

Monday 1 July 2024

08:00 -	Registration	
09:00-09:30 ⬆ CH		Welcome and Opening Remarks S. Logothetidis ISFOE24 Chairman
09:30-11:00 ⬆ CH	Workshop on OLAE Materials 1 Chair: E. Loidorikis	
09:30-10:00 KEYNOTE	Green Chemistry for Green Energy M. Leclerc <i>Laboratoire des Polymères Electroactifs et Photoactifs, Département de chimie, Université Laval</i>	
10:00-10:30 KEYNOTE	Polymer semiconductors: doping-induced energy level renormalization and improved solvent-resistance N. Koch ¹ Institut für Physik & Center for the Science of Materials Berlin, Humboldt-Universität zu Berlin, Germany ² Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany	
10:30-10:45	The development of electron-deficient materials for organic electronics applications P. Kafourou, ^{1,2} Q. He ² , M. I. Nugraha ¹ , N. Gasparini ² , T. D. Anthopoulos ³ , M. Heeney ^{1,2} ¹ Physical Sciences and Engineering Division (PSE), King Abdullah University of Science and Technology (KAUST), Saudi Arabia ² Department of Chemistry and Centre for Processable Electronics, Imperial College London, UK ³ Photon Science Institute, Henry Royce Institute, Department of Electrical and Electronic Engineering, The University of Manchester, UK	
10:45-11:00	Environmentally friendlier functional inks for printed conformable electronics: from conductive tracks to sensors and electroluminescent devices N. Perinka ¹ , L. Campos-Arias ¹ , M. Franco ² , R. Policia ² and Senentxu Lanceros-Méndez ^{1,2,3} ¹ BCMaterials, Basque Center for Materials, Applications and Nanostructures UPV/EHU Science Park, Spain ² Physics Centre of Minho and Porto Universities (CF-UM-UP) and Laboratory of Physics for Materials and Emergent Technologies (LapMET) University of Minho, Braga, Portugal ³ Ikerbasque, Basque Foundation for Science, Bilbao, Spain	

11:00-11:30	COFFEE BREAK Grand Pietra Exhibition Hall			
11:30-13:30 ⬆ Crystal Hall	Workshop on OLAE Materials 2 Chairs: A. Colsmann			
11:30-12:00 KEYNOTE	Generating functional conjugated polymers by post-polymerisation reactions Martin Heeney <i>Chemical Science, King Abdullah University of Science and Technology, Saudi Arabia</i>			
12:00-12:30 INVITED	Processing and phase transitions of organic semiconductors Jasper J. Michels <i>Max Planck Institute for Polymer Research, Germany</i>			
12:30-13:00 INVITED	Advancements in Ultra-Thin Glass and Ceramics M. Prassas <i>Corning European Technology Center, Avon, France</i>			
13:00-13:15	Oxetanes as a new class of additives for PEDOT:PSS: providing high conductivity and water-resistance to thin films A. Charas ¹ , S. M. Jorge ¹ , C. Príncipe ¹ , A. Ablú ¹ , L. F. Santos ² , Jorge Morgado ¹ ¹ Instituto de Telecomunicações, Instituto Superior Técnico, Av. Rovisco Pais, Lisbon, Portugal ² Dep. of Structural Chemistry, Institute of Molecular Sciences and Dep. of Chemical Engineering, Instituto Superior Técnico, Universidade de Lisboa, Portugal			
13:15-13:30	Sustainable access to conjugated microporous polymers (CMPs) via Suzuki-Miyaura reaction in water and their application as heterogeneous catalysts N. Giuliani, A. Calascibetta, S. Mattiello, C. Santoro, L. Beverina			

Department of Materials Science, University of Milano-Bicocca, U5 building, Via Cozzi 55, 20125 Milan, Italy

13:30-15:00	LUNCH BREAK Grand Pietra Exhibition Hall	ISFOE24 POSTERS	EXPO24 Exhibition & Networking
15:00-17:00 Crystal Hall	Workshop on OPVs & Perovskite PVs 1 Chairs: M. Heeney, S. Kassavetis		
15:00-15:30 KEYNOTE	Enabling sustainable energy solutions by vacuum and plasma surface technologies Christian May <i>Fraunhofer Institute for Electron Beam and Plasma Technology FEP, Germany</i>		
15:30-16:00 INVITED	Towards printing of organic solar cells from surfactant-free aqueous dispersions K. Fischer ¹ , J. Armleder ¹ , J. Bruder ¹ , A. Czopiak ¹ , F. De Rossi ² , H. Röhm ¹ , F. Brunetti ² , A. Colsmann¹ ¹ <i>Karlsruhe Institute of Technology (KIT), Material Res. Center for Energy Systems, Germany</i> ² <i>CHOSE, University of Rome "Tor Vergata", Rome, Italy</i>		
16:00-16:15	Molecular Organic Solar Cells: From Formulation and Surface Engineering to Novel Device Architectures A. Panagiotopoulos¹ , G. Kakavelakis ² , Henning Richter ³ , D. Kutsarov ¹ , S.R.P. Silva ¹ ¹ <i>School of Computer Science and Electronic Engineering, Advanced Technology Institute (ATI), University of Surrey, UK</i> ² <i>Department of Electronic Engineering, School of Engineering, Hellenic Mediterranean University, Crete, Greece</i> ³ <i>Nano-C Inc. 33 SW Park, Westwood, MA 02090, United States</i>		
16:15-16:30	Empirical Model for Light Soaking in Inverted OPVs V. Heben¹ , C. Kapnopoulou ¹ , A. Zachariadis ¹ , D. Tselekidou ¹ , A. Laskarakis ¹ , S. Logothetidis ^{1,2} ¹ <i>Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, Greece</i> ² <i>Organic Electronic Technologies (OET), Greece</i>		
16:30-17:00 INVITED	Encapsulation Technologies for flexible opto-electronic devices P. Schlenz <i>Fraunhofer FEP, Winterbergstraße 28, 01277 Dresden, Germany</i>		

17:00-17:30	COFFEE BREAK Grand Pietra Exhibition Hall	ISFOE24 POSTERS	EXPO24 Exhibition & Networking
17:30-19:00 Crystal Hall	Workshop on OPVs & Perovskite PVs 2 Chairs: J. Michels		
17:30-18:00 INVITED	Organic Semiconductors for Photovoltaic Applications – A Manufacturer's Perspective Arthur D Hendsbee <i>Product Manager, Brilliant Matters Organic Electronics, St Augustin de Desmaures Quebec, Canada</i>		
18:00-18:15	Active-layer Solution Filtration Enhances the Stability of Organic Solar Cells and Molecular Perspectives for Organic Photovoltaic Stability J. Luke^{1,2} , E. Yang ² , C. Labanti ² , S.-Y. Park ^{2,3} , Y. Fu ⁴ , A. V. Marsh ¹ , Z. Qiao ⁵ , M. Bidwell ⁵ , N. Gasparini ⁵ , M. Heeney ^{1,5} , J.-S. Kim ² ¹ <i>Physical Sciences and Engineering Division (PSE), KAUST, Saudi Arabia</i> ² <i>Department of Physics and Centre for Processable Electronics, Imperial College London, UK</i> ³ <i>Department of Physics, Pukyong National University, 5117A, B15, 45, Yongso-ro, Nam-gu, Busan, South Korea</i> ⁴ <i>Department of Physics, The Chinese University of Hong Kong, Sha Tin, NT, Hong Kong, China</i> ⁵ <i>Dept Chemistry, Centre for Processable Electronics, Imperial College London, Mol. Sciences Research Hub, UK</i>		
18:15-18:30	Printed AgNWs dispersion as top electrode in Organic Photovoltaic Devices for enhanced performance and stability E. Doudis¹ , E. Paraschoudi ¹ , A. Paliagkas ¹ , V. Heben ¹ , C. Kapnopoulou ¹ , E. Mekeridis ² , A. Zachariadis ¹ , A. Laskarakis ¹ , S. Logothetidis ^{1,2} ¹ <i>Lab for Thin Films - Nanobiomaterials - Nanosystems & Nanometrology (LTFN), Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i> ² <i>Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, 57001 Themi, Greece</i>		
18:30-18:45	Phenanthrene-derivates for Improving the Function of Spiro-OMTAD in Conventional Perovskite Solar Cell		

Yun-Tou, Lin¹, Man-Hin, Wong¹, Jinn-Hsuan, Ho², Yian, Tai^{1,2}

¹ Department of Chemical Engineering, National Taiwan University of Science and Technology) No.43, Keelung Rd., Sec.4, Da'an Dist., Taipei City 106335, Taiwan (R.O.C.), Taiwan

² Department of Chemical Engineering, National Taiwan University of Science and Technology) Taipei 10607, Taiwan

19:00-20:30

ISFOE24 POSTER Session

EXPO24 Exhibition & Networking

21:00-

DINNER

ISFOE24 KEYNOTE & INVITED SPEAKERS

Tuesday 2 July 2024

09:00-11:00 ⬆CH	NN24 OPENING Chair: A. Laskarakis			
09:00-09:30 WELCOME	 2-5 July 2024	Welcome and Opening Remarks S. Logothetidis NN24 Chairman		
09:30-10:00 NANOTEX KEYNOTE	High performance optoelectronic devices, based on Polyvinylidene Fluoride based copolymers, through ink formulation and printing process optimization Georges Hadzioannou <i>Emeritus Chemistry Professor at University of Bordeaux, International member of the US NAE Laboratoire de Chimie des Polymères Organiques (LCPO) UMR CNRS 5629, Bordeaux France</i>			
10:00-11:00 ⬆TH1	Workshop on OLAE Materials & OPVs 3 Chair: A. Laskarakis			
10:00-10:30 KEYNOTE	Improving Bulk Heterojunction Organic Solar Cell Stability Using Cross-linkers Thuc-Quyen Nguyen <i>Center for Polymers and Organic Solids and Department of Chemistry & Biochemistry, University of California, Santa Barbara, USA</i>			
10:30-11:00 KEYNOTE	Surpassing 20% Efficiency in Organic Photovoltaics T. D. Anthopoulos <i>Department of Electrical and Electronic Engineering, The University of Manchester, Oxford Road, Manchester, M13 9PL, UK</i>			

11:00-11:30	COFFEE BREAK Grand Pietra Exhibition Hall	ISFOE24 POSTERS	EXPO24 Exhibition & Networking
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11:30-13:30 ⬆TH1	Workshop on AI, ML, Intelligent Manufacturing and Automation 1 (NN24 & ISFOE24) Chair: S. Lebigre				
11:30-11:35	Welcome & Opening Remarks S. Logothetidis ISFOE24/NN24 Chairman				
11:35-12:00 KEYNOTE	Digital Era of Advanced Materials Design and Development N. Konchakova ¹ , S. Belloutar ² , F. Pirker ³ , A. Laskarakis ⁴ , P. Klein ⁵ ¹ Helmholtz-Zentrum Hereon, Geesthacht/ Germany, ² LIST, Luxembourg, ³ AC2T Researchg GmbH, ⁴ LTFN, AUTH, Greece ⁵ Fraunhofer-Institut für Techno- und Wirtschaftsmathematik, Germany				
12:00-12:30 INVITED	In-line Digital Nano-characterization towards the Zero-Defect manufacturing of Flexible Organic Electronics A. Laskarakis <i>Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece</i>	12:00-13:30 ⬆TH2	Workshop on OLEDs, OTFTs and Wearables 1 Chair: M. Gioti	12:00-13:30 ⬆DS1	Workshop on Bioelectronics 1 (NN24 & ISFOE24) Chair: D. A. Koutsouras
		12:00-12:30 INVITED	From UV to Near-Infrared light detection: next generation photodetectors for imaging and biometric applications N. Gasparini <i>Department of Chemistry and Centre for Processable Electronics, Imperial College London, W120BZ, UK</i>	12:00-12:30 KEYNOTE	Organic Electrochemical Transistors for Disease Diagnostics S. Inal <i>King Abdullah University of Science and Technology, Saudi Arabia</i>
12:30-13:00 INVITED	Update on in-line characterization of compositional, electronic and structural properties of advanced thin film solar cells C. Defranoux, F.Korsos, P.Basa, T.Brigancz, C.Balogh, A.Hajtman	12:30-13:00 INVITED	Emission properties of original carbene–metal–amide complexes and investigation of their OLED structures by ellipsometry method A. Vembris	12:30-13:00 INVITED	Thin-film Electronics for Circumferential Bidirectional Interaction with the Spinal Cord S. El Hadwe <i>University of Cambridge, UK</i>

	Semilab Co. Ltd., Budapest, Hungary		Institute of Solis State Physics of University of Latvia, Latvia		
13:00-13:15	Advancing Large-Scale Production: Intelligent Manufacturing of Flexible Printed Organic Photovoltaics I. Gkaragkos , E. Mekeridis, S. Fachouri, S. Zygridou, S. Logothetidis <i>Organic Electronic Technologies P.C. 20th KM Thessaloniki - Tagarades, Themi, Greece</i>	13:00-13:15	Manufacturing activities of sensing elements at the HMU by printing and coating 2D materials in the frame of the EU EMERGE Project C. Polyzoidis ¹ , K. Anagnostou ¹ , E. Sotiropoulos ¹ , K. Rogdakis ^{1,2} , E. Kymakis ^{1,2} ¹ Department of Electrical & Computer Engineering, Hellenic Mediterranean University, Greece ² Institute of Emerging Technologies (i-EMERGE), University Research and Innovation Center, HMU, Greece	13:00-13:30 INVITED	Biofunctionalized interfaces for single molecule detection G. Scamarcio ^{1,2} C. Di Franco ^{1,2} M. Piscitelli ¹ C. Scandurra ³ M. Catacchio ⁴ E. Macchia ^{3,4} Luisa Torsi ⁵ ¹ Dipartimento Interateneo di Fisica, Università degli Studi di Bari Aldo Moro, Bari, Italy ² CNR, Istituto di Fotonica e Nanotecnologie, Sede di Bari, Italy ³ Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy ⁴ Faculty of Science and Engineering, Åbo Akademi University, Turku, Finland ⁵ Dipartimento di Farmacia-Scienze del Farmaco, Università degli Studi di Bari Aldo Moro, 70125 Bari (Italy)
13:15-13:30	ELORPrintTec, an innovation center enabling the emerging science and technology of organic/polymer electronics and systems G. Hadzioannou, S. Ducat, G. Payrot, S. Khiev , W. Smaal <i>ELORPrintTec, University of Bordeaux, Allée Geoffroy Saint-Hilaire, 33615 Pessac France</i>	13:15-13:30	Screen-printable sustainable luminescent inks for anti-counterfeiting and soft actuator applications B. D. D. Cruz ^{1,2,3} , R. Policia ¹ , N. Pereira ¹ , P. Nunes ⁴ , M. Fernandes ^{4,5} , C. R. Tubio ⁶ , G. Botelho ³ , S. Lanceros-Méndez ^{1,6,7} , V. de Zea-Bermudez ^{4,5} , D. M. Correia ³ ¹ Physics Centre of Minho and Porto Universities (CF-UM-UP) and Laboratory of Physics for Materials and Emergent Technologies (LapMET) University of Minho, Portugal; ² Centre of Molecular and Environmental Biology, University of Minho, Portugal; ³ Centre of Chemistry, University of Minho, Portugal; ⁴ CQ-VR, University of Trás-os-Montes e Alto Douro, Portugal; ⁵ Chemistry Department, University of Trás-os-Montes e Alto Douro, Portugal; ⁶ BCMaterials, Basque Center for Materials, Applications and Nanostructures, UPV/EHU Science Park, Spain; ⁷ Ikerbasque, Basque Foundation for Science, Bilbao, Spain		

13:30-15:00

LUNCH BREAK
Grand Pietra Exhibition Hall

ISFOE24 POSTERS
EXPO24 Exhibition & Networking

		15:00-17:00 ⬆ TH1	Workshop on AI, ML, Intelligent Manufacturing & Automation 2 (NN24 & ISFOE24) Chair: N. Konchakova		
15:30-17:00 ⬆ TH2	Workshop on OPVs (3GPV) Chair: G. Volonakis	15:00-15:30 KEYNOTE	Digitalization of every step in the production value chain: How to get from digital twins to Coating as a service T. Kolbusch <i>COATEMA, Germany</i>	15:30-17:00 ⬆ DS1	Workshop on Bioelectronics 2 (NN24 & ISFOE24) Chair: S. El-Hadwe
15:30-16:00 INVITED	3D/1D Bilayer Strategy for Stable, Efficient and Reproducible Perovskite Solar Cells P. Falaras ¹ , M. M. Elsenety ^{1,2} ¹ Institute of Nanoscience and Nanotechnology, National Centre for Scientific Research "Demokritos", Athens, Greece	15:30-16:00 INVITED	Efficient mass production for the automated manufacturing of flexible organic photovoltaics by roll-to-roll printing E. Mekeridis , V. Kyriazopoulos, S. Fachouri, S. Logothetidis	15:30-16:00 INVITED	Bioelectronic devices and Therapeutic applications D. A. Koutsouras <i>Imec-NL, High Tech Campus 31, 5656 AE Eindhoven, The Netherlands</i>

16:00-16:30 INVITED	² Dept of Chemistry, Al-Azhar University, Cairo, Egypt All printed perovskite solar cells and modules for next generation energy production devices D.A. Chalkias ¹ , A. Mourtzikou ² , E. Stathatos¹ ¹ Nanotechnology & Advanced Materials Lab, Dept Electrical Computer Engineering, Un. Peloponnese, Greece ² BRITE Solar Technologies, Patras Science Park, Greece	16:00-16:30 INVITED	Organic Electronic Technologies P.C, Thermi, Greece Sustainable nano-functionalised packaging meeting the challenges of Circular Economy S. Lebigre CT-IPC, France	16:00-16:15	Detection of chloride in sweat with extended-gated organic electrochemical transistors C. Bortolotti^{1,2} , A. Kyndiah ² , A. Aliverti ¹ , M. Caironi ² ¹ Dip. Elettronica, Inform. Bioing., Politecnico di Milano, Italy ² Center for Nano Science and Technology @PoliMi, IIT, Italy
				16:15-16:30	Monitoring of 3D-bioengineered biohybrid actuators by means of Organic Transistor-based mechanical sensors S. Lai¹ , J. Fuentes Llanos ² , G. Casula ¹ , P. Cosseddu ¹ , M. Guix Noguera ³ , S. Sánchez ^{2,4} ¹ Department of Electrical and Electronic Engineering, University of Cagliari, Italy ² Institute for Bioengineering of Catalonia (IBEC), The Barcelona Institute of Science and Technology, Spain ³ Departament de Ciència dels Materials i Química Física, University of Barcelona (UB), 08028 Barcelona, Spain ⁴ Catalan Institute for Research and Advanced Studies, Spain
16:30-17:00 INVITED	Long-Term Outdoor Performance of Perovskite Photovoltaics integrated in a Stand-Alone Solar Farm E. Kymakis^{1,2} ¹ Department of Electrical & Computer Engineering, Hellenic Mediterranean University, Heraklion, Crete, Greece ² Institute of Emerging Technologies, Hellenic Mediterranean University Center for Research & Innovation, Heraklion, Crete, Greece	16:30-16:45	Organic photovoltaic systems integrated in buildings S.Zygridou , E. Mekeridis, I. Gkaragkos, S. Fachouri, S. Logothetidis Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, 57001 Thermi Greece	16:30-16:45	WGM Sensors for future diagnostics: identification of small molecules to whole organisms W.E.A. Krames^{1,3} , D. I. Dayi ¹ , M. Borgolte ¹ , L. Kaiser ¹ , M. Himmelhaus ² , R. Csuk ³ , H.-P. Deigner ^{1,4,5} ¹ Institute of Precision Medicine, Furtwangen Un. Germany ² NanoBioAnalytics, Germany ³ Institute of Organic Chemistry, Martin-Luther University, Halle-Wittenberg, Germany ⁴ EXIM, Fraunhofer Institute IZI (Leipzig), Germany ⁵ Faculty of Science, Eberhard Karls Univ. Tuebingen, Germany
		16:45-17:15 INVITED	Organic and Perovskite Solar Cells: Upscaling Challenges and the Research Revolution via AI-Driven Automatic Experiments L. Sutherland Commonwealth Scientific and Industrial Research Organisation (CSIRO), Melbourne, Australia	16:45-17:00	In vivo study of bioresorbable nanostructured chemical sensor for monitoring of pH level E. Vandini¹ , M. Corsi ² , A. Paghi ² , S. Mariani ² , G. Golinelli ³ , A. Debrassi ⁴ , G. Egri ⁴ , G. Leo ¹ , A. Vilella ¹ , L. Dähne ⁴ , D. Giuliani ¹ , G. Barillaro ² . ¹ Dept Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Italy ² Dept Information Engineering, University of Pisa, Italy ³ Dept Medical & Surgical Science Children & Adults, Univ. Hospital Modena & Reggio Emilia, Italy ⁴ Surflay Nanotec GmbH, Germany

17:00-18:30

COFFEE BREAK
Grand Pietra Exhibition Hall

ISFOE24 POSTER Session
EXPO24 Exhibition & Networking

18:30	Official Opening Ceremony			
18:30-18:45		Welcome to NANOTECHNOLOGY Prof. S. Logothetidis NANOTECHNOLOGY2024 Chairman		
18:45-19:00	Official Salutations			
	PLENARY SESSION			
19:00-19:45		Carbon Nanotechnology: A Route for Technology Platforms Prof. S. Ravi P. Silva Director of Advanced Technology Institute (ATI) and Head of NanoElectronics Centre, Un. of Surrey, UK		
19:45-20:45		FUTURISTIC NANOTECH EVENT A unique show for Applied Nanotechnologies in Fashion, Healthcare & Beauty Organized by:		
				
21:00	OFFICIAL NANOTECHNOLOGY GALA DINNER PORTO PALACE CONFERENCE CENTRE & HOTEL - ROOF GARDEN			

Wednesday 3 July 2024

09:00-11:00 ⬆TH2	Workshop on OPVs & Perovskite PVs 3 Chair: M. C. Scharber	09:00-11:00 ⬆TH1	Workshop on AI, ML, Intelligent Manufacturing & Automation 3 (NN24 & ISFOE24) Chair: A.Kneer		
09:00-09:30 KEYNOTE	Accelerating Emerging-PV Technologies Christoph Brabec ¹ <i>Institute of Materials for Electronics and Energy Technology (i-MEET), Department of Materials Science and Engineering, FAU, Erlangen, Germany</i> ² <i>Helmholtz-Institute Erlangen-Nürnberg (HI ERN), Forschungszentrum Jülich Erlangen, Germany</i>	09:00-09:30 KEYNOTE	Machine Learning Guided Design of Low-Dimensional Hybrid Lead Halide Perovskites with Enhanced Optical Properties R. Gautier, H. Yuan, F. Massuyeau, R. Laref <i>Nantes Université, CNRS, Inst. des Matériaux de Nantes Jean Rouxel, France</i>	09:30-11:00 ⬆ DS1	Workshop on Bioelectronics 3 (NN24 & ISFOE24) Chair: S. Inal
09:30-10:00 INVITED	Characterizing Perovskite Solar Cells – From Impedance Spectroscopy to Transient Electroluminescence E. Comi ¹ , M. Battaglia ¹ , A. Schiller ² , S. Jenatsch ² , B. Blülle ² , M.A. Torre Cachafeiro ¹ , R. Hiestand ² , E. Knapp ¹ , Beat Ruhstaller ^{1,2} ¹ <i>Inst. of Computational Physics, Zurich Univ. Appl. Sciences, Winterthur, Switzerland</i> ² <i>Fluxim AG, 8401 Winterthur, Switzerland</i>	09:30-10:00 INVITED	Towards explainable, interpretable, and physical-based artificial intelligence for materials science and engineering F. Sofos, T.E. Karakasidis <i>Condensed Matter Physics Lab, Department of Physics, University of Thessaly Lamia, Greece</i>	09:30-10:00 INVITED	Charge Carrier Density in Organic Semiconductors Modulates the Effective Capacitance of Electrolyte Gated Organic Transistors: a Unified View of EGOFET and OECT R. Zanotti ^{1,2} , M. Sensi ¹ , M. Berto ¹ , A. Paradisi ¹ , P. Greco ^{3,4} , C. A. Bortolotti ¹ , M. Di Lauro ³ , F. Biscarini ^{1,3} ¹ <i>Department of Life Sciences – Università di Modena e Reggio Emilia, Modena, Italy</i> ² <i>Dipartimento di Fisica, Informatica e Matematica, Università di Modena e Reggio Emilia Modena, Italy</i> ³ <i>Center for Translational Neurophysiology of Speech & Communication - Istituto Italiano di Tecnologia, Italy</i> ⁴ <i>Department of Neurosciences and Rehabilitation, Università di Ferrara, Ferrara, Italy</i>
10:00-10:30 INVITED	Developing novel green solvents and techniques for ambient processing of metal halide perovskites Zhaoyi Du, Sami Kibal, Zengyun Chen, Lola Bourgeais, David. J. Payne, Martyn A. McLachlan <i>Dept Materials, Molecular Sciences Research Hub, Imperial College London, London, W12 0BZ</i>	10:00-10:30 INVITED	Machine Learning techniques in microscopy and nanometrology V. Constantoudis ^{1,2} , E. Giannatou ² , G. Papaveros ^{1,2} , M. Chatzigeorgiou ¹ , N. Boukos ¹ , M. Vrigkas ³ , A. Vekinis ¹ , A. Stellas ² , E. Almpanis ¹ , N. Papanikolaou ¹ ¹ <i>Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Greece</i> ² <i>Nanometris p.c., Greece</i> ³ <i>Department of Communication and Digital Media, University of Western Macedonia, Greece</i>	10:00-10:15	Integration of flexible organic force sensors on biohybrid catheters for endoscopic applications G. Casula ¹ , U. Mahmood ¹ , A. Bartolucci ² , P. Cosseddu ¹ , L. Vannozi ² , L. Ricotti ² , S. Lai ¹ ¹ <i>Department of Electrical and Electronic Engineering, University of Cagliari, Italy</i> ² <i>The Biorobotic Institute, Scuola di Studi Superiori Sant'Anna, Pontedera, Italy</i>
				10:15-10:30	A flexible electrochemical platform for health status monitoring in diabetic patients F. Ceccardi ¹ , F. Mariani ¹ , S.Lai ² , G. Casula ² , I.Gualandi ¹ , A. Bonfiglio ² , E. Scavetta ¹ ¹ <i>Department of Industrial Chemistry "Toso Montanari", University of Bologna, Bologna, Italy</i> ² <i>Department of Electronic Engineering, Cagliari, Italy</i>
10:30-10:45	High-Efficiency Perovskite-Organic Tandem Photovoltaics Enabled by Recombination Layer Engineering T. Maksudov ¹ , M. He ¹ , S. Doukas ² , M. I. Nugraha ¹ , B. Adilbekova ¹ , H. Faber ¹ , L. Luo ¹ , R. Zhou ³ , O. Bakr ³ , W. Ogieglo ⁴ , I. Pinnau ⁴ , G. T. Harrison ¹ , D. R. Naphade ¹ , Z. Ling ¹ , E. Lidorikis ^{2,5} , S. Fatayer ¹ , M. Heeney ¹ , F. H. Isikgor ¹ , Thomas D. Anthopoulos ¹	10:30-10:45	Optimizing Inks and Paste Formulations for the Printed Electronics Industry:Advancements in Additive Manufacturing Materials L. Schneider, A. Motyka, M. Łysień, S. Drozdek <i>XTPL SA; Stabłowicka 147, 54 066 Wrocław, Poland</i>	10:30-10:45	A printed organic transistor-based ion sensor towards on-skin monitoring of calcium concentration S. Lai ¹ , G. Casula ¹ , F. Mariani ² , F. Ceccardi ² , P. Cosseddu ¹ , I. Gualandi ² , E.Scavetta ² , A. Bonfiglio ¹ ¹ <i>Department of Electronic Engineering, Cagliari, Piazza d'Armi, 09123, Cagliari, Italy</i>

	¹ KAUST, Physical Science and Engineering Division, KAUST Solar Center (KSC), Saudi Arabia. ² Department of Materials Science and Engineering, University of Ioannina, Greece ³ Material Science Engineering, PSE, KAUST, Saudi Arabia ⁴ Chem. Eng. Program, Advanced Membranes & Porous Materials Center, Physical Science & Engineering Division, KAUST, Saudi Arabia ⁵ Univ. Research Center of Ioannina (URCI), Institute of Materials Science & Computing, Greece				² Department of Industrial Chemistry "Toso Montanari", University of Bologna, Bologna, Italy
10:45-11:00	Printed Electrodes for Highly Efficient and Roll-to-Roll Processible Perovskite Solar Cells L. J. Sutherland ¹ , J. F. Benitez-Rodriguez ² , D. Vak ¹ , S. Yan ¹ , J. Jasieniak ² , M. Gao ¹ , G. P. Simon ² , H. C. Weerasinghe ³ ¹ Manufacturing, Commonwealth Scientific & Industrial Research Organisation (CSIRO), Australia ² Materials Science and Engineering, Monash University, Australia ³ Department of Physics & Electronics, University of Kelaniya, Sri Lanka	10:45-11:00	AI guided materials discovery of two-dimensional magnets T. D. Rhone Department of Physics, Applied Physics and Astronomy, Rensselaer Polytechnic Institute, USA	10:45-11:00	Potentiodynamic sensing with Organic Electrochemical Transistors F. Mariani ¹ , I. Gualandi ¹ , D. Arcangeli ² , F. Ceccardi ¹ , L. Salvigni ² , F. Decataldo ³ , M. Tassarolo ³ , D. Tonelli ¹ , B. Fraboni ³ , E. Scavetta ¹ ¹ Department of Industrial Chemistry "Toso Montanari", University of Bologna, Bologna, Italy ² Organic Bioelectronics Laboratory, Biological and Environmental Science & Engineering Division (BESE), KAUST, Saudi Arabia ³ Department of Physics and Astronomy, University of Bologna, Italy

11:00-11:30

COFFEE BREAK
Grand Pietra Exhibition Hall

ISFOE24 POSTERS
EXPO24 Exhibition & Networking

11:30-13:30 ⬆ TH2	Workshop on OPVs & Perovskite PVs 4 Chair: Martyn A. McLachlan
11:30-12:00 KEYNOTE	The Role of Alpha-Methylbenzyl Ammonium Iodide to Reduce Defect Densities in Perovskite Devices B. Hailegnaw ¹ , F. Mayr ² , C. Putz ¹ , L. Lehner ¹ , K. Gugujonovic ² , S. Demchyshyn ¹ , M. Kaltenbrunner ¹ , M. C. Scharber ² ¹ Division of Soft Matter Physics, Inst Experimental Physics Johannes Kepler Univ., Linz, Austria ² LIOS and Institute for Physical Chemistry Johannes Kepler University, Linz, Austria
12:00-12:30 INVITED	Illuminating the dark side of triplet state and its role on V_{oc} in PM6:6:6-IDTBR solar cells Safa Shoaee Paul Drude Institute for Solid State Electronics, Berlin, Germany, University of Potsdam, Institute of Physics and Astronomy, Potsdam-Golm, Germany
12:30-13:00 INVITED	Computational materials design for next generation opto-electronics G. Volonakis Univ Rennes, ENSCR, INSA Rennes, CNRS, ISCR - UMR 6226, F-35000 Rennes, France
13:00-13:30 INVITED	Charge-pair generation in single-component molecular semiconductors for organic photovoltaics F. Eisner ¹ , J. Nelson ² , M. Azzouzi ² , H. Yang ² , S. Wei Yuan ² ¹ School of Engineering & Materials Science, Queen Mary University of London, UK ² Department of Physics, Imperial College London, UK

13:30-15:00

LUNCH BREAK
Grand Pietra Exhibition Hall

ISFOE24 POSTERS
EXPO24 Exhibition & Networking

15:00-17:00 ⬆️TH2	Workshop on OLEDs, OTFTs and Wearables 2 Chair: M. Gioti	15:00-17:00 ⬆️TH1	Workshop on Artificial Intelligence, Machine Learning, Intelligent Manufacturing and Automation 4 (NN24 & ISFOE24) Chair: R. Gautier
15:00-15:30 INVITED	High Performance Flexible and Stretchable Wire Li-ion Batteries T. Djenizian <i>Department of Flexible Electronics, School of Mines Saint-Etienne, F-13541, Gardanne, France</i>	15:00-15:30 INVITED	Organic Photovoltaic Material and Device Insights from High-Throughput Experiments, Data Science and Machine-Learning Methods X. Rodríguez-Martínez <i>Universidad da Coruña, Spain</i>
15:30-15:45	Investigations of the behavior of Conductive Yarns with the help of Simulations K. Weide-Zaage, Y. Huang <i>RESRI Group, Institute of Microelectronic Systems, Leibniz Universität Hannover, Germany</i>	15:30-16:00 INVITED	An Experimentally validated Numerical Approach for Predicting Adsorption Processes on Membrane-Coated Adsorbents in the Field of Water Remediation A. Kneer <i>TinnIT Technologies GmbH, Germany</i>
15:45-16:00	Design of Smart Textile Heaters K.M.B. Jansen, B. Bozali, S. Ghodrat <i>Faculty of Industrial Design Engineering, Delft University of Technology, The Netherlands</i>		
16:00-16:15	Advanced Printed E-Textiles with reliable durability in harsh environments M. Salimian, H. Alves <i>INESC Microsistemas e Nanotecnologias, R. Alves Redol 9, 1000-029 Lisbon, Portugal</i>	16:00-16:15	Enhancing plasma etching efficiency, repeatability, and environmental footprint via AI-based modeling and optimization (plasmaI) V. Constantoudis ^{1,3} , E. Gogolides ^{1,3} , T. Giannakopoulos ² , S. Konstantopoulos ² , A. Armaou ⁴ , G. Kokkoris ⁵ ¹ Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Greece ² Institute of Informatics and Telecommunication, NCSR Demokritos, Greece ³ Nanometris p.c., Neapoleos 27, Greece ⁴ School of Chemical Engineering, NTUA Athens, Greece
16:15-16:30	Novel printed electrochemical sensors in the textile industry for water quality monitoring. A.P.M.Tavares, R. Campos, M. Pereira-Barros, D. Campanhã, J.Gonçalves <i>CENTI, Center of Nanotechnology and Smart Materials</i>	16:15-16:30	Advancing Additive Manufacturing: A Data-Driven Strategy for Integrated L-PBF Process Optimization P. Stavroulakis ¹ , P. Kolozis ¹ , L. Gargalis ² , L. Karavias ² , E. Karaxi ² , E. P. Koumoulos ¹ ¹ IRES - Innovation in Research Engineering Solutions, Bluepoint, Schaerbeek, Belgium ² Conify P.C., Greece
16:30-16:45	High Sensitivity Flexible Tactile sensor based on a short channel Organic Thin Film Transistor A. Mascia, M. Concas, P. Cosseddu <i>Department of Electric and Electronic Engineering, University of Cagliari, Cagliari, Italy</i>	16:30-16:45	Real Time & Digital controlling of high precision electrode deposition by Spectroscopic Ellipsometry Tool for Electronic Devices fabrication on OVPD Cluster PPL M. Chatzidis ¹ , A. Zachariadis ¹ , P.K. Baumann ² , A. Laskarakis ¹ , M. Gioti ¹ , S. Logothetidis ¹ ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki, Greece ² AIXTRON SE, Dornkaulstr. 2, 52134 Herzogenrath, Germany
16:45-17:00	Double-Gate Organic Transistor: Advantages and Possible Applications M. Concas, A. Mascia, P. Cosseddu <i>Department of Electric and Electronic Engineering, University of Cagliari, Cagliari, Italy</i>	16:45-17:00	3D printing of Luminescent Solar Concentrators R. Capener, J. Manning, P. Itrych, S. Baldock, L. Danos <i>Department of Chemistry, Energy Lancaster, Lancaster University, Lancaster, LA1 4YB, UK</i>
17:00-17:15	Printable Optically Responsive Systems Based on a Nanoparticle- free Approach D.M. Correia ¹ , L.C. Fernandes ² , B.D.D.Cruz ^{1,2,3} , A.S.Castro ¹ , N. Pereira ² , J.M.S.S. Esperança ⁴ , V. de Zea Bermudez ⁵ , C.R. Tubio ⁶ , S. Lancers-Méndez ^{2,6,7,8} ¹ Centre of Chemistry, University of Minho, 4710-057 Braga, Portugal ² Physics Centre of Minho and Porto Universities (CF-UM-UP) and Laboratory of Physics for Materials and Emergent Technologies (LapMET) University of Minho, Portugal ³ Centre of Molecular and Environmental Biology, University of Minho, Portugal ⁴ LAQV, REQUIMTE, Departamento de Química, Universidade Nova de Lisboa, Portugal ⁵ CQ-VR, University of Trás-os-Montes e Alto Douro, Portugal	17:00-17:15	Optimization of perovskite solar cells using data science analysis and machine learning predictions M. Elsenety ^{1,2} , C. Falaras ³ , E. Stathatos ³ , Y. Niu ⁴ , L. Hu ⁴ ¹ Inst. Nanoscience & Nanotechnology, Nat. Center for Sc. Res. "Demokritos", Greece ² Dept of Chemistry, Al-Azhar University, Cairo, Egypt ³ Electrical and Computer Engineering Dept., Univ. of the Peloponnese, Patras, Greece ⁴ Institute of Solid State Physics, Hefei Inst. Physical Science, Chinese Acad. Sciences, P.R. China

	⁶ Chemistry Department, University of Trás-os-Montes e Alto Douro, Portugal ⁷ BCMaterials, Basque Center for Materials, Applications and Nanostructures, Leioa, Spain ⁸ Ikerbasque, Basque Foundation for Science, Bilbao, Spain		
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NANOTECHNOLOGY 2024 Beach Party

Please ensure that you have your Beach Party tickets for the dinner and drinks

19:00

Boarding to buses at Porto Palace Hotel entrance for transfer to the Beach Bar
Departure from Hotel will start at 18:00

Thursday 4 July 2024

09:00-11:00 🏠 CH	Workshop on OPVs & Perovskite PVs 5 Chair: G. Itskos	09:00-11:00 🏠 DS1	Workshop on Open Innovation & Standardization 1 Chair: E. Loidorikis	09:00-11:00 🏠 TH1	Workshop on AI, ML, Intelligent Manufacturing and Automation 5 – I3D24 (NN24 & ISFOE24) Chair: S. Khiev
09:00-09:30 INVITED	Chirality and piezoelectricity in low dimensional perovskite and Fully printable solar cells L. Etgar <i>Hebrew University of Jerusalem, Institute of Chemistry, Casali Center for Applied Chemistry, Jerusalem, Israel</i>	09:00-09:30 INVITED	Facilitating Open Innovation in Material Manufacturing through BPMN D. Campagna <i>Research and Development Department, ESTECO SPA, Area Science Park, Trieste, Italy</i>	09:00-9:30 INVITED	Laser Induced Forward Transfer as a bioprinting method and applications I. Zergioti ^{1,2} ¹ <i>School of Applied Mathematical and Physical Sciences, NTUA, Athens, Greece</i> ² <i>PhosPrint P.C., Athens, Greece</i>
09:30-10:00 INVITED	Boosting Efficiency and Thermal Stability in Organic Solar Cells via High Molecular Weight of PTQ10 Polymer Sergi Riera-Galindo <i>Institute of Materials Science of Barcelona (ICMAB-CSIC), Spain</i>	09:30-10:00 INVITED	Digitalizing Innovative Advanced Materials to enable collaboration along value chains on Open Innovation Platforms N. Konchakova ¹ , H.A. Preisig ² , S. Belloutar ³ , M. Horvat ⁴ , T.F. Hagelien ⁵ , P. Klein ⁶ ¹ <i>Helmholtz-Zentrum Hereon, Geesthacht/ Germany;</i> ² <i>NTNU, Trondheim/ Norway;</i> ³ <i>LIST, Luxembourg, 4WIKKI LIMITED, London /United Kingdom,</i> ⁵ <i>SINTEF, Trondheim/ Norway,</i> ⁶ <i>Fraunhofer-Institut für Techno- und Wirtschaftsmathematik, Germany</i>	09:30-10:00 INVITED	Exosome Enhanced Bioprinting: Promises and Challenges A. Sendemir ^{1,5} , P. Ilhan ² , E. M. Namli ³ , Z. Morcimen ¹ , D. Sabirtas ⁵ , S. Tasdemir ⁵ ¹ <i>Department of Bioengineering, Faculty of Engineering, Ege University, Izmir, Türkiye</i> ² <i>PA Biotechnology, Ege Technopark, Izmir, Türkiye</i> ³ <i>Dept Stem Cell, Ege University, Izmir, Türkiye</i> ⁴ <i>Dept Biomedical Technologies, Ege University, Türkiye</i> ⁵ <i>Department of Bioengineering, Faculty of Engineering, Celal Bayar University, Manisa, Türkiye</i>
10:00-10:30 INVITED	Halide perovskites beyond methylammonium lead iodide M. Kepenekian ¹ , B. Cucco ¹ , C. Katan ¹ , G. Volonakis ¹ , J. Even ² ¹ <i>Univ Rennes, ENSCR, CNRS, Rennes, France</i> ² <i>Univ Rennes, INSA Rennes, CNRS, Institut FOTON – UMR 6082, Rennes, France</i>	10:00-10:30 INVITED	Structurally accurate coarse-grained model for polymers: a lesson of validation Otello M. Roscioni <i>Goldbeck Consulting LTD, Cambridge, UK</i>	10:00-10:15	Itaconic acid: a versatile biobased building block for the replacement of (meth)acrylic acid in photocurable formulations for 3D printing M. Maturi ^{1,2} , A. Sanz de Leon ¹ , M. Comes Franchini ² and S. I. Molina ¹ ¹ <i>Dept. of Materials Science, Metallurgic Engineering, and Inorganic Chemistry, University of Cadiz, Avda. Universidad de Cádiz 10, Campus Universitario de Puerto Real (Spain)</i> ² <i>Dept. of Industrial Chemistry, University of Bologna, Via Gobetti 85, Bologna, Italy</i>
				10:15-10:30	Design of a Novel Printed Matrix for Composite Graft Using 3D Printing Techniques A. Orfanos ¹ , K. Tsimenidis ¹ , V. Karagkiozaki ¹ ¹ <i>BL Nanobiomed P.C., 20th Km Thessaloniki – Tagarades Road, Thessaloniki, Greece, 57001</i>
10:30-11:00 INVITED	First-principles studies on advanced materials in sensors, electronics and optoelectronics L. Tsetseris <i>Department of Physics, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece</i>	10:30-11:00 INVITED	Open Innovation Modelling: MUSICODE Project E. Loidorikis <i>University of Ioannina, Greece</i>	10:30-10:45	Rheological analysis of bioinks used for Laser Induced Forward Transfer S. Elezoglou ¹ , K. Giannakopoulos ¹ , A. Hatzia Apostolou ³ , A. Klinakis ^{2,3} , I. Zergioti ^{1,3} ¹ <i>National Technical University of Athens, School of Applied Mathematical and Physical Sciences, Athens, Greece</i> ² <i>Biomedical Research Foundation of the Academy of Athens, Athens, Greece</i> ³ <i>Department of Naval Architecture, School of Engineering, University of West Attica, Athens, Greece</i>

					4 PhosPrint P.C., Attika Technology Park Lefkippos, Agia Paraskevi, Athens, Greece

11:00-11:30	COFFEE BREAK Grand Pietra Exhibition Hall	ISFOE24 POSTERS	EXPO24 Exhibition & Networking
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11:30-13:30 ⬆ TH1	Workshop on OLEDs, OTFTs and Wearables 3 Chair: G. Volonakis	11:30-13:30 ⬆ CH	Workshop on OPV & Perovskite PV 6 Chair: J. Panidi	11:30-13:30 ⬆ DS2	Workshop on Centers of Excellence (NN24 & ISFOE24) Chair: A. Laskarakis
11:30-12:00 INVITED	Organic Heterojunction Transistors for Multi-Valued Logic Circuits Chang-Hyun Kim <i>School of Electrical Engineering and Computer Science, University of Ottawa, Canada</i>	11:30-12:00 INVITED	Optimizing Molecular p-Dopants: Decoupling Electronic and Geometric Effects Mélisha Berteau-Rainville ¹ , Somaiyeh Charoughchi ² , Emanuele Orgiu ¹ , Ingo Salzmann ^{2,4} <i>Institut national de la recherche scientifique (INRS), Varennes, QC, Canada; Department of Chemistry and Biochemistry, Concordia University, Montreal, QC, Canada; Department of Physics, Concordia University, QC, Canada</i>	11:30-12:00	Centre of Excellence for Organic, Printed Electronics & Nano-Technologies (COPE-Nano) S. Logothetidis <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece</i>
12:00-12:30 INVITED	Polar Polymorphism in Organic Semiconductor Thin Films: a Curious Case in Asymmetric Benzothieno[3,2-b][1]benzothiophene Derivatives S. Yan ¹ , A. Cazorla ¹ , D. Cornil ² , J. Cornil ² , D. Beljonne ² , R. Palacios-Rivera ¹ , C. Ocal ¹ , E. Barrena ¹ ¹ <i>Instituto de Ciencia de Materiales de Barcelona (ICMAB-CSIC), E-08193 Barcelona, Spain</i> ² <i>David Cornil – Laboratory for Chemistry of Novel Materials, University of Mons (UMONS), France</i>	12:00-12:30 INVITED	New Conjugated Polymers for High Performance Organic Solar Cells and Photodetectors C. Chocho <i>National Hellenic Research Foundation, Greece</i>	12:00-12:15	Latvia: Excellence Centre of Advanced Material Research and Technology Transfer (CAMART2) T. Safiulins <i>Institute of Solid State Physics, University of Latvia, Latvia</i>
12:30-13:00 INVITED	Probing on-surface chemical reactions of self-assembled monolayers for organic devices R. Ruvalcaba ¹ , Z. Liu ¹ , M. Insan Nugraha ² , G. Harrison ² , Y. Yang ² , M. Heeney ² , T. Anthopoulos ² , S. Fatayer ^{1,2} ¹ <i>Applied Physics Program, Physical Science and Engineering Division, KAUST, Saudi Arabia</i> ² <i>KAUST Solar Center, KAUST, Saudi Arabia</i>	12:30-12:45	Inkjet-printing of aqueous, surfactant-free nanoparticle dispersions for the fabrication of organic solar cells A. Czopiak, K. Fischer, J. Bruder, A. Colsmann <i>Karlsruhe Institute of Technology (KIT), Material Research Center for Energy Systems, Karlsruhe, Germany</i>	12:15-12:30	Latvia: Baltic Biomaterials Centre of Excellence (BBCE) A. Dubnika <i>Riga Technical University, Latvia</i>
		12:45-13:15 INVITED	Agrivoltaics Revolution and Triple Land Use: The Impact of Organic Photovoltaics in Greenhouses and Open Field Cultivations E. Athanasiadou, S. Logothetidis <i>Organic Electronic Technologies P.C. (OET), Thermi, Greece</i>	12:30-12:45	InnoRenew CoE - Renewable Materials and Healthy Environments Research and Innovation Centre of Excellence A. Kutnar ^{1,2} , W. Pajerski ¹ , A. Sandak ^{1,2} ¹ <i>InnoRenew CoE, Livade 6a, 6310 Izola, Slovenia</i> ² <i>University of Primorska, Titov trg 4, 6000 Koper, Slovenia</i>
				12:45-13:00	Hellenic Robotics Center of Excellence (HERON) E. Papadopoulos <i>Institute of Robotics, ATHENA Research Center, Greece</i>
13:00-13:15	A food-based integrated logic family Giulia Coco ^{1,2} , Valerio F. Annese ¹ , Valerio Galli ^{1,2} , Mario Caironi ¹ ¹ <i>Center for Nano Science and Technology, Italian Institute of Technology, Milan, Italy</i>			13:00-13:30	Round Table Discussion: Building and Governing a successful CoE - CoE Establishment and Complementary Funding - Challenges during the expansion of Centers - Business Models of CoE and Best Practices

	² Department of Physics, Polytechnic University of Milan, Piazza Leonardo da Vinci, 32, Milan, Italy				- Discussion on Future Collaboration
13:15-13:30	Printed sensors for monitoring environmental conditions and their application in energy management A. Fonseca, P. Silva, V. Miranda, D. Esteves, J. Gonçalves CENTI (Center of Nanotechnology and Smart Materials)	13:15-13:30	Application and Impact of OPVs and OLEDs on fruit quality and growth of fruit crops S. Michailidou, E. Athanasiadou, S. Logothetidis Organic Electronic Technologies P.C. (OET), Thermi, Greece		

13:30-15:00	LUNCH BREAK Grand Pietra Exhibition Hall	ISFOE24 POSTERS	EXPO24 Exhibition & Networking
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15:00-17:30 ▲CH	Workshop on OLEDs, OTFTs and Wearables 4 Chair: M. Gioti	15:00-17:30 ▲TH1	Bioelectronics 4 (NN24 & ISFOE24) Chair: C. Pitsalidis
15:00-15:30 INVITED	Photonics with Metal Halide Perovskite Nanocrystals G. Itskos ¹ , P. Papagiorgis ¹ , A. Manoli ¹ , M. Athanasiou ¹ , M. Sergides ² , K. Georgiou ² , A. Othonos ² , Y. Berezovska ³ , I. Cherniukh ³ , T. V. Sekh ³ , M. I. Bodnarchuk ^{3,4} , M. V. Kovalenko ^{3,4} ¹ Experimental Condensed Matter Physics Laboratory, Department of Physics, University of Cyprus, Cyprus; ² Lab of Ultrafast Science, Department of Physics, University of Cyprus, Nicosia Cyprus; ³ Laboratory for Inorganic Chemistry, Department of Chemistry and Applied Biosciences, ETH Zürich, Switzerland; ⁴ Empa – Swiss Federal Laboratories for Materials Science Technology, Dübendorf, Switzerland	15:00-15:30 INVITED	Combining SPR and Organic field effect detection in a low cost, high performance monitoring system for thin molecular layers deposition D. Hatami ¹ , A. Spanu ² , A. Bonfiglio ² ¹ Dept. of Electrical and Electronic Engineering, Un. of Cagliari Piazza d'Armi, Italy ² Scuola Universitaria Superiore IUSS, Italy
15:30-16:00 INVITED	Improving the sustainability of organic electronics J. Panidi Department of Chemistry, Imperial College London	15:30-16:00 INVITED	Conducting hydrogel electrodes for epidermal electronics and sensing A.-M. Pappa Khalifa Un., Abu Dhabi, UAE
16:00-16:15	Exploring the factors influencing the implementation of printable PLEDs for optical sensing applications K. Papadopoulos ¹ , D. Tselekidou ¹ , V. Kyriazopoulos ² , S. Kassavetis ¹ , A. Laskarakis ¹ , S. Logothetidis ^{1,2} , M. Gioti ¹ ¹ Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, Greece ² Organic Electronic Technologies (OET), Greece	16:00-16:15	Combining reduced-graphene oxide transistor and CRISPR/Cas13a ribonucleic particles as a tool for amplification-free RNA detection P. Guernonprez ¹ , T.A. Le ² , P. Nioche ³ , E. Krejci ⁴ , V.T. Thu ² , L. Renaud ⁵ , S. Sanaur ⁶ , B. Piro ¹ ¹ Un. Paris Cité, ITODYS, CNRS, Paris, France ² Un. of Science and Technology of Hanoi (USTH) and Academy of Science & Technology (VAST), Vietnam ³ INSERM U1124, Un. Paris Cité, Paris, France ⁴ CNRS, Un. Paris Cité, ENS Paris Saclay, France ⁵ Université de Lyon, Inst. des Nanotechnologies de Lyon, Université Lyon 1, France ⁶ Inst. Mines-Telecom, Mines Saint-Étienne, Dept. Flexible Electronics, France
16:15-16:30	Fully printed flexible OFETs via ink-jet printing of electrodes and a high-mobility organic semiconducting blend M. Cambiaggio ^{1,2} , T. Losi ¹ , M. Caironi ¹ ¹ Center for Nano Science and Technology, Italian Institute of Technology, Milan, Italy ² Department of Physics, Polytechnic University of Milan, Milan, Italy	16:15-16:30	Plasmonics-based strategy for concentration of analytes M.P. Carmo ¹ , D. Mack ² , D. J. Roth ¹ , F. J. Rodríguez-Fortuño ¹ , P.A. Huidobro ³ , A. Rakovich ¹ ¹ Physics Dept., King's College London, UK ² Physics Dept., Imperial College London, UK ³ IFIMAC, Universidad Autónoma de Madrid, Spain
16:30-16:45	New derivatives of 1,4-bis(phenylenesulfonyl)dibenzene for solution-processed Organic Light-Emitting Diodes P. Trzaska ¹ , A. Zielinska ^{1,2} , M. Bosiak ^{1,3} ¹ Noctiluca SA, Torun, Gagarina 7 St., Poland ² Doctoral School of Exact and Natural Sciences "Academia Scientiarum Thoruniensis", Torun, ³ Nicolaus Copernicus University, Torun, Poland		
16:45-17:00	Wearable Sensors and Mobile App Data for the Modelling and Classification of Visceral Pain M. Vinicio Alban-Paccha ^{1,2} , J. Teran-Perez ¹ , N. Shenker ³ , C. Geoffrey Woods ⁴ , G. G. Malliaras ² ¹ Division of Anaesthesia, Department of Medicine, University of Cambridge, Cambridge, UK		

	² Electrical Engineering Division, Department of Engineering, Un. Cambridge, Cambridge, UK ³ Division of Rheumatology, Department of Medicine, University of Cambridge, Cambridge, UK ⁴ Department of Medical Genetics, Cambridge Inst. Medical Research, Un. Cambridge, UK
17:00-17:15	Printed heating elements on a 3D surface: Direct writing vs. flexible substrate M. Arseenko , K. Muthu Karuppasamy, F. Duminica, P. Guiano CRM Group, Allée de l'innovation 1, B57 – Quartier Polytech, Liège, Belgium
17:15-17:30	Role of Water in Conductive Polymer Gas Sensors: Insights From Polyaniline For Ammonia Detection M. Pascaud ^{1,2} , M. N. Romanias ¹ , F. Thevenet ¹ , C. Samuel ³ , A. Fresneau ² , N. Redon ¹ , C. Duc ¹ ¹ IMT Nord Europe, Centre for Energy and Environment, Lille, France ² TERA Sensor, 13790 Rousset, France ³ IMT Nord Europe, Centre for Materials and Processes, Lille, France
17:30-17:45	Engineering of CuSCN for Tuning of Hole-transport Properties in Opto/electronic Applications P. Sukpoonprom ^{1,2} , Z. Qiao ² , C. Chattakoonpaisarn ¹ , N. Gasparini ² , P. Pattanasattayavong ¹ ¹ Department of Materials Science and Engineering, School of Molecular Science & Engineering, Vidyasirimedhi Institute of Science and Technology (VISTEC), Thailand ² Department of Chemistry and Centre for Processable Electronics, Imperial College London, UK
17:45-18:00	Digital Printing of Nanomaterials for Flexible and Organic Electronics P. Kowalczewski , I. Grądzka-Kurzaj, J. Gadzialinska, L. Witczak, K. Fiaczyk, M. Lysień, F. Granek XTPL S.A., Stabłowicka 147, 54-066 Wrocław, Poland
18:00-18:15	Expanding the application of ESIP molecules by tuning their molecular interaction in thin films G. Martínez-Denegri ¹ , F. A. Soares ¹ , A. D'Aléo ² , P. SSleczkowski ¹ ¹ Lodz University of Technology, International Centre for Research on Innovative Bio-based Materials (ICRI-BioM), Lodz, Poland ² Strasbourg University, CNRS, Strasbourg Institute of Material Physics and Chemistry, Strasbourg, France
18:15-19:00	ISFOE24 Closing Ceremony Closing Remarks and Discussion Ceremony for ISFOE24 Awards Farewell comments & End of ISFOE24

ISFOE24 POSTERS
Nanomaterials: Organic Semiconductors, Electrodes, Barriers, Hybrids and Devices: OPVs, OTFTs, OLEDs
Poster Display : Monday 1 July to Thursday 4 July
Official Poster Session & Presentation: Monday 1 July (19:00-20:30):

P1-1	Novel fluorene-based bipolar charge transporting materials Romualdas Jonas Cepas ³ , Marytė Daškevičienė ¹ , Kristina Kantminienė ² , Vyngintas Jankauskas ³ , Aistė Jegorovė ¹ , Alytis Gruodis ³ , Vytautas Getautis ¹ and Kristijonas Genevičius ³ ¹ Department of Organic Chemistry, Kaunas University of Technology, Kaunas, Lithuania ² Department of Physical and Inorganic Chemistry, Kaunas University of Technology, Kaunas, Lithuania ³ Institute of Chemical Physics, Vilnius University, Vilnius, Lithuania)
P1-2	BTBT-based organic semiconducting materials for EGOFTs with prolonged shelf-life stability Polina A. Shaposhnik, Askold A. Trul, Elena Yu. Poimanova, Ekaterina A. Sorokina, Oleg V. Borshchev, Elena V. Agina, Sergey A. Ponomarenko Enikolopov Institute of Synthetic Polymeric Materials of Russian Academy of Sciences, Moscow, Russian Federation
P1-3	Fabrication and characterization of fully printed single carrier devices based on Y5-12 material E. Doudis ¹ , C. Kapnopoulos ¹ , C. Stavraki ¹ , V. Heben ¹ , A. Paliagkas ¹ , A. Zachariadis, E. Rampota ¹ , S. Kassavetis ¹ , A. Laskarakis ¹ , S. Logothetidis ^{1,2} ¹ Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece ² Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, Thermi Greece
P1-4	Development and characterization of printed transparent electrode nanolayers for applications in organic electronics A. Papadopoulos, C. Kapnopoulos, E. Doudis, E. Paraschoudi, P. Rampota, I. Chatziioannou, C. Stavraki, A. Paliagkas, S. Logothetidis, A. Laskarakis Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece
P1-5	Decoupling excitonic static and dynamic disorder in organic semiconductors Frederix Siebe, Van Landeghem Melissa, Mertens Sigurd, Vandewal Koen Instituut voor Materiaalonderzoek (IMO-IMOMEC), Hasselt University, Wetenschapspark, 1, Belgium
P1-6	Synthesis, Crystal Structure and Optoelectronic properties of [(CH₃)₃SnBr₃] J. Koutsoubogeras ^{1,2} , N. Tsoureas ² , A. Philippopoulos ² , A. Kaltzoglou ¹ ¹ Institute of Theoretical and Physical Chemistry, National Hellenic Research Foundation, Athens, Greece ² Inorganic Chemistry Laboratory, Department of Chemistry, National and Kapodistrian University of Athens, Athens, Greece
P1-7	Bipolar phenoxathiine-based derivatives exhibiting RTP/TADF A. Dabulienė, O. Bezvikonny, J.V. Grazulevicius Department of Polymer Chemistry and Technology, Kaunas University of Technology, Kaunas, Lithuania
P1-8	Impact of Donor Units on Photophysical Properties of Fluorine-Containing Triphenylpyrimidines J. Simokaitienė ¹ , H. Sarykov ¹ , O. Bezvikonny ¹ , G. Sych ¹ , D. Volyniuk ¹ , J. V. Grazulevicius ¹ ¹ Department of Polymer Chemistry and Technology, Kaunas University of Technology, Kaunas, Lithuania

P1-9	Impact of Energy Level Alignment and Interfaces' Integrity on Multilayer OLEDs' Performance: A Comparative Study D. Kanatsiopoulos, K. Papadopoulos, D. Tselekidou, S. Logothetidis, M. Gioti <i>Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece</i>
P1-10	Investigation of organometallic Iridium complexes as potential emissive materials for OLED applications Z. Malika ¹ , D. Tselekidou ¹ , K. Papadopoulos ¹ , D. Kanatsiopoulos ¹ , S. Logothetidis ^{1,2} , M. Gioti ¹ ¹ <i>Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece</i> ² <i>Organic Electronic Technologies P.C. (OET), 20th KM Thessaloniki- Tagarades, 57001, Thermi, Greece</i>
P1-11	Improved Physics-Based Model for Organic Thin Film Transistors: Accurate Modelling and Parameter Extraction Method Amer. Zaibi, Benjamín. Iñiguez <i>DEEEA, University of Rovira I Virgili 43007 Tarragona, Spain</i>
P1-12	Biofunctionalised polymer electrolyte membrane for self-healing fuel cells and electrolyzers from pinholes P. Gartner ¹ , M. Stahlberger ² , G. Lanza ¹ , S. Bräse ³ ¹ <i>Institute of Production Science, Karlsruhe Institute of Technology (KIT), Kaiserstr.12, 76131 Karlsruhe, Germany</i> ² <i>Institute of Microstructure Technology, KIT, Kaiserstr.12, 76131 Karlsruhe, Germany</i> ³ <i>Institute of Biological and Chemical Systems, KIT, Kaiserstr.12, 76131 Karlsruhe, Germany</i>
P1-13	Organic Bolometers for Far Infrared Detection B. Bijmens, K. Vandewal <i>Hasselt University, IMOMEC, Diepenbeek Belgium</i>
P1-14	Derivatives of 2,12-di-tert-butyl-5,9-dioxa-13B-boranaphtho[3,2,1-DE]anthracene for organic-LIGHT emitting diodes application A. Zielinska ^{1,2} , P. Trzaska ¹ , M. Bosiak ^{1,3} ¹ <i>Noctiluca SA, Torun, Gagarina 7 St., Poland;</i> ² <i>Doctoral School of Exact and Natural Sciences "Academia Scientiarum Thoruniensis", Torun;</i> ³ <i>Nicolaus Copernicus University, Torun, Poland</i>
P1-15	Impact of homocoupling defects on polymer transistor performance Goossens A.* ^{1,2} , Bynens L. ^{1,2} , Vanderspikken J. ^{1,2} , Maes W. ^{1,2} , Vandewal K. ^{1,2} ¹ <i>Institute for Materials Research (IMO), Hasselt University, Belgium</i> ² <i>Interuniversity Microelectronics Centre (IMEC), Associated lab IMOMEC, Belgium</i>
P1-16	Systematic investigation of the effect of molecular doping in improving the optoelectronic properties and efficiency of fully printed flexible organic photovoltaics A. Paliagkas ¹ , C. Stavrakis ¹ , C. Kapnopoulos ¹ , A. Zachariadis ¹ , V. Heben ¹ , E. Rabota ¹ , E. Paraschoudi ¹ , S. Logothetidis ^{1,2} , A. Laskarakis ¹ ¹ <i>Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece</i> ² <i>Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, Thermi Greece</i>
P1-17	Incorporating TDMs and NFAs into printable indoor OPVs with enhanced stability under solar and artificial light – The IntoPV Project Christos Polyzoidis ¹ , Marinos Tountas ¹ , Evangelos Sotiropoulos ¹ , Katerina Anagnostou ¹ and Emmanuel Kymakis ^{1,2} ¹ <i>Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion, Greece</i> ² <i>Institute of Emerging Technologies (i-EMERGE) of HMU Research Center, Heraklion, Greece</i>
P1-18	Mechanical Stability of OPV Devices and Modules Under Repeated Bending Cycles S. Kassavetis ¹ , E. Doudis ¹ , Th. Kalampaliki ¹ , A. Zachariadis ¹ , E. Rampota ¹ , Ch. Kapnopoulos ¹ , E. Mekeridis ² , A. Laskarakis ¹ , S. Logothetidis ^{1,2} ¹ <i>Lab for Thin Films - Nanobiomaterials - Nanosystems & Nanometrology (LTFN), Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i> ² <i>Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, 57001 Thermi, Greece</i>

P1-19	Accurate Mobility Extraction from I-V Characteristics in Fully Printed Organic Semiconductors: A Case Study based on PC60BM C.Stavraki ¹ , C. Kapnopoulos ¹ , A. Paliagkas ¹ , O. Heben ¹ , E. Doudis, E. Paraschoudi ¹ , A. Zachariadis ¹ , S. Kassavetis ¹ , A. Laskarakis ¹ , S. Logothetidis ^{1,2} ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki Greece ² Organic Electronic Technologies P.C. (OET), Thermi, Greece
P1-20	Investigating the Stability of Fully Printed MAPbI₃ Perovskite Solar Cells through ISOS Protocols C. Stavraki ¹ , S. Kassavetis ¹ , A. Zachariadis ¹ , C. Kapnopoulos ¹ , E. Paraschoudi ¹ , C. Gravalidis ¹ , A. Paliagkas ¹ , E. Mekeridis ² , S. Logothetidis ^{1,2} , A. Laskarakis ¹ ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki Greece ² Organic Electronic Technologies P.C. (OET), Thermi, Greece
P1-21	Investigation of the effect of hole transport layers functionalization on the efficiency of printed perovskite solar cells A.Kostopoulou ¹ , C.Stavraki ¹ , C.Kapnopoulos ¹ , E. Paraschoudi ¹ , P.Rampota ¹ , K.Papadopoulos ¹ , S.Kassavetis ¹ , E.Mekeridis ² , S.Logothetidis ^{1,2} , A.Laskarakis ¹ ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki Greece ² Organic Electronic Technologies P.C. (OET), Thermi, Greece
P1-22	High Secure Process Automation Framework to Improve Production Quality and Scalability Antti Takaluoma, Janne Rosberg Offcode Oy, Oulu, Finland
P1-23	Integrated Services for SMEs & Start-Ups for Flexible Printed Electronics & Nanotechnology Pilot products E. Paraschoudi ¹ , S. Kassavetis ¹ , C. Kapnopoulos ¹ , K. Papadopoulos ¹ , M. Chatzidis ¹ , P. Rampota ¹ , E. Doudis ¹ , A. Laskarakis ¹ , S. Logothetidis ^{1,2} ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki Greece ² Organic Electronic Technologies P.C. (OET), Thermi, Greece
P1-24	Barbiturate-end capped non-fullerene acceptors for Organic Photovoltaics B. L. Oliveira ¹ , J. Morgado ^{1,2} , A. Charas ¹ ¹ Instituto de Telecomunicações, Instituto Superior Técnico, Av. Rovisco Pais, Lisbon, Portugal ² Dep. Of Bioengineering, Instituto Superior Técnico, Av. Rovisco Pais, Lisbon, Portugal
P1-25	Operation of SrAl₂O₄:Eu²⁺, Dy³⁺ phosphor-based PSCs under low light conditions A. Zourou ¹ , E. Stathatos ² , P. Falaras ¹ ¹ Institute of Nanoscience & Nanotechnology, NCSR Demokritos, 15310, Agia Paraskevi, Athens, Greece ² Department of Electrical & Computer Engineering, University of the Peloponnese, 26334, Patras, Greece
P1-26	Surface treatment for efficient wide bandgap perovskite solar cells under various light conditions Nikolaos Tzoganakis ¹ , Emmanuel Spiliarotis ¹ , Dimitris Tsikritzis ^{1,2} , Emmanuel Kymakis ^{1,2} ¹ Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Crete, Greece. ² Institute of Emerging Technologies (i-EMERGE) of HMU Research Center, Crete, Greece
P1-27	Adoption of inline photoluminescence imaging technique for realistic Organic PV production T. Brigancz ^{1*} , Zs. Sánta ¹ , Z. Kiss ¹ and F. Korsós ¹ , A. Zachariadis ² , C. Kapnopoulos ² , V. Kyriazopoulos ³ , E. Mekeridis ³ , A. Laskarakis ² , S. Logothetidis ^{2,3} ¹ Semilab Co. Ltd., 4/A. Prielle K. str., Budapest, Hungary ² Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece ³ Organic Electronic Technologies P.C. (OET), 20th KM Thessaloniki—Tagarades, GR-57001 Thermi, Greece

P1-28	Time-resolved photoluminescence lifetime measurements of organic photovoltaic materials L. Illés ^{1,2} , F. Steinbach ¹ , F. Korsós ² , T. Brigancz ² , Z. T. Kiss ² , S. Lenk ¹ , A. Zachariadis ³ , C. Kapnopoulos ³ , V. Kyriazopoulos ⁴ , E. Mekeridis ⁴ , A. Laskarakis ³ , S. Logothetidis ^{3,4} ¹ Department of Atomic Physics, Institute of Physics, Budapest University of Technology and Economics, Budapest, Hungary ² Semilab Co. Ltd, Budapest, Hungary ³ Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece ⁴ Organic Electronic Technologies P.C. (OET), 20th KM Thessaloniki—Tagarades, GR-57001 Thermi, Greece
P1-29	Impact of Introducing Tertiary Amino Linkages on Phenothiazine Derivatives: Influence on Delayed Emission Properties R. Keruckiene, D. Lekavicius, J. Simokaitiene, M. Guzauskas, J. V. Grazulevicius Department of Polymer Chemistry and Technology, Kaunas University of Technology, Kaunas, Lithuania
P1-30	Dot-by-dot printing of capacitors by LIFT S. Lux, M. Stahlberger Institute for Microstructure Technology, Karlsruhe Institute of Technology, Germany
P1-31	Dot-by-dot printing, a novel approach for OLED fabrication by LIFT M. Stahlberger, S. Lux Institute for Microstructure Technology, Karlsruhe Institute of Technology, Germany
P1-32	Thin-film Transistor-based Low-voltage Organic Flash Memory Using Ultrathin Hybrid Dielectrics Soojin You ¹ , Dongho Choi ¹ , Hanul Moon ² , Seunghyup Yoo ¹ ¹ School of Electrical Engineering, KAIST, Daejeon, Rep. of Korea ² Department of Semiconductors, Dong-A University, Busan, Rep. of Korea
P1-33	Triboelectric Sensors for Physiological Monitoring A. Rohit & Savas Kaya School of Electrical Engineering & Computer Science, Ohio University Athens, USA
P1-34	Compensating for Errors in a Gas Sensor Array Using Machine Learning and a Custom Laboratory Test System F. Gerhát, M. Mičjan, V. Režo Institute of Electronics and Photonics, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava, Slovak Republic
P1-35	Roll-to-roll deposition of photochromic yttrium oxyhydride (YHO) films for smart windows applications M. Zubkins ¹ , T. Safiulins ¹ , A. Fedotovs ² , E. Strods ¹ , V. Vibornis ¹ , J. Purans ¹ ¹ Institute of Solid State Physics, 8 Kengaraga street, LV1063, Riga, Latvia ² Sidrabe Vacuum Ltd, 17 Krustpils street, LV1073, Riga, Latvia

Biosensors & Bioelectronics (Common POSTER Session in ISFOE24 & NN24)
Tuesday 2 to Thursday 4 July: Poster Display & Presentations
Thursday 4 July (17:00-20:00): Poster Presentation

P4-1	Fabrication of label-free immunoprobe for monkeypox A29 detection using one-step electrodeposited molybdenum oxide-graphene quantum rods Murugesan Chandran ¹ , Kyusik Yun ¹ , Jongsung Kim ² , Chang-Hyun Jang ³ ¹ Department of Bionanotechnology, Gachon University, Gyeonggi-do 13120, Republic of Korea ² Department of Chemical & Biological Engineering, Gachon University, Gyeonggi-do 13120, Republic of Korea ³ Department of Chemistry, Gachon University, Gyeonggi-do 13120, Republic of Korea
P4-2	Effective Self-Assembled Multilayer-Based Electrode Passivation for Operationally Stable Electrolyte-Gated Transistor Biosensors Young-Geun Ha Department of Chemistry, Kyonggi University, Suwon, Gyeonggi-Do, Republic of Korea
P4-3	Single-Nanoparticle-Based Digital SERS Sensor for Accurate, Quantitative, and Simultaneous Detection of Various Disease Biomarkers Eun-Ah You ¹ , Jae-Eul Shim ¹ , Young Jun Kim ¹ , Eunil Hahm ¹ , Jong-Ho Choe ² , and Ahruem Baek ¹ ¹ Korea Research Inst.e of Standards and Science (Division of Biomedical Metrology), Daejeon 34113, Republic of Korea ² Korea University (Department of Physics) Seoul 02841, Republic of Korea
P4-4	Glucose Sensing Based on Glucose Oxidase Meta-Chemical Surface (MCS) Electrode Fabricated Using Dip-Pen Nanolithography M. Zohar ¹ , D. Shamir ² , A. Burg ³ ¹ Electrical and Electronics Engineering, Shamoon College of Engineering, Be'er Sheva, Israel ² Analytical Chemistry, NRCN, Be'er Sheva, Israel ³ Chemical Engineering, Shamoon College of Engineering, Be'er Sheva, Israel
P4-5	Comparison of SPEs sensors based on various carbon nanostructure for monitoring of anticancer doxorubicin A. Grozdanov ¹ , Perica Paunovic ¹ , Iva Dimitrievska ¹ , University Ss Cyril and Methodius in Skopje, Faculty of Technology and Metallurgy, Rugjer Boskovic 16, 1000 Skopje, R.N. Macedonia
P4-6	Anodic Niobia and Tantalum Nanocolumn-like Surface Functionalization for Click Coupling B. Ranishenka ¹ , A. Hoha ² , A. Poznyak ² , V. Shmanai ¹ , A. Pligovka ² ¹ Inst.e of Physical Organic Chemistry, Nat. Academy of Sciences of Belarus, 13 Surganova Str., Minsk, 220072, Belarus ² Research and Development Laboratory 4.10 "Nanotechnologies", Belarusian State University of Informatics and Radioelectronics, 6 Brovki Str., 220013 Minsk, Belarus
P4-7	Innovative gold nanoparticles-based biosensors for point of care (POC) pathogen detection Colombo A.* ¹ , Giustra M. ¹ , Salvioni L. ¹ , Tomaino G. ¹ , Barbieri L. ¹ , Colombo M. ¹ , NanoBioLab, Department of Biotechnology and Bioscience, University of Milano-Bicocca, Italy.
P4-8	In vitro culture platform based on electroconductive BSA/PEDOT:PSS hydrogel Z. Fohlerova, V. Polakova Central European Inst.e of Technology, Purkynova 123, 612 00 Brno, Czech Republic
P4-9	Multifunctional Wireless BTO@PEDOT Core@shell Nanobioelectronic Systems for Cancer Therapy C. F. Jones* ^{1,2} , Frederico Castelo Ferreira ^{1,2} , Paola Sanjuan- Albarte ^{1,2} , Teresa Esteves ^{1,2} ¹ Department of Bioengineering, Inst.e for Bioengineering and Biosciences, Inst.o Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, 1049-001 Lisbon, Portugal ² Associate Laboratory i4HB-Inst.e for Health and Bioeconomy, Inst.o Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, 1049-001 Lisbon, Portugal

P4-10	Calibration and Characterization of Biohybrid Catheters integrating organic transistor-based strain sensors U. Mahmood ¹ , G. Casula ¹ , A. Bartolucci ² , P. Cosseddu ¹ , L. Ricotti ² , L. Vannozzi ² , S. Lai ¹ ¹ <i>Department of Electrical and Electronic Engineering, University of Cagliari, Piazza d'Armi, 09123 Cagliari, Italy</i> ² <i>The Biorobotic Inst.e, Scuola di Studi Superiori Sant'Anna, Viale Rinaldo Piaggio 34, 56025 Pontedera, Italy</i>
P4-11	A textile-based filtering antenna for wearable applications A. K Stavrakis, G. M. Stojanovic <i>Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia</i>
P4-12	Novel bio-functionalization routes for the detection of D-Glucose A. Batsi ¹ , V. Karagkiozaki ² , K. Tsimenidis ² , A. Orfanos ² , S. Logothetidis ^{1,2} ¹ <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki Greece</i> ² <i>BL Nanobiomed, Thermi, Greece</i>
P4-13	Safe-by-Design of DNA origami based biosensors - moving towards safer nano-innovations J. Voglhuber-Höller ¹ , S. Resch ¹ , S. Tahiraj ¹ , M. Reinfelds ¹ , JK. Scheper ¹ ; A. Falk ¹ ¹ <i>BioNanoNet Forschungsgesellschaft mbH (BNN)</i> <i>Kaiser-Josef-Platz 9, 8010 Graz, AUSTRIA</i>

Workshop on Artificial Intelligence, Machine Learning, Intelligent Manufacturing and Automation
Tuesday 2 to Thursday 4 July: Poster Display & Presentations
Thursday 4 July (17:00-20:00): Poster Presentation

I3D-1	Isocyanate-free urethanediol itaconates as biobased liquid monomers in photopolymerization-based 3D printing R. Carmenini, C. Spanu, E. Locatelli, L. Sambri, M. Comes Franchini* and M. Maturi* <i>Department of Industrial Chemistry "Toso Montanari", University of Bologna, Viale Risorgimento 4, 40136 Bologna, Italy</i>
I3D-2	Lightweight mineral particles/ABS composite filaments for Fused Filament Fabrication (FFF); physical and mechanical properties, and printability P. Angelopoulos ¹ , N. Kountouris ¹ , Z. Viskadourakis ² , A. Skaropoulou ¹ , C. Panagiotopoulou ¹ , A. Peppas ¹ , G. Kenanakis ² , M. Taxiarchou ¹ ¹ <i>Laboratory of Metallurgy, School of Mining and Metallurgical Engineering, National Technical University of Athens (NTUA), Greece</i> ² <i>Institute of Electronic Structure and Laser, Foundation for Research & Technology-Hellas, N. Plastira 100, Heraklion, Crete, GR 70013, Greece</i>
I3D-3	Tandem FFF Printing using High-Load Composite Polymeric Filaments for Rapid Manufacturing of Dielectric and Electrochemical Energy Storage Devices A. Tiliakos ^{1,2} , R.-Valentin Răbuga ¹ , G.-Rainer Gillich ² ¹ <i>National R&D Institute for Cryogenic and Isotopic Technologies (ICSI), ICSI Energy Department, Rm. Vâlcea, 240050, Romania</i> ² <i>Babeş-Bolyai University, Department of Engineering Science, Centre for Vibrodiagnostics for Equipment Testing and Automation (CVDTEA), Cluj-Napoca, 400084, Romania</i>
I3D-4	Functionalized red emitting carbon dots as fluorescent additives for 3D printing photopolymerization S. Maturi, ^a A. Baschieri, ^b E. Locatelli, ^a M. Comes Franchini ^a and L. Sambri ^a ^{a)} <i>Department of Industrial Chemistry "Toso Montanari", University of Bologna, via P. Gobetti 85, Bologna, 40129, Italy</i> ^{b)} <i>ISOF, CNR, via P. Gobetti 101, Bologna, 40129, Italy</i>

I3D-5	Bipolar Plates for Hydrogen Fuel Cells Manufactured by Fused Filament Fabrication using High-Load Metal-Polymer Composites A. Tiliakos ^{1,2} , R.-V. Răbuga ¹ , G.-Rainer Gillich ² ¹ <i>National R&D Institute for Cryogenic and Isotopic Technologies (ICSI), ICSI Energy Department, Rm. Vâlcea, 240050, Romania</i> ² <i>Babeş-Bolyai University, Department of Engineering Science, Centre for Vibrodiagnostics for Equipment Testing and Automation (CVDTEA), Cluj-Napoca, 400084, Romania</i>
I3D-6	Extending the Aerodynamic Shape Optimization of a Solar Car to 3D Printing G. Tzionas ¹ , An. Moissiadis ¹ , N. Ntinis ² , I. Tzionas ¹ ¹ <i>Department of Mechanical Engineering, International Hellenic University, Serres, Greece</i> ² <i>Department of Mechanical Engineering, University of Western Macedonia, Kozani, Greece</i>
I3D-7	3D printed materials for healing of bone defects J. Frankova ¹ , R. Novotna ¹ , R. Novotny ¹ , J. Janusz ² and A. Jabłoński ² , I. Rajzer ² ¹ <i>Department of Medical Chemistry and Biochemistry, Hnevotinska 3, Palacky University Olomouc, 775 15, Czech Republic</i> ² <i>Faculty of Mechanical Engineering and Computer Science, University of Bielsko-Biala, Willowa 2, 43-309 Poland</i>
I3D-8	Advanced 3D collagen-based scaffolds enriched with vasculogenic compound for enhanced vascularization and wound healing D. Izsak ¹ , V. Pavliňáková ¹ , Z. Fohlerová ¹ , T. Szotkowska ² , M. Buchtová ² , L. Vojtová ¹ ¹ <i>CEITEC BUT, Central European Institute of Technology, Brno University of Technology, Czech Republic</i> ² <i>Institute of Animal Physiology and Genetics, The Czech Academy of Science, Czech Republic</i>
I3D-9	Finite Element Analysis and Topology Optimization of Additive Manufactured Orthodontic Twin Brackets for Enhanced Performance and Mass Reduction T. Profitiliotis ¹ , N. Kladovasilakis ^{1,2} , E. M. Pechlivani ¹ , D. Tzetzis ¹ ¹ <i>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic University, Thessaloniki, 57001, Greece</i> ² <i>Center for Research and Technology Hellas, Information Technologies Institute, 57001 Thessaloniki, Greece</i>
I3D-10	Development and Numerical Evaluation of a Topologically Optimized Helmet with Advanced Architected Materials N. Kladovasilakis ^{1,2} , K. Tsongas ² , E.M. Pechlivani ¹ , D. Tzetzis ¹ ¹ <i>Center for Research and Technology Hellas, Information Technologies Institute, 57001 Thessaloniki, Greece</i> ² <i>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic University, Thessaloniki, 57001, Greece</i>
I3D-11	A refractometry sensor for the detection of pathogens in bioreactor samples M. Chatzipetrou ¹ , E. Damianidou ² , M. Dimadi ² , A. Bokski ³ , E. Schreuder ³ , A. Klinakis ² and I. Zergioti ¹ . ¹ <i>School of Applied Mathematics and Physical Sciences, National Technical University of Athens, Zografou 15780, Greece.</i> ² <i>PhosPrint P. C. Lefkippos Technology Park, NCSR Demokritos, Patriarchou Grigoriou 5' & Neapoleos 27, 15341, Agia Paraskevi, Athens, Greece.</i> ³ <i>LioniX International B.V., Hengelosestraat 500, 7521 AN Enschede, The Netherlands</i>
I3D-12	Multilayer laser printing of cells with hydrogels. S. Elezoglou ¹ , A. Hatzia Apostolou ² , A. Chalari ³ , A. Rufino ⁴ , C. Chandrinou ¹ , C. Custodio ⁴ , A. Klinakis ^{3,5} , and I. Zergioti ^{1,5} ¹ <i>National Technical University of Athens, School of Applied Mathematical and Physical Sciences, Athens, Greece</i> ² <i>Department of Naval Architecture, School of Engineering, University of West Attica, Athens, Greece</i> ³ <i>Biomedical Research Foundation of the Academy of Athens, Athens, Greece</i> ⁴ <i>Metatissue Edificio Central, PCI - Creative Science Park Aveiro Region, Via do Conhecimento, 3830-352 Ílhavo, Portugal</i> ⁵ <i>PhosPrint P.C., Attika Technology Park Lefkippos, Agia Paraskevi, Athens, Greece</i>

I3D-13

Surrogate model for exciton-polariton condensation

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I3D-14

Compensating for Errors in a Gas Sensor Array Using Machine Learning and a Custom Laboratory Test System

F. Gerhát, M. Mičjan, V. Režo

Institute of Electronics and Photonics, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava, Slovak Republic

I3D-15

High Secure Process Automation Framework to Improve Production Quality and Scalability

A. Takaluoma¹, Janne Rosberg²

Offcode Oy, Finland

I3D-16

From CHADA to CHAMEO:

A reference system for characterisation data management

O. M. Roscioni¹, G. Goldbeck¹, P. Del Nostro¹, D. Toti¹

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