Rinaldi, M. Sidoli, G. Magnani, M. Riccò, D. Pontiroli *Nanocarbon Laboratory, cIDEA & Dept. Mathematical, Physical & Computer Sciences, Univ. Parma, Italy*	**16:00-16:30** **INVITED**	**Hydrogel 3D structure for water harvesting from humidity** **J Ding** *Department of Materials Science & Engineering, National University of Singapore*
16:15-16:30	**One-step synthesis of copper decorated laser-induced graphene for wearable non-enzymatic glucose sensor** **V. Vezzoni**, M. Setti, D. Pontiroli, M. Riccò *Nanocarbon Laboratory, cIDEA & Dept Math., Phys. Computer Sciences, University of Parma, Italy*		
16:30-16:45	**Fabrication and characterization of printable PLEDs for optical sensing applications** **K. Papadopoulos[1],** D. Tselekidou[1], A. Zachariadis[1], S. Kassavetis[1], S. Logothetidis[1,2], M. Gioti[1] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* ***[2]Organic Electronic Technologies P.C. (OET), Thermi, Greece***	**16:30-16:45**	**Optical profilometry for 3D mapping of Photonic Integrated Circuits** **S. Sarigiannidis[1]**, Y. Papadopoulos[1], D. G. Papazoglou[2, 3], I. Zergioti[1] *[1] NTUA, Athens, Greece; [2] Institute of Electronic Structure and Laser, FORTH, Heraklion, Greece; [3] Mat. Science and Techn. Dept, Univ. Crete, Greece*
16:45-17:00	**3D Printed Sensors: A Cost-Effective Solution for Industry 4.0** **N. Pereira[1]**, J. Fernández Maestu[2], J. Vicente[2], C. Rial Tubio[2], S. Lanceros-Méndez[1,2,3] *[1] Physics Center of Minho and Porto Universities (CF-UM-UP) and LaPMET - Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, Portugal* *[2] BCMaterials, Basque Center for Materials, Applications and Nanostructures, Spain*	**16:45-17:00**	**Flexible printed metamaterial absorber based for microwave applications** **E. Gagaoudakis[1]**, E. Mantsiou[2], C.-P. Tsichlis[1,2], M. Zografaki[1,2], K. Dovelos[3], A. Paraskevopoulos[4], V. Vardakastani[3], D. Tzarouchis[3], M. Koutsoupidou[3], P. Kosmas[3], C. Spandonidis[5], F. Giannopoulos[5], A. Petsa[5], V. Binas[1,2]

	[3] IKERBASQUE, Basque Foundation for Science, Bilbao, Spain		[1]Inst. Electronic Structure Laser (IESL), FORTH, Greece; [2]Dept. Chemistry, Aristotle Univ. Greece; [3]Meta Metamaterials Europe, Greece; [4]Inst. Informatics & Telecom., NCSR Demokritos, Greece; [5]Prisma Electronics SA, Greece

19:00 **NANOTEXNOLOGY 2025 Beach Party**

Please ensure that you have your Beach Party tickets for the dinner and drinks
Boarding to buses at Porto Palace Hotel entrance for transfer to the Beach Bar
Departure from Hotel will start at 18:00

Thursday 10 July 2025

09:00-11:00 CH	ISFOE25 OPVs & Perovskite PVs 4 Chair: D. Tselekidou			09:00-11:00 TH1	AI3D25 Computational Modeling of Materials, Devices & Processes Chair: P. Keliris
09:00-09:30 INVITED	**Scaling Up Organic Photovoltaics: The Path to Industrial Mass Production** **E. Mekeridis** *OET Energy Technologies P.C. Thermi, Greece*	09:30-11:00 DS1	ISFOE25 NN25 Bioelectronics 5 Chair: S. El Hadwe	09:00-09:30 INVITED	**Coherent, ultrafast charge movement in bio-organic nanowires** **C. Simserides** *National and Kapodistrian University of Athens, Greece*
09:30-10:00 INVITED	**Ambient, Scalable and Sustainable Synthesis of Metal Halide Perovskites** Z. Du[1], J. Wei[2], D. Ding[2], M. Rimmele[2], Y. Dong[3], D. Nodari[2], F. Furlan[2], E. Angela[1], G. Morgan[1,4], P. Akinshin[1,4], W. Rodriguez Kazeem[1], G. Kerherve[5], M. Heeney[2,6], T. J. Macdonald[3], Saif A. Haque[2], N. Gasparini[2], D.J. Payne[1], **M.A. McLachlan[1]** *[1] Dept Materials, Molecular Sciences Research Hub, Imperial College London, UK; [2] Dept Chemistry, Molecular Sciences Research Hub, Imperial College London, London, UK; [3] Dept Electronic and Electrical Engineering, University College London, UK; [4] Now at Clarendon Laboratory, Dept Physics, University of Oxford, UK; [5]Dept Materials, Imperial College London, UK; [6] KAUST, Saudi Arabia; [7]NEOM Education, Research, and Innovation Foundation, Saudi Arabia*	09:30-10:00 INVITED	**Reliable and Ultrasensitive Colorimetric f-ELISA Biosensors for Rapid Onsite Detection of Biological and Chemical Agents in Fluids** **G. Sun** *University of California, Davis, USA*	09:30-10:00 INVITED	**Machine and Deep Learning for Interatomic Potentials in Materials Science** **J. Kioseoglou[1,2]** *[1]Physics Dept, Aristotle University of Thessaloniki, Greece* *[2]Center for Interdisciplinary Research and Innovation, Aristotle University of Thessaloniki, Greece*
10:00-10:30 INVITED	**Innovative Materials for Efficient Organic and Perovskite Photovoltaics** **H. Richter** *Nano-C, Inc., USA*	10:00-10:15	**Waterproof Polyelecyrolyte for Implatnable Medical Devices** **M.-K. Choi[1]**, Y.-J. Choi[1], Y.-S. Kim[1], J.-H. Lee[1], Y.-W Kim[1], S.-K. Kang[1,2,3] *[1]Department of Materials Science and Engineering, Seoul National University, Republic of Korea.* *[2]Research Institute of Advanced Materials (RIAM), Seoul National University, Republic of Korea.* *[3]Soft Foundry Institute, Seoul National University, Republic of Korea*	10:00-10:30 INVITED	**Spectral and transport properties of quantum dot Josephson junctions** **A. Keliri** *College de France, France*

		10:15-10:30	**Biodegradable and biocompatible organic RFID tags** **Velluto F.,[1,2]** Sergi I.,[1,2] De Salvo A.,[1] Di Lauro M.,[1] Fadiga L.,[1,2] Biscarini F.[1,3] *[1] Centre for Translational Neurophysiology of Speech and Communication, IIT-CTNSC, Italy* *[2] Department of Neuroscience and Rehabilitation, University of Ferrara, Italy* *[3] Department of Life Science, University of Modena and Reggio Emilia, Italy*		
10:30-10:45	**Phase-Field Simulations of Thermal Annealing For All-Small Molecule Organic Solar Cells** **Y. Ameslon[1,3]**, O. J. J. Ronsin[1], C. Harreiß[2], J. Will[2], S. Rechberger[2], M. Wu[2], E. Spiecker[2] and J. Harting[1,3,4] *[1] Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich, Nürnberg, Germany* *[2] IMN, CENEM, IZNF, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany* *[3] Dept. Chemical and Biological Engineering, Friedrich-Alexander-Universität Erlangen- Nürnberg, Germany* *[4] Dept. Physics, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany*	**10:30-10:45**	**Effect of Solution Gating in the Detection of Organophosphate via Meta-Nano-Channel Field Effect Transistor** **P. Verma[1*]**, Y. Ben-Shahar[5*], S. Bhattarai[2], S. Harilal[3], G. Feldheim[5], A. Pavzner[5], I. Columbus[6], E. Pikhay[4], I. Shechter[4], A. Elkayam[4], M. Y. Bashouti[3,6], B. Akabayov[2], A. Weissberg[7], I. Ron[1,5], Y. Roizin[4], G. Shalev[1,8**] *[1] School of Electrical Engineering, Ben-Gurion University of the Negev, Israel; [2] Dept. Chemistry and Data Science Research Center, Ben-Gurion University, Israel; [3] Dept Solar Energy and Environmental Physics, Swiss Institute for Dryland Environmental and Energy Research, J. Blaustein Institutes for Desert Research, Ben-Gurion University, Israel; [4] Tower Semiconductor, Migdal Haemek, Israel; [5] Dept Physical Chemistry, Israel Institute for Biological Research, Israel; [6] Dept. Analytical Chemistry, Israel Institute for Biological Research, Israel; [6] Dept Organic Chemistry, Israel Institute for Biological Research, Israel; [8] The Ilse-Katz Institute for Nanoscale Science and Technology, Ben-Gurion University, Israel*	**10:30-11:00** **INVITED**	**Electron beams as probes in nanophotonics: modelling and applications** **C. Tserkezis** *University of Southern Denmark, Denmark*
10:45-11:00	**Exploring the Impact of Electron Transport Layer and Electrode Modifications on the Efficiency and Photostability of Fully Printed Organic Solar Cells** **E. Doudis[1,2]**, A. Zachariadis[1,2], C. Kapnopoulos[1,2], E. Mekeridis[3], D.Tselekidou[1,2], A. Laskarakis[1,2], S. Logothetidis[1,2,3] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece,* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies (OET), Thermi, Greece*	**10:45-11:00**	**Sustainable electrochemical sensors from cork-derived laser induced graphene: non-enzymatic glucose detection in urine** **D. Pontiroli[1]**, M. Setti[1], E. Vaughan[2], R. Murray[2], L. Sygellou[3], A. J. Quinn[2], M. Riccò[1], D. Iacopino[2] *[1]Nanocarbon Laboratory, cIDEA & Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy* *[2]Tyndall National Inst., Univ. College Cork, Ireland* *[3]Inst. of Chemical Engineering Sciences, Foundation for Res. and Technology-Hellas, Patras Greece*		

11:00-11:30	**COFFEE BREAK** Grand Pietra Exhibition Hall	ISFOE 25 POSTERS	EXPO 25 Exhibition & Networking

11:30-13:30 CH	ISFOE25 7-10 July 2025 **OPVs & Perovskite PVs 5** **Chair: A. Colsmann**	11:30-13:30 DS1	ISFOE25 7-10 July 2025 NN25 8-11 July 2025 **Bioelectronics 6** **Chair: G. Sun**	11:30-13:30 DS2	ISFOE25 7-10 July 2025 NN25 8-11 July 2025 AI3D25 8-10 July 2025 **Workshop on Centers of Excellence (NN25 & ISFOE25)** **Chair: G. Hadziioannou, Un. of Bordeaux, A. Laskarakis, LTFN, AUTh**
11:30-12:00 **INVITED**	**SUNREY – Boosting SUstaiNability, Reliability end efficiency of perovskite PV through novel materials and process engineering** **C. Boeffel** *Fraunhofer Institut für Angewandte Polymerforschung, Potsdam, Germany*	**11:30-12:00** **INVITED**	**Innovative applications of thin-film transistors (TFTs) technology for novel display, active-matrix sensing and on-chip DNA synthesis** J. Du, Z. Liu, Y. Xiao, S. Huo, F. Wu and **L. Feng** *Hangzhou LinkZill Technology Co., Ltd., China*	**11:30-12:00**	**Centre of Excellence for Organic, Printed Electronics & Nano-Technologies (COPE-Nano)** **S. Logothetidis,[1,2]** *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece,* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece*
12:00-12:30 **INVITED**	**Organic nanoparticle dispersions for light-harvesting applications** J. Bruder, J. Armleder, K. Fischer, H. Röhm, **A. Colsmann** *Karlsruhe Institute of Technology (KIT), Material Research Center for Energy Systems, Karlsruhe, Germany*	**12:00-12:15**	**Blue-Green Algal Polysaccharide 'Sacran' for Ultrathin Flexible and Biodegradable Organic Electrochemical Transistors (OECTs)** K. Matura[1], C. Putz[2], S. Hradilova[3], K. Polakova[3], M. Okajima[4], T. Kaneko[4], M. Irimia-Vladu[1], M. Kaltenbrunner[2], N. S. Sariciftci[1], **S. Tekoglu[1]** *[1]Linz Inst. for Solar Cells and Institute of Physical Chemistry, Johannes Kepler University, Austria* *[2]Div. Soft Matter Physics & Institute of Experimental Physics, Johannes Kepler University, Austria* *[3]Czech Advanced Techn. Research Institute (CATRIN), RCPTM, Palacký University Olomouc, Czech Republic* *[4]School Chemical Material Engineering, Jiangnan University, China*	**12:00-12:30**	**Hellenic Robotics Center of Excellence (HERON)** **G. Yovanof** *Institute of Robotics, ATHENA Research Center, Greece*
		12:15-12:30	**Novel gating mechanism employed on nano bio-FET towards real-time, point-of-care diagnostics in human whole blood** **V. Garika[1#],** S. Bhattarai[8], S. Harilal[2], A. Eisenberg-Lerner[3], Z. Rotfogel[3,4], E. Pikhay[5], I. Shehter[5], A. Elkayam[5], M. Y. Bashouti[2,6], B. Akabayov[7], I. Ron[1], Y. Roizin[5], V. Bamm[8], M. Wills[8], G. Shalev[1,6]* *[1] School of El. Eng., Ben-Gurion University of the Negev, Israel; [2] Dept. of Solar Energy and Environmental Physics, Swiss Institute for Dryland Environmental and Energy Research, J. Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Israel; [3] Ophthalmology Research Laboratory, Kaplan Medical Center, Israel; [4] Faculty of Medicine, Hadassah Medical School, Hebrew University of Jerusalem, Israel; [5] Tower Semiconductor, Israel; [6] The Ilse-Katz Institute for Nanoscale Science and Technology, Ben-Gurion University, Israel; [7] Dept. of Chemistry and Data Science Research Center, Ben-Gurion University, Israel; [8] Dept. of Mol. & Cellular Biology, University of Guelph, Canada*		

12:30-13:00 INVITED	**Room Temperature Superradiance in Continuous Perovskite Superlattices** **M. Vasilopoulou** *National Centre for Scientific Research "Demokritos", Greece*	**12:30-12:45**	**Addressing the challenge of solution gating in biosensors based on field-effect transistors** **V. Garika[1],** S. Babbar[1], S. Samanta[1], S. Harilal[2], A. Eisenberg-Lerner[3], Z. Rotfogel[3,4], E. Pikhay[5], I. Shehter[5], A. Elkayam[5], M. Y. Bashouti[2,6], B. Akabayov[7], I. Ron[1], G. Hazan[8,9], Y. Roizin[5], G. Shalev[1,6]* *[1] School of El. Eng., Ben-Gurion University of the Negev, Israel; [2] Dept. of Solar Energy and Environmental Physics, Swiss Institute for Dryland Environmental and Energy Research, J. Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Israel; [3] Ophthalmology Research Laboratory, Kaplan Medical Center, Rehovot, Israel; [4] Faculty of Medicine, Hadassah Medical School, The Hebrew University of Jerusalem, Israel; [5] Tower Semiconductor, Israel; [6] The Ilse-Katz Institute for Nanoscale Science and Technology, Ben-Gurion University of the Negev, Israel; [7] Dept. of Chemistry and Data Science Research Center, Ben-Gurion University of the Negev, Israel; [8] School of Medicine, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel; [9] Pediatric Dept. D, Soroka University, Medical Center, Beer-Sheva, Israel*	**12:30-13:00**	**Exploring Collaboration Opportunities with Baltic Biomaterials Centre of Excellence** A. Dubnika[1,2], D. Loca[1,2], **J. Locs[1,2]** *[1]Inst. of Biomaterials and Bioengineering, Fac. of Natural Sciences and Technology, Riga Technical Univ., Latvia.* *[2]Baltic Biomaterials Centre of Excellence, Headquarters at Riga Technical Univ., Riga, Latvia.*
		12:45-13:00	**Label free biosensors based on Laser Induced Graphene for micro/nano plastics detection** **G. Genovese[1]**, V. Vezzoni[1], M. Setti[1], N. Ahmad[1], A. Rinaldi[1], M. Sidoli[1], S. Scaravonati[1], G. Magnani[1], S. Fortunati[2], M. Giannetto[2], M. Riccò[1], D. Pontiroli[1] *[1] Nanocarbon Laboratory, cIDEA & Dept. Mathematical, Physical and Computer Sciences, University Parma, Italy.* *[2] Department of chemistry life sciences and environmental sustainability, University of Parma, Italy*	**13:00-13:30**	**Teaming for excellence in micro-nanofabrication and flexible electronics for widespread socio-economic impact - TEAM-NANO** **A. Kara** *Sabanci University Nanotechnology Center (SUNUM), Turkey*
13:00-13:30 INVITED	**Improving OPV stability** **S.Zygridou**, E. Mekeridis, I. Gkaragkos, S. Logothetidis *OET Energy Technologies P.C. Thermi, Greece*	**13:00-13:15**	**Biological transistor (bioFET) for the specific and label-free sensing of CRP in unprocessed blood** **S. Babbar*[1]**, A. Eisenberg-Lerner[2], Z. Rotfogel[2,3], E. Pikhay[4], I. Shehter[4], A. Elkayam[4], M. Y. Bashouti[5], B. Akabayov[6], I. Ron[1], G. Hazan[7,8], Y. Roizin[4], G. Shalev[1,5] [1] School of Electrical Engineering, Ben-Gurion University of the Negev, Israel. [2] Ophthalmology Research Laboratory, Kaplan Medical Center, Rehovot, Israel. [3] Faculty of Medicine, Hadassah Medical School, The Hebrew University of Jerusalem, Jerusalem, Israel. [4] Tower Semiconductor, PO Box 619, Migdal Haemek, Israel [5] The Ilse-Katz Institute for Nanoscale Science and Technology, Ben-Gurion University of the Negev, POB 653, Beer-Sheva 8410501, Israel. [6] Department of Chemistry and Data Science Research Center, Ben-Gurion University of the Negev, 8410501, Beer-Sheva, Israel. [7] School of Medicine, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel. [8] Pediatric Department D, Soroka University, Medical Center, Beer-Sheva, Israel.		

13:30-15:00	**LUNCH BREAK** Grand Pietra Exhibition Hall	ISFOE25 POSTERS	EXPO25 Exhibition & Networking

15:00-16:00 **CH**	**ISFOE 25 7-10 July 2025 OPVs & Perovskite PVs 6** **Chair: S. Toffanin**	**15:00-17:30** **DS1**	**AI3D 25 8-10 July 2025 Computational Modeling of Materials, Devices & Processes** **Chair: P. Keliris**
15:00-15:30 **INVITED**	**How the perovskite microstructure impacts stability of solar cells** A. D. Schulz[1,2], K. Märkle[1,2], C. Kreusel[3], K. O. Brinkmann[3], T. Leonhard[1,2], T. Riedl[3], A. Colsmann[1,2], **H. Röhm[1,2]** *[1] Light Technology Institute, Karlsruhe Institute of Technology, Karlsruhe, Germany* *[2] Material Research Center for Energy Systems, Karlsruhe Institute of Technology, Germany.* *[3] In. of Elect. Devices and Wuppertal Center for Smart Mat. Systems, Un. Wuppertal, Germany*	**15:00-15:30** **INVITED**	**High-Throughput Unified Framework for Local Disorder and Anharmonic Electron-Phonon Coupling** **M. Zacharias** *Computation-based Science and Technology Research Center, The Cyprus Institute, Aglantzia 2121, Nicosia, Cyprus*
15:30-15:45	**Scalable Fabrication and Stability Analysis of Fully Printed Flexible Perovskite Solar Modules** **C. Stavraki[1,2],** S. Kassavetis[1,2], C. Kapnopoulos[1,2], A. Zachariadis[1,2], E. Paraschoudi[1,2], A. Paliagkas[1,2], E. Mekeridis[3], A. Laskarakis[1,2], S. Logothetidis[1,2,3] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece,* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies P.C. (OET), Thermi, Greece*	**15:30-16:00** **INVITED**	**Standardizing data, workflows, and executions in a modelling platform for organic electronic materials and processes** **E. Lidorikis** *Department of Materials Science & Engineering, University of Ioannina, Greece*
15:45-16:00	**Additive Engineering for Improved Lifetime of Methylammonium-Free Perovskite Solar Cells** **A. Ioakeimidis,** F. Galatopoulos, A. Z. Chrusou, S. A. Choulis *Department of Mechanical Engineering and Materials Science and Engineering, Cyprus University of Technology, Molecular Electronics and Photonics Research Unit, Limassol, Cyprus*		
16:00-18:15 **CH**	**ISFOE 25 7-10 July 2025 OLEDs, OTFTs and Wearables 4** **Chair: M. Gioti**	**16:00-16:15**	**Memristive Implementation of Explainable Fuzzy Classifiers** **M. Klimo[1]**, L. Kralik[1], O. Such[2], J. Dzuba[3], V. Kolomaznik[3], D. Voltmann[3] *[1] - Univ. of Zilina, Slovakia* *[2] - Slovak Academy of Science, Slovakia* *[3] - Bizzcom, Slovakia*
16:00-16:30 **INVITED**	**Enhancing the optoelectronic performance of organic photonic transistors by implementing multifunctional persistent radicals** **S. Toffanin** *Istituto per lo Studio dei Materiali Nanostrutturati, Consiglio Nazionale delle Ricerche (CNR-ISMN)*	**16:15-16:30**	**Charge transfer in B-DNA, including the backbone, via a four-channel Tight Binding (TB) model and TB parameters obtained by density functional theory (DFT)** A. Kordas, A. Morphis, **C. Simserides** *Dept. of Physics, National and Kapodistrian Univ. of Athens, Greece*
16:30-17:00 **INVITED**	**Electroactive polymers for fully-printed sensing and thermal management devices** **A. Agreda[1],** W. Smaal[1], P. M. Resende[2], F. Le Goupil[2], G. Payrot[1], G. Fleury[2], G. Hadziioannou[1,2] *[1]. ELORPrintTec, F-33600 Pessac, France* *[2]. Univ. Bordeaux, CNRS, Bordeaux INP, LCPO, UMR 5629, Pessac F-33600, France*	**16:30-16:45**	**Applications of Artificial Intelligence in Nanotechnology** **V. Karanassios[1]** *Dept. of Chemistry and Waterloo Inst. of Nanotechnology, Waterloo, Ontario, Canada N2L 3G1*
17:00-17:15	**Optimizing Red Emission in Phosphorescent OLEDs: Investigating Organic Host Materials Doped with Iridium Complex for Enhanced Performance** **D. Tselekidou[1,2]**, K. Papadopoulos[1,2], S. Kassavetis[1,2], C. Gravalidis[1,2], S. Logothetidis[1,2,3], M. Gioti[1,2] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece,* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies P.C. (OET), Thermi, Greece*		
17:15-17:30	**Top-emitting microcavity white organic light-emitting diodes** **M. Kumar,** A. Dutta, H. Qureshi, M. A. Papachatzakis, A. Abdelmagid, K. S. Daskalakis *Department of Mechanical and Materials Engineering, University of Turku, Finland*		
17:30-17:45	**Correlation between Energy-Level Alignment and Interfacial Properties with the OLED Performance** **D. Kanatsiopoulos[1,2]**, K. Papadopoulos[1,2], D. Tselekidou[1,2], S. Kassavetis[1,2], S. Logothetidis[1,2,3], M. Gioti[1,2] *[1] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2] Center of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3] Organic Electronic Technologies P.C. (OET), 20 KM Thessaloniki-Tagarades, Greece*		
17:45-18:00	**R2R Manufacturing of Fully Printed Organic Light Emitting Diodes (OLEDs): Materials, Processes and Device Optimization** **V. Kyriazopoulos[1]**, K. Papadopoulos[2], D. Tselekidou[2], E. Mekeridis[1], A. Laskarakis[2], M. Gioti[2], S. Logothetidis[1,2]		

	[1] Organic Electronic Technologies P.C. (OET), 20th KM Thessaloniki - Tagarades, 57001 Thermi Greece *[2] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece*
18:00-18:15	**Quantum Dot Light-emitting Electrochemical Cells (QLECs) based on Cd-free Quantum Dots** **E. Nannen[1]**, S. Gellner[1,2], J. Frohleiks[2], F. Wefers[2] *[1] Competence Centre Novel Electronics and Advanced Materials NOVA, Faculty of Engineering and Computer Science, Niederrhein University of Applied Sciences, Krefeld, 47805, Germany* *[2] Solid State Lighting, Werkstoffe der Elektrotechnik and CENIDE , Univ. Duisburg-Essen, Germany*
18:15-18:30	ISFOE25 CLOSING CEREMONY **Closing Remarks and Discussion - Ceremony for ISFOE25 Awards - Farewell comments & End of ISFOE25**

ISFOE 25 POSTERS

Nanomaterials: Organic Semiconductors, Electrodes, Barriers, Hybrids and Devices: OPVs, OTFTs, OLEDs Poster Display : Monday 7 July to Thursday 10 July Official Poster Session & Presentation: Monday 7 July (19:00-20:30):	
P1-1	**Continuous flow synthesis of conjugated polymers using direct (hetero)arylation polymerization (DHAP)** **W. Dupont**[1], L-P. Boivin[1], D. Gendron[2], M. Leclerc[1] *[1]Chemistry department, Laval University, Québec, Canada* *[2]Thetford Cegep, Kemitek, Thetford Mines, Quebec, Canada*
P1-2	**Biosourced and Metal-Free Synthesis of Conjugated Polymers: *b*PPV, *b*CN-PPV and *b*PPTzTz** **L-P. Boivin**[1], M. Leclerc[1], D. Gendron[2] *[1]Laval University, Chemistry department, Québec City, Québec, Canada* *[2] Cégep of Thetford, Kemitek, Thetford Mines, Québec, Canada*
P1-3	**Toward Understanding Temperature and Bias Instabilities of Anti-ambipolar Transistors via Low-Frequency Noise Spectroscopy** **J. Song**[1], Y. Han[2], and H. Yoo[2] *[1]Department of Semiconductor Engineering, Gachon University, Seongnam-si, Gyeonggi-do, Republic of Korea* *[2]Department of Electronic Engineering, Hanyang University, Seoul, Republic of Korea*
P1-4	**Development of down-converting white light-emitting diodes based on phenothiazine and 3,5-dicyanopyridine derivatives with single-molecular white emissions** **Volyniuk D.[1]**, Melnykov S.[2], Arsenyan P.[3], Volyniuk L.[1], Vigante B.[3], Karaush-Karmazin N.M.[4], Minaev B.F.[4], Lazauskas A.[1], Belyakov S.[3], Bezvikonnyi O.[1], Stakhira P.[2], Grazulevicius J.V.[1] *[1]Department of Polymer Chemistry and Technology, Kaunas University of Technology, Lithuania* *[2]Department of Electronic Engineering, Lviv Polytechnic National University, Lviv, Ukraine* *[3]Latvian Institute of Organic Synthesis, Riga* *[4]Department of Chemistry and Nanomaterials Science, Bohdan Khmelnytsky National University, Ukraine*
P1-5	**9-Fluorelidenemalononitrile Derivatives as Electron Transporting Materials** **V. Getautis[1]**, J. Petrulevičius[1], G. Juška[2], V. Jankauskas[2], M. Daškevičienė[1] *[1]Department of Organic Chemistry, Kaunas University of Technology, Lithuania*
P1-6	**Dibenzothiophene as a building block towards π-extended systems with room temperature phosphorescence** **R. Bujaldón[1,2]**, Clara Fabregat[1,2], Jaume Garcia-Amorós[1,2], Dmytro Volyniuk[3], Melika Ghasemi[3], Juozas V. Grazulevicius[3], Dolores Velasco[1,2] *[1]University of Barcelona, Spain* *[2]Institute of Nanoscience and Nanotechnology (IN2UB), University of Barcelona, Spain* *[3]Kaunas University of Technology, Lithuania*
P1-7	**Transient Photoluminescence: from organic to solar cells** **L. Illés[1,2]**, F. Steinbach[1], T. Brigancz[2], F. Korsós[2], A. Zachariadis[3], C. Kapnopoulos[3], E. Mekeridis[4], A. Laskarakis[3], S. Logothetidis [3,4], Z. T. Kiss[2], Á. Solti[5], S. Lenk[1] *[1]Department of Atomic Physics, Institute of Physics, Budapest University of Technology and Economics, Műegyetem rakpart 3., H-1111 Budapest, Hungary* *[2]Semilab Co. Ltd, Prielle Kornélia u. 4/A. H-1117 Budapest, Hungary* *[3]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, GR-54124, Greece* *[4]Organic Electronic Technologies P.C. (OET), 20th KM Thessaloniki—Tagarades, GR-57001 Thermi, Greece* *[5]Department of Plant Physiology and Molecular Plant Biology, Eötvös Loránd University, Budapest, Hungary*
P1-8	**Optical and structural properties of single-crystal and thin film $MAPbBr_3$** **A. Verikios**[1], A. Soultati[1], M. Vasilopoulou[1,*] *[1]Institute of Nanoscience and Nanotechnology (INN), National Center for Scientific Research Demokritos, 15310 Agia Paraskevi, Athens, Greece*

P1-9	**Inverted Design Donor-Acceptor-Donor Type Non-Fullerene Acceptors for Application in Bulk-Heterojunction Organic Solar Cells** **K. Traskovskis**[1], K. Dmitrijevs[1], R. Grzibovskis[2] *[1]Riga Technical University, Faculty of Natural Sciences and Technology, Street Paula Valdena 3, LV-1048, Riga, Latvia* *[2]Institute of Solid State Physics, University of Latvia, Kengaraga Str. 8, Riga, LV-1063, Latvia*
P1-10	**Comprehensive study on molecular doping to enhance optoelectronic performance and efficiency in fully printed flexible organic solar cells** **A. Paliagkas[1,2],** C. Stavraki[1,2], C. Kapnopoulos[1,2], A. Zachariadis[1,2], V. Heben[1,2], E. Rabota[1,2], E. Paraschoudi[1,2], S. Logothetidis[1,2,3], A. Laskarakis[1,2] *[1] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2]Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), Greece* *[3] Organic Electronic Technologies (OET), Greece*
P1-11	***Aesthetically Patterned Semitransparent Perovskite Photovoltaics for Ambient Applications*** **M. Tountas[1]**, E. D. Koutsouroubi[1], D. Tsikritzis[1], S. Maragkaki[2], E. Stratakis[2], and E. Kymakis[1] *[1] Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), 71410, Heraklion, Greece* *[2] Institute of Electronic Structure and Laser (IESL), Foundation for Research and TechnologyHellas (FORTH), 70013, HHeraklion, Greece*
P1-12	**Impact of Modified Hole Transport Layer Functionalization on the Performance of Printed Perovskite Solar Cells** **A.Kostopoulou[1,2]**, C.Stavraki[1,2], C.Kapnopoulos[1,2], E. Paraschoudi[1,2], P.Rampota[1,2], K.Papadopoulos[1,2], S.Kassavetis[1,2], E.Mekeridis[3], S.Logothetidis[1,2,3], A.Laskarakis[1,2] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2]Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), Greece* *[3] Organic Electronic Technologies P.C. (OET), Greece*
P1-13	**Modification of slot-die coated transparent electrodes for integration into organic photovoltaics (OPVs)** **A. Papadopoulos**, C. Kapnopoulos, E. Doudis, E. Paraschoudi, P. Rampota, C. Stavraki, A. Paliagkas, S. Kassavetis, S. Logothetidis, A. Laskarakis *Nanotechnology Lab LTFN, 54124, Aristotle University of Thessaloniki, Greece*
P1-14	**Enhancing Reliability and Mechanical Robustness of R2R-Printed Flexible Organic Photovoltaics** **E. Doudis[1]** , Th. Kalampaliki[1], S. Kassavetis[1], S. Zygridou[2], E. Mekeridis[2], A. Laskarakis[1], S. Logothetidis[1,2] *[1] Department of Physics, Aristotle University of Thessaloniki, Greece* *[2] Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, 57001 Thermi, Greece*
P1-15	**ITO-Free flexible organic photovoltaic devices processed using industrialcompatible Roll-to-Roll and Sheet-to-Sheet techniques Eswaran Jayaraman1,2, Michela Prete1,2,** **A. Chandel[1,2]**, J. Lamminaho[1,2], and M. Madsen[1,2*] *[1] SDU Centre for Advanced Photovoltaics and Thin-film Energy Devices (CAPE), Mads Clausen Institute (MCI), Sønderborg 6400, Denmark* *[2] SDU Climate Cluster (SCC), Campusvej 55, 5230 Odense, Denmark*
P1-16	**Design, Synthesis and Characterization of Benzophenone Derivatives as Triplet Harvesting Emitters** **A. Dabuliene,** R. Keruckiene, O. Bezvikonnyi, J. Simokaitiene, J.V. Grazulevicius *Department of Polymer Chemistry and Technology, Kaunas University of Technology, K. Barsausko st. 59, 51423 Kaunas, Lithuania*
P1-17	**Structure–Property Relationship of the Derivatives of Imidazole and Fluorene** **J. Simokaitiene**, M. Abdella, D. Volyniuk, J. V. Grazulevicius *Department of Polymer Chemistry and Technology, Kaunas University of Technology,* *Barsausko St. 59, LT-51423 Kaunas, Lithuania*
P1-18	**Gaussian-Sigmoid Switchable Split-Gate Organic Anti-Ambipolar Transistor** **M. Kim**[1], R. Ko[1], and H. Yoo[2] *[1]Department of Semiconductor Engineering, Gachon University, Seongnam-si, Gyeonggi-do, 13120, Republic of Korea* *[2]Department of Electronic Engineering, Hanyang University, Seoul, 04763, Republic of Korea*
P1-19	**High-Performance Split-Gate Organic Thin-Film Transistor based on Coplanar Asymmetric Nanogap Electrodes Created Via Adhesion Lithography** **M. Kim**[1], G. Lee[2, 3], R. Ko[1], and H. Yoo[4] *[1]Department of Semiconductor Engineering, Gachon University, Seongnam-si, Gyeonggi-do, 13120, Republic of Korea* *[2]Ceramic Total Solution Center, Korea Institute of Ceramic Engineering and Technology, Icheon, 17303, Republic of Korea* *[3]Department of Materials Science and Engineering, Korea University, Seoul, 02841, Republic of Korea* *[4]Department of Electronic Engineering, Hanyang University, Seoul, 04763, Republic of Korea*

P1-20	**Strain Relaxation and Multidentate Anchoring in n-Type Perovskite Transistors and Logic Circuits** **A. Rashid bin Mohd Yusoff** *Department of Physics, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru, Malaysia*
P1-21	**Scalable Fabrication and Stability Analysis of Fully Printed Flexible Perovskite Solar Modules** **C. Stavraki[1,2],** S. Kassavetis[1,2], C. Kapnopoulos[1,2], A. Zachariadis[1,2], E. Paraschoudi[1,2], A. Paliagkas[1,2], E. Mekeridis[3], A. Laskarakis[1,2], S. Logothetidis[1,2,3] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece,* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies P.C. (OET), Thermi, Greece*
P1-22	**Visible light communication using thermally-activated delayed fluorescent OLEDs** King L.G.*[1], Majlesein B.[2], Osahon I.N.O[2], Yoshida K.[1], Haas H.[2], Samuel I.D.W.[1] *[1]Organic Semiconductor Centre, SUPA, School of Physics and Astronomy, University of St. Andrews, UK* ***[2]LiFi Research and Development Centre, Electrical Engineering Division, University of Cambridge, UK***
P1-23	**Development of triazine and carbazole derivatives featuring bipolar charge-transporting properties and thermally activated delayed fluorescence** Volyniuk L.*[1], Stanitska M.[1], Bucinskas A.[1], Ghasemi M.[1], Dabuliene A.[1], Woon K.L.[1], Volyniuk D.[1], Grazulevicius J.V.[1] *[1]Department of Polymer Chemistry and Technology, Kaunas University of Technology, K. Barsausko str. 59, Kaunas 51423, Lithuania* *[2]Low Dimensional Material Research Centre, Department of Physics, University Malaya, Kuala Lumpur, Malaysia*
P1-24	**Minimizing the Impact of Humidity and NO2-SO2 Cross-Sensitivity** on a Low-Cost Gas Sensor Array **F. Gerhát**[1], V. Režo[1], M. Mičjan[1] *[1]Institute of Electronics and Photonics, Slovak University of Technology in Bratislava Ilkovičova 3, 841 04 Bratislava, Slovak Republic*
P1-25	**Dual Passivation Effect of Ligand and Doping Engineering for High-Performance Perovskite Light-Emitting Diodes** **G.-J. Park**[2], Y.-H. Kim[1], K.-B. Shin[2], M.-H. Park[1,2,*] *[1]Department of Materials Science and Engineering, Soongsil University 369 Sangdo-Ro, Dongjak-Gu, Seoul, Republic of Korea* *[2]Department of Convergence of Energy Policy and Technology, Soongsil University 369 Sangdo-Ro, Dongjak-Gu, Seoul, Republic of Korea*
P1-26	**Lattice-stabilized Perovskite Nanocrystals and Device Engineering for Highly Efficient Light-Emitting Diodes** **J.-G. Jung**[1], Y.-J. Lee[2], K.-B. Shin[2], J.-M. Kim[3], H. Kim[1], W. Lee[1], B.-G. Kang[3], M.-H. Park[1,2,*] *[1] Department of Materials Science and Engineering, Soongsil University 369, Sangdo-ro, Dongjak-gu, Seoul, Republic of Korea* *[2] Department of Convergence of Energy Policy and Technology, Soongsil University 369, Sangdo-ro, Dongjak-gu, Seoul, Republic of Korea* *[3] Department of Chemical Engineering, Soongsil University 369, Sangdo-ro, Dongjak-gu, Seoul, Republic of Korea*
P1-27	**W-shaped luminophores based on isophtaloylbisdibenzothiophene (ISBDBT) for OLED application** **A. Kimpel**[1], M. Stanitska[1], J. V. Gražulevičius[1] *[1]Department of Polymer Chemistry and Technology, Faculty of Chemistry, Kaunas University of Technology University, K. Baršausko st. 59, LT-51423, Kaunas, Lithuania*
P1-28	**Organometallic copper(I) complexes as components for single-component white light OLEDs** **F. Z. Boudjenane**[1], A. Ruduss[1], A. Vembris[2], K. Traskovskis[1] *[1]Riga Technical University, Faculty of Natural Sciences and Technology Street Paula Valdena 3, LV-1048, Riga, Latvia* *[2]Institute of Solid State Physics, University of Latvia, Kengaraga Str. 8, Riga, LV-1063, Latvia*
P1-29	**Study of charge trap- and charge barrier-mediated electroluminescence properties in multilayer Organic Light-Emitting Transistors (OLETs)** **N. Quaresima**,[1] K. Zahoaliaj,[1] S. Mattiello,[2] L. Beverina,[2] M. Prosa,[1] M. Bolognesi,[1] and S. Toffanin[1] *[1]Institute of Nanostructured Materials (ISMN) -National Research Council (CNR),* *Via P. Gobetti 101, Bologna 40129, , Italy* *[2]Department of Materials Science, University of Milano-Bicocca, Via R. Cozzi 55, Milano, Italy*
P1-30	**Role of functionalization in triindole-based semiconductors for OTFTs** C. Fabregat[1,2], R. Bujaldón[1,2], J. Garcia-Amorós[1,2], J. Puigdollers[3], E. Saucedo[3], **D. Velasco**[1,2] *[1]University of Barcelona, Martí i Franquès 1, E-08028, Barcelona, Spain.* *[2]Institute of Nanoscience and Nanotechnology (IN2UB), University of Barcelona.* *[3]Polytechnic University of Catalonia (UPC), Av. Eduard Maristany 10–14, E-08019, Barcelona, Spain.*

P1-31	**Novel configuration of solution-processed charge generation layers for highly efficient tandem light emitting diodes** **Ye-Ji Lee[1]**, Jae-Geun Jung[2], Kyoung-Been Shin[1], Min-Ho Park[1,2] 2, *[1] Department of Convergence of Energy Policy and Technology, Soongsil University 369, Sangdo-ro, Dongjak-gu, Seoul, Republic of Korea* *[2] Department of Materials Science and Engineering, Soongsil University 369, Sangdo-ro, Dongjak-gu, Seoul, Republic of Korea*
P1-32	**High-Entropy Perovskite Emitters with Improved Thermodynamic Stability** Kyoung-Been Shin[2], Min-Ho Park[1,2]2 *[1] Department of Materials Science and Engineering, Soongsil University, 369 Sangdo-Ro, Dongjak-Gu, Seoul* *[2] Department of Convergence of Energy Policy and Technology, Soongsil University, 369 Sangdo-Ro, Dongjak-Gu, Seoul*
P1-33	**Lattice Energy Modulation of Lead-free Perovskite Nanocrystals for Highly Stable Color Conversion Layer** **D.-Y. Kim[1]**, J. S. Yeo[2], H. R. Jang[2], T.-H. Han[2], and M.-H. Park[1]* *[1] Department of Materials Science and Engineering, Soongsil University, 369 Sangdo-Ro, Dongjak-Gu, Seoul , 06978, Republic of Korea* *[2] Division of Materials Science and Engineering, Hanyang University, 222 Wangsimni-ro Seongdong-gu, Seoul, 04763, Republic of Korea.*
P1-34	**Highly Efficient Vacuum-Deposited Pure Blue Perovskite LEDs with Narrow Emission** **J. Kwon**, B. Shin *Department of Material Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST) 291, Daehak-ro, Yuseong-gu, Daejeon, Republic of Korea*
P1-35	**Optimizing Red Emission in Phosphorescent OLEDs: Investigating Organic Host Materials Doped with Iridium Complex for Enhanced Performance** **D. Tselekidou[1,2]**, K. Papadopoulos[1,2], S. Kassavetis[1,2], C. Gravalidis[1,2], S. Logothetidis[1,2,3], M. Gioti[1,2] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece,* *[2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies P.C. (OET), Thermi, Greece*
P1-36	***Reliability Investigation of Conductive Yarn with the help of FE-Simulation*** **K. Weide-Zaage**, X. Ma, Y. Huang *Institute for Microelectronic Systems, Workgroup: reliability, simulation & risk analysis, Leibniz Universität Hannover, Germany*
P1-37	**Multi-Functional Polymeric Substrates with Integrated Optical Layers for Flexible Organic Photodetectors** **C.-M. Esteban[1]**, C. Dongho[1], S. Ramakant[1], L. Woochan[1], J. Jeoungmin[1], Y. Seunghyup[1,*] *School of Electrical Engineering, KAIST, Daejeon, Republic of Korea*
P1-38	**Metal Oxide Colloidals Synthesis Using Laser Ablation in Liquids for application in Enhanced OLED Devices** **K. Kyrtopoulou[1]**, N. Pliatsikas[1], E. Karkadaki[1], S. Panos[1], S. Kassavetis[1], M. Gioti[2], P. Patsalas[1] *[1] Department of Physics, Aristotle University of Thessaloniki, Greece* *[2] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece*
P1-39	**Correlation between Energy-Level Alignment and Interfacial Properties with the OLED Performance** **D. Kanatsiopoulos[1,2]**, K. Papadopoulos[1,2], D. Tselekidou[1,2], S. Kassavetis[1,2], S. Logothetidis[1,2,3], M. Gioti[1,2] *[1] Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2] Center of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Greece* *[3] Organic Electronic Technologies P.C. (OET), 20 KM Thessaloniki-Tagarades, Greece*

Biosensors & Bioelectronics (Common POSTER Session in ISFOE25 & NN25) **Tuesday 8 to Friday 11 July: Poster Display** **Thursday 10 (17:30-20:00): Poster Presentation**	
P4-1	**Selective electrochemical sensing of dopamine via β-cyclodextrin-**functionalized selenium quantum dots **J Kim[1]**, R. Sangubotla[1], K. Yun[2], C.-H. Jang[3] *[1] Dept. of Chemical and Biological Eng.,* *[2] Bionano Technology,* *[3] Chemistry, Gachon Univ., Korea*

P4-2	**Functional Bacterial Cellulose Membranes via Imprinting and Surface Chemistry Modification** **I. Ntovolou**[1], D. Farkatsi[1], D.I Koukoumaki[2], D. Sarris[2] and K. Ellinas[1] *[1]Laboratory of Advanced Functional Materials and Nanotechnology, Department of Food Science and Nutrition, School of the Environment, University of the Aegean, Greece* *[2]Laboratory of Physico-Chemical and Biotechnological Valorization of Food By-Products, Department of Food Science & Nutrition, School of Environment, University of the Aegean, Lemnos, Greece*
P4-3	**Wearable System for Gastric Motility Monitoring using High-Resolution Electrogastrography** **C. Slaughter**, L. Gatecliff, X. Tao, R.R.M. Serrano, A. Dominguez-Alfaro, G. Malliaras *Department of Engineering, University of Cambridge*
P4-4	**Effect of Solution Gating in the Detection of Organophosphate via Meta-Nano-Channel Field Effect Transistor** **P. Verma**[1*], Y. Ben-Shahar[5*], S. Bhattarai[2], S. Harilal[3], G. Feldheim[5], A. Pavzner[5], I. Columbus[6], E. Pikhay[4], I. Shechter[4], A. Elkayam[4], M. Y. Bashouti[3,6], B. Akabayov[2], A. Weissberg[7], I. Ron[1,5], Y. Roizin[4], G Shalev[1,8**] *[1] School of El. Eng., Ben-Gurion Univ. of the Negev, Israel* *[2] Dept. of Chemistry and Data Science Res. Center, Ben-Gurion Univ. of the Negev, 8410501, Beer-Sheva, Israel* *[3] Dept. of Solar Energy and Environmental Physics, Swiss Inst. for Dryland Environmental and Energy Res., J. Blaustein Inst.s for Desert Res., Ben-Gurion Univ. of the Negev Israel* *[4] Tower Semiconductor, PO Box 619, Migdal Haemek, Israel* *[5] Dept. of Physical Chemistry, Israel Inst. for Biological Res., P.O. Box 19, Ness-Ziona 74100, Israel* *[6] Dept. of Analytical Chemistry, Israel Inst. for Biological Res., P.O. Box 19, Ness-Ziona 741000, Israel* *[6] Dept. of Organic Chemistry, Israel Inst. for Biological Res., P.O. Box 19, Ness-Ziona 741000, Israel* *[8] The Ilse-Katz Inst. for Nanoscale Science and Technology, Ben-Gurion Univ. of the Negev, POB 653, Beer-Sheva 8410501, Israel*
P4-5	**Conceptualization of a portable device for non-invasive creatinine detection** **Francalanci B.**[1], Rovini E.[1], Cavallo F.[1] *Department of Industrial Engineering, University of Florence, via di Santa Marta 3, 50139, Florence, Italy*
P4-6	**Memristive Nanodevices for Highly-Sensitive Bio/Chemical Sensing Applications** **I. Tzouvadaki**[1], S. Carrara[2], G. De Micheli[2] *[1]Centre for Microsystems Technology (CMST), imec and Ghent Univ., Technologiepark 126, 9052 Gent, Belgium* *[2]Integrated System Laboratory, EPFL, 1015 Lausanne, Switzerland*
P4-7	**Biological transistor (bioFET) for the specific and label-free sensing of CRP in unprocessed blood** **S. Babbar**[*1], A. Eisenberg-Lerner[2], Z. Rotfogel[2,3], E. Pikhay[4], I. Shehter[4], A. Elkayam[4], M. Y. Bashouti[5], B. Akabayov[6], I. Ron[1], G. Hazan[7,8], Y. Roizin[4], G. Shalev[1,5] [1] School of Electrical Engineering, Ben-Gurion University of the Negev, Israel. [2] Ophthalmology Research Laboratory, Kaplan Medical Center, Rehovot, Israel. [3] Faculty of Medicine, Hadassah Medical School, The Hebrew University of Jerusalem, Jerusalem, Israel. [4] Tower Semiconductor, PO Box 619, Migdal Haemek, Israel [5] The Ilse-Katz Institute for Nanoscale Science and Technology, Ben-Gurion University of the Negev, POB 653, Beer-Sheva 8410501, Israel. [6] Department of Chemistry and Data Science Research Center, Ben-Gurion University of the Negev, 8410501, Beer-Sheva, Israel. [7] School of Medicine, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel. [8] Pediatric Department D, Soroka University, Medical Center, Beer-Sheva, Israel.
P4-8	**Design and Fabrication of Flexible, Fully Printed Piezoelectric Sensors for Heart Rate Monitoring** **A. Paliagkas**[1,2], E. Paraschoudi[1,2], S. Kassavetis[1,2], C. Kapnopoulos[1,2], M. Chatzidis[1,2], C. Stavraki[1,2], A. Laskarakis[1,2], S. Logothetidis[1,2,3] *[1]Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece* *[2]Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), Greece* *[3]Organic Electronic Technologies P.C. (OET), Greece*

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AI3D-1	**Enhanced Wear Resistance and Formula Optimization of POM materials Studied by Molecular Dynamics Simulation** **T-J. Huang**, You-Yi Lin *Material & Chemical Res. laboratories, Industrial Technology Res. Inst., Hsinchu,310, Taiwan*

AI3D-2	**Data-driven Methods for Thermoplastic Polymer Design** **T.-J. Huang** [1], Chuin-Shan Chen[2] *[1] Material & Chemical Res. laboratories, Industrial Technology Res. Inst., Hsinchu,310, Taiwan* *[2] Dept. of Civil Engineering, Computer-Aided Engineering, National Taiwan Univ., Taiwan 10617, Taiwan*
AI3D-3	**Influence of transition mutations and disorder on charge localization and transfer in B-DNA sequences** P. Banev, A. Falliera, **C. Simserides** *Dept. of Physics, National and Kapodistrian Univ. of Athens, Panepistimiopolis, Zografos GR-15784, Athens, Greece*
AI3D-4	**Oxygen evolution reaction on rhodium-doped $BaTiO_3$ (001) surface** **Zh.Ye. Zakiyeva** *Dept. of Physics and Technology, L.N. Gumilyov Eurasian National Univ., 2 Satpayev Street, Kazakhstan, Astana*
AI3D-5	**A Bioinspired Bioink for Cartilage Regeneration: Integrating κ-Carrageenan, Silk Fibroin, and PBAT Microcarriers in 3D Bioprinting** S. Koç Akbayrak, **M. Gümüşderelioğlu**, *Chemical Engineering Dept., Hacettepe Univ., Beytepe, Ankara, TURKEY*
AI3D-6	**Machine Learning for the Efficiency Optimization of Flexible Printed Organic Photovoltaics** **G. Krokidas**, S. Kassavetis, A. Laskarakis, Ch. Kapnopoulos, A. Paliagkas, S. Logothetidis *Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki GR-54124, Greece*