

PROGRAM

Monday 4 July 2022

10:30-11:00 UTC/GMT+3	Welcome and Opening Remarks Prof. S. Logothetidis NANOTECHNOLOGY & ISFOE22 Chairman			
11:00-13:00	Workshop on OLAE Materials 1 (Room: Crystal Hall) Chair: A. Laskarakis			
11:00-11:30 KEYNOTE (L)	Organic Electronics for a Net Zero Carbon Future Sustainable Society R. Silva <i>University of Surrey, UK</i>			
11:30-12:00 INVITED (L)	Printable Aromatic Polyethers for OLEDs A. K. Andreopoulou, K. Andrikopoulos, C. Anastasopoulos, J. Kallitsis Department of Chemistry, University of Patras, 26504 Patras, Greece			
12:00-12:15 (L)	Intrinsic photoinduced charge generation in aggregated small molecule semiconductors F. A. Nüesch ^{1,4} , G. Fish ² , S. Jenatsch ⁵ , A. Billion ³ , W.-H. Hu ¹ , R. Hany ¹ , I. Krossing ³ , J. E. Moser ² ¹ <i>Laboratory for Functional Polymers, Swiss Federal Laboratories for Materials Science and Technology, EMPA, Switzerland,</i> ² <i>Photochemical Dynamics Group, Institute of Chemical Sciences and Engineering, Ecole polytechnique fédérale de Lausanne, Switzerland,</i> ³ <i>Institut für Anorganische und Analytische Chemie, and Freiburger Materialforschungszentrum, Universität Freiburg, Germany,</i> ⁴ <i>Institute of Materials and Engineering, School of Engineering, Ecole polytechnique fédérale de Lausanne, Switzerland,</i> ⁵ <i>Fluxim AG, Katharina-Sulzer-Platz 2, 8400 Winterthur, Switzerland</i>			
12:15-12:30 (V)	Anti-icing solutions combining printed electronics and nanotexturing of Al alloys I. Obieta ¹ , L. Bilbao, C. Vaquero, A. Perez, J. Maudes, H. Villaverde, I. Bustero, O. Adarraga <i>Tecnalia Research&Innovation, Functional surfaces and Printed Electronics Platform, San Sebastian, Spain</i>			
12:30-12:45 (L)	Optimization of novel squaraine derivatives: configuration and interfacing Floren Radovanović-Perić ¹ , Vilko Mandić ¹ , Dragana Vuk ¹ , Ivana Panžić ¹ , Thomas Rath ² ¹ <i>Faculty of Chemical Engineering and Technology, Zagreb, Croatia,</i> ² <i>Institute for Chemistry and Technology of Materials, Graz, Austria</i>			
12:45-13:00 (V)	Rational Design of Dual-Mode Materials for use in Bendable Electrochromic Devices and Electrofluorochromic Applications Monika Wałęsa-Chorab ^{1,2} , Kacper Muras ² , Heather L. Filiatrault ¹ , W.G. Skene ¹ ¹ <i>Department of Chemistry, Campus MIL, Université de Montréal, CP 6128, succ. Centre-ville, Montreal, Québec, Canada,</i> ² <i>Faculty of Chemistry, Adam Mickiewicz University in Poznań, Poland</i>			
13:00-14:30	Lunch Break	Exhibition-Networking	Poster Display & Presentations: Nanomaterials and Devices	Poster Display: Biosensors & Bioelectronics, Graphene and Related Materials, I3D
14:30-16:30	Workshop on OLAE Materials 2 (Room: Crystal Hall) Chair: S. Kassavetis			
14:30-15:00 KEYNOTE (L)	Developing a tool kit to tune the performance of conjugated polymers by post-polymerisation modification M. Heeney <i>Chemical Science, King Abdullah University of Science and Technology, Saudi Arabia</i>			
15:00-15:30 KEYNOTE (L)	Organics and oxides working together for sustainable and autonomous flexible electronics P. Barquinha <i>i3N CENIMAT, Materials Science Department, NOVA School of Science and Technology, NOVA University of Lisbon (FCT-NOVA) and UNINOVA-CEMOP, Caparica, Portugal</i>			
15:30-16:00 INVITED (L)	Endohedral fullerenes for quantum information processing: beyond qubits K. Porfyrakis <i>Faculty of Engineering and Science, University of Greenwich, Central Avenue, Chatham Maritime, Kent, ME4 4T, U.K.</i>			

16:00-16:15 (V)	Dielectric tuning of the non-fullerene organic polymers at the mm-wave frequency Suraj Manikandan, Jens Wenzel Andreasen <i>Technical University of Denmark, Denmark</i>		
16:15-16:30 (V)	Challenges and opportunities of scaling-up organics semiconductors P. Berrouard <i>Brilliant Matters, QC Canada</i>		
16:30-17:00	Coffee Break	Exhibition-Networking	Poster Display & Presentations: Nanomaterials and Devices
			Poster Display: Biosensors & Bioelectronics, Graphene and Related Materials, I3D
17:00-19:30	Workshop on OPVs & Perovskite PVs 1 (Room: Crystal Hall) Chair: K. Porfyrakis		
17:00-17:30 KEYNOTE (L)	Non-Radiative Recombination in Organic Photovoltaics Koens Vandewal <i>Hasselt University, Belgium</i>		
17:30-18:00 INVITED (L)	Barrier coatings for next generation front sheets for organic photovoltaics P. Schlenzl ¹ , L. Momoix ² , V.J.J. von Morgen ³ , J. Fahlteich ¹ ¹ Fraunhofer FEP, Dresden, Germany, ² ASCA, La Chevrolière, France, ³ DuPont Thin Films, UK	18:00-19:45	Workshop on Computational Modelling for OEs 1 (Room: Timber Hall 2) Chair: E. Lidorikis
18:00-18:15 INVITED (L)	Quantitative Analysis of Upscaling Losses and Defects in Printed Solar Cells by Employing FEM Simulations S. Jenatsch ¹ , R. K. Misra ² , E. L. Comi ³ , E. Knapp ³ , G. Koutsourakis ⁴ , F. Castro ⁴ , S. R. P. Silva ² , B. Ruhstaller ^{1,3} ¹ Fluxim AG, Winterthur, Switzerland, ² Advanced Technology Institute, University of Surrey, UK, ³ Institute of Comp. Physics, Zurich University of Applied Sciences, Winterthur, Switzerland, ⁴ National Physical Laboratory, UK	18:00-18:30 INVITED (L)	Cross-scale simulation method for the prediction of R2R-printing, drying, and phase separation processes in the eld of organic electronics production A. Kneer ^{1,2} , S.F. Kalourazi ³ , K. Kordos ⁴ , I. Skarmoutsos ⁵ , K. Reimann ¹ , B. Nestler ^{2,3} ¹ TinniT Technologies GmbH, Karlsruhe, Germany, ² Hochschule Karlsruhe, University of Applied Sciences, IDM, Germany, ³ Karlsruhe Institute of Technology, Institute of Applied Materials – Comp. Materials Science, Germany, ⁴ Department of Materials Science and Engineering, University of Ioannina, Greece ⁵ Department of Chemistry, University of Ioannina, Greece
18:15-18:30 (L)	Sustainable laser ablation processes for fabrication of plasmonic colloidal silver NPs to improve electrical and optical properties of printed PEDOT:PSS nanolayers C. Kapnopoulos ¹ , S. Kassavetis ¹ , V. Heben ¹ , C. Stavraki ¹ , A. Paliagkas ¹ , E. Mekeridis ² , A. Laskarakis ¹ , S. Logothetidis ^{1,2} ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece ² Organic Electronic Technologies (OET), 57001 Thessaloniki, Greece		
18:30-18:45 (L)	High performance transparent embedded-silver grid electrodes for organic photovoltaics fabricated by selective metal condensation P. Bellchambers ¹ , C. Henderson ¹ , K-W Park ² , J-K. Lee ² , R. A. Hatton ¹ ¹ Department of Chemistry, University of Warwick, UK, ² Department of Polymer Science and Engineering, Inha University, Incheon, South Korea	18:30-19:00 INVITED (L)	A robust multiscale workflow for open simulation platforms O. M. Roscioni ^{1,2} , M. Ricci ² , F. M. Bellussi ³ , M. Fasano ³ , G. Goldbeck ¹ ¹ Goldbeck Consulting Limited, St John's Innovation Centre, Cambridge, UK ² materialx Ltd, Easton Business Centre, Bristol, UK ³ Department of Energy, Politecnico di Torino, Torino 10129, Italy
18:45-19:00 (L)	In-Line Real-Time Spectroscopic Ellipsometry, Raman and Photoluminescence Spectroscopy characterization of Roll-to-Roll printed nanomaterials for Flexible Organic Photovoltaics A. Zachariadis, A. Laskarakis, C. Kapnopoulos, S. Logothetidis <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece</i>		
19:00-19:15 (V)	Laser processes for Perovskite Modules: Influence of pulse duration and wave length onto the process quality to reduce production S. Bergfeld <i>Bergfeld Lasertech GmbH, Aachen, Aachen University of Applied Sciences, Jülich Campus</i>	19:00-19:15 (L)	OLED Modeling with the Amsterdam Modeling Suite T.M. Soini <i>Software for Chemistry and Materials (SCM), Amsterdam, The Netherlands</i>

<p>19:00-19:15 (V)</p>	<p>Connecting Electronic Structure and Morphology to Model Organic Electronic Materials R. Alessandri <i>University of Chicago, Chicago, Illinois 60637, United States</i></p>	<p>19:15-19:30 (L)</p>	<p>Study of charge balance using electron and hole only devices: Extraction of charge transport parameters of ETL/HTL layers in OLEDs K Chitra Sai Srivatsava, Debdutta Ray <i>Department of Electrical Engineering, IIT Madras, Chennai, India</i></p>
		<p>19:30-19:45 (L)</p>	<p>Impact of polymer gate dielectric capacitance and gate leakage current on the solution-based polymer organic thin film transistor S. Puttur, M. Chennamkulam Ajith, S. Dutta <i>Department of Electrical Engineering, IIT Madras, Chennai, India</i></p>

Tuesday 5 July 2022





10:30-13:00	Workshop on OPVs & Perovskite PVs 2 (Room: Timber Hall 1) Chair: K. Andreopoulou				
10:30-11:00 KEYNOTE (V)	Virtual screening for organic solar cells and light emitting diodes D. Andrienko <i>Max Plank Institute for Polymer Research, Germany</i>	11:00-13:00	Workshop on OLEDs, OTFTs and Wearables 1 (Room: Timber Hall 2) Chair: M. Giotti	11:00-13:00	Workshop on Printed sensors and integration of battery and OPV (Room: Dock Six 1) Chair: M. Krebs
11:00-11:30 INVITED (L)	Energy Harvesting with Piezoelectric Polymers for Biomedical Applications K. Asadi Department of Physics, University of Bath, Claverton Down, BA2 7AY, Bath, United Kingdom	11:00-11:30 INVITED (L)	New Technologies and Materials for Display Applications C. Boeffel <i>Fraunhofer Institute for Applied Polymer Research IAP, Germany</i>	11:00-11:30 INVITED (L)	Printed sensors with integrated functions Martin Krebs <i>PrintABattery, Germany</i>
11:30-11:45 (L)	Carrier Tunneling from Charge Transfer States in Organic Photovoltaic Cells A. Devizis, A. Gelzinis, J. Chmeliov, M. Diethelm, L. Endriukaitis, D. Padula, F. Nüesch, R. Hany, Dr. A. Devizis, Dr. A. Gelzinis, Dr. J. Chmeliov, L. Endriukaitis <i>State Research Institute Center for Physical Sciences and Technology, Vilnius, Lithuania</i> <i>Institute of Chemical Physics, Faculty of Physics, Vilnius University, Vilnius LT-10222, Lithuania</i> <i>Empa, Swiss Federal Laboratories for Materials Science and Technology, Laboratory for Functional Polymers, Dübendorf CH-8600, Switzerland</i>	11:30-12:00 KEYNOTE (L)	Organic Semiconductors: New Opportunities in Visible Light Communication I.D.W. Samuel <i>Organic Semiconductor Centre, SUPA, School of Physics and Astronomy, University of St Andrews, St Andrews, UK</i>	11:30-12:00 INVITED (L)	Innovative Printed Batteries: From funded projects to prototype production N. Bucher, J. Lefebvre <i>VARTA Microbattery GmbH, VARTA-Platz 1, 73479 Ellwangen, Germany</i>
11:45-12:00 (L)	Role of Ionization Energy Offset in NFA-based Ternary Organic Solar Cells: Implications to Design Rules S. Karthedath, S. H. K. Paleti, A. Sharma, D. Baran, J. Gorenflot, F. Laquai <i>KAUST Solar Center (KSC), Physical Sciences and Engineering Division (PSE), Material Science and Engineering Program (MSE), Kingdom of Saudi Arabia</i>				
12:00-12:15 (L)	Aiming for an overall efficiency of 10% for continuously manufactured OPV L. Pongratz ¹ , F. Kiel ² , C. Esen ² ¹ <i>Fraunhofer Institute for Laser Technology ILT, Aachen, Germany</i> ² <i>Chair of Applied Laser Technologies LAT at Ruhr Universität Bochum, Germany</i>	12:00-12:15 (V)	Evidence and Effects of Ion Transfer at Active-Material/Electrode Interfaces in Solution-Fabricated Light-Emitting Electrochemical Cells E. Auroux ¹ , A. Sandström ¹ , C. Larsen ² , E. Zäll ¹ , P. Lundberg ¹ , T. Wägberg ¹ , L. Edman ^{1,2} ¹ <i>Department of Physics, Umeå University, Umeå, Sweden,</i> ² <i>LunaLEC AB, Umeå, Sweden</i>	12:00-12:30 INVITED (V)	The H2020 IMPETUS project: Pilot line for paper-based quantitative electrochemical biosensing test cards G.C. Mutinati, R. Hainberger <i>AIT Austrian Institute of Technology GmbH, Vienna, Austria</i>
12:15-12:30 (L)	33% PCE Enhancement in Organic Solar Cells integrating Silver Nanowire Electrodes I. Ibrahim Zamkoye ^{1,2} , J. Bouclé ^{1,2} , N. Leclerc ³ , B. Lucas ^{1,2} , S. Vedraïne ^{1,2}	12:15-12:30 (L)	Comparison of lab scale Carbazole based polymer with Polyfluorene derivatives for solution processed OLEDs: Emission characteristics, color purity & printability		

	¹ Univ. Limoges, XLIM, UMR 7252, F-87000 Limoges, France, ² CNRS, XLIM, UMR 7252, F-87000 Limoges, France, ³ ICPEES, Université de Strasbourg, CNRS, Strasbourg, France		K. Papadopoulos ¹ , D. Tselekidou ¹ , V. Kyriazopoulos ² , S. Kassavetis ¹ , A. K. Andreopoulos ³ , K. Andrikopoulos ³ , J. K. Kallitsis ³ , A. Laskarakis ¹ , S. Logothetidis ¹ , M. Gioti ¹ ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece ² Organic Electronic Technologies P.C. 20th km Thessaloniki - Tagarades, Thermi, Greece ³ Department of Chemistry University of Patras, University Campus, Rio-Patras GR-26504, Greece		
12:30-12:45 (L)	Enhanced Stability of Tin Halide Perovskite Photovoltaics Using a Bathocuproine - Copper Top Electrode A. Wijesekara ¹ , M. Walker ² , Y. Han ² , D. Walker ² , S. Huband ² and R. A. Hatton ¹ ¹ Department of Chemistry, University of Warwick, Coventry, UK ² Department of Physics, University of Warwick, Coventry, UK	12:30-12:45 (L)	Design and optimization of a Blue fluorescent Microcavity-Organic Light-Emitting Diode (MOLED) for an algae excitation light source application L.A. Lozano-Hernández ¹ , J.B. Doucet ¹ , B. Reig ¹ , L. Salvagnac ¹ , H.Y. Lee ^{2,3} , C.T. Lee ² , S. Calvez ¹ , I. Séguéy ¹ , V. Bardinal ¹ ¹ Laboratory for Analysis and Architecture of Systems, CNRS, Toulouse, France ² Department of Photonics, National Cheng Kung University, Taiwan, Republic of China ³ Department of Electrical Engineering, Yuan Ze University, Taiwan, Republic of China	12:30-12:45 (L)	Manufacturing Flexible & Printed RFIDs and Sensors for IoT S. Fachouri ¹ , E. Mekeridis ¹ , S. Logothetidis ² ¹ Organic Electronic Technologies P.C. (OET), 20th km Thessaloniki-Tagarades. 57001 Thermi, Thessaloniki, Greece ² Laboratory for Thin Films - Nanobiomaterials - Nanosystems & Nanometrology (LTFN), Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
12:45-13:00 (L)	2-Methylanisole as “green” and harmless solvent for organic photovoltaic cells with over 11% efficiency F. Kiel, C. Esen, A. Ostendorf Applied Laser Technologies, Ruhr University Bochum, Germany	12:45-13:00 (L)	Numerical Analysis and Optimization of Organic Light-Emitting Diode based on Triplet-Triplet Fusion Mechanism Jun-Yu Huang ^{1,2} , Hsiao-Chun Hung ¹ , Kung-Chi Hsu ¹ , Chia-Hsun Chen ¹ , Pei-Hsi Lee ¹ , Hung-Yi Lin ¹ , Bo-Yen Lin ³ , Man-kit Leung ⁴ , Tien-Lung Chiu ³ , Jiun-Haw Lee ¹ , Richard Friend ² and Yuh-Renn Wu ¹ ¹ Graduate Institute of Photonics and Optoelectronics and Dept Electrical Engineering, National Taiwan University, Taipei, Taiwan, ² Cavendish Lab, Univ. Cambridge, UK, ³ Department of Electrical Engineering, Yuan Ze University, Taiwan, ⁴ Department of Chemistry, National Taiwan University, Taipei, Taiwan	12:45-13:00	The role of Hellenic Association of POE in promoting business in Greece Evangelos Bakalis Hellenic Organic and Printed Electronics Association (HOPE-A), Thessaloniki, Greece
13:00-14:30	Lunch Break	Exhibition-Networking	Poster Display: Nanomaterials and Devices, Graphene and Related Materials, Biosensors & Bioelectronics, I3D		
14:30-16:30	Workshop on OPVs & Perovskite PVs 3 (Room: Timber Hall 1) Chair: K. Porfyrakis		14:30-16:30	Special Workshop on Open Innovation (Room: Timber Hall 2) Chair: E. Lidorikis	
14:30-15:00 INVITED (V)	Efficient Structures and Processes for Upscaling of Perovskite Modules and Tandems T. Aernouts ^{1,2,3} imo-imec, Thin Film PV Technology – partner in Solliance, Imec1, EnergyVille2, Hasselt University3, 1,2Thor Park 8320, 3600 Genk, Belgium Hasselt, Belgium		14:30-15:00 INVITED (L)	Facilitators of Open Innovations – Who are They? A case study in Advanced Protective Coatings N. Konchakova ¹ , P. Klein ² , P. Visser ³ , K. Schladitz ² ¹ Institute of Surface Science, Helmholtz-Zentrum Hereon, Geesthacht, Germany ² Fraunhofer Institute for Industrial Mathematics, Germany ³ Akzo Nobel Car Refinishes B.V., Rijksweg 31, 2171 AJ Sassenheim, The Netherlands	
15:00-15:30 INVITED	New Horizons for Photonic-enhanced Perovskite Solar Cells M. Mendes		15:00-15:20 INVITED	Building an industry-driven “innovation ecosystem” through the establishment of platforms for characterization	

(V)	NOVA School of Science and Technology (FCT NOVA), Portugal		(L)	D. Dykeman ¹ , D. DiStefano ¹ , Jean-Marc Lucatelli ² , Victor Etique ² , Ludovic Steinbach ¹ , Andrea Berto ² , Yuan Wren ² Ansys UK Ltd., ¹ Materials Business Unit, ² Applications Engineering, Cambridge, UK	
15:30-15:45 (L)	Perovskite photovoltaic devices without hysteresis issues based on 1D zincite V. Mandić ¹ , I. Panžić ¹ , F. Radovanović-Perić ¹ , T. Rath ² ¹ Faculty of Chemical Engineering and Technology, Marulićev trg 20, 10000 Zagreb, Croatia ² Institute for Chemistry and Technology of Materials, Stremayrgasse 9, 8010 Graz, Austria		15:20-15:40 INVITED (L)	From MODA to executable workflows via the BPMN standard D. Campagna Research and Development Department, ESTECO SpA Area Science Park, Trieste, Italy	
15:45-16:00 (L)	Exploring SnO ₂ quantum dots-based electron transport layer for perovskite solar cells S. Derbali, A. Mirea, I. Vlaicu, A.G. Tomulescu, F. Neatu, S. Neatu, C. Besleaga, M. Florea, L. Pintilie and I. Pintilie National Institute of Materials physics (NIMP), 077125 Magurele, Romania		15:40-16:00 INVITED (L)	An experimentally validated multi-scale materials, process and device modeling & design platform enabling non-expert access to open innovation in the organic and large area electronics industry (MUSICODE) E. Lidorikis University of Ioannina, Greece	
16:00-16:15 (L)	Monolithic Perovskite/Organic Tandem Solar Cells with Minimized Parasitic Absorption Losses F. Isikgor, T. Maksudov, X. Chang, W. Hadmojo, Z. Ling, T. Anthopoulos King Abdullah University of Science and Technology (KAUST), KAUST Solar Center (KSC), Physical Sciences and Engineering Division (PSE), Kingdom of Saudi Arabia		16:00-16:15 INVITED (L)	An integrated open-access platform for materials modelling innovation: OpenModel O. M. Roscioni ¹ , G. Goldbeck ¹ , F. L. Bleken ² , J. Friis ³ , W. Leite Cavalcanti ⁴ ¹ Goldbeck Consulting Limited, St John's Innovation Centre, Cambridge, UK ² SINTEF Industry, Process Technology, Oslo, Norway ³ SINTEF Industry, Materials and Nanotechnology, Trondheim, Norway ⁴ Fraunhofer IFAM, Bremen, Germany	
16:15-16:30 (L)	The use of AgNWs for fully-printed perovskites solar cells manufacturing A. Galatsopoulos ¹ , A. Zachariadis ² , E. Mekeridis ¹ , C. Kapnopoulos ² , S. Logothetidis ² ¹ Organic Electronic Technologies P.C. 20 th km Thessaloniki - Tagarades, Thermi, Greece ² Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece		16:15-16:30 INVITED (L)	The European Open Innovation Ecosystem: How Open Innovation Test Beds, Open Access Pilot Lines and Digital Innovation Hubs may help European SME J. Fahlteich KETMarket GmbH, Germany	
16:30-17:00	Coffee Break	Exhibition-Networking	Poster Display: Nanomaterials and Devices, Graphene and Related Materials, Biosensors & Bioelectronics, I3D		
17:00-18:15	Workshop on OPVs & Perovskite PVs 4 (Room: Timber Hall 1) Chair: S. Kassavetis	17:00-18:15	Workshop on OLEDs, OTFTs & Wearables 2 (Room: Timber Hall 2) Chair: C. Boeffel	17:00-18:15	Workshop on Computational Modelling for OEs 1 (Room: Doc Six 1) Chair: P. Kelires
17:00-17:30 INVITED (L)	From additive to structural engineering – tools for performance enhancements in perovskite photovoltaics M. McLachlan Imperial College London, UK	17:00-17:30 INVITED (L)	Triplet-excited State Fusion as a Tool to Drive Photocurrent Generation in Vertically-configured Organic Photodetectors G. Antoniou ¹ , P. Yuan ¹ , L. Koutsokeras ¹ , S. Athanasopoulos ² , D. Fazzi ³ , T. Prodromakis ⁴ , J. Panidi ⁴ , D. G. Georgiadou ⁴ , P. E. Keivanidis ¹ ¹ Dept Mechanical Engineering & Materials Science and Engineering, Cyprus Univ. Technology, Cyprus ² Departamento de Física, Universidad Carlos III de Madrid, Madrid, Spain ³ Dipartimento di Chimica "Giacomo Ciamician", Università di Bologna, Italy ⁴ Centre for Electronics Frontiers, Electronics and Computer Science, University of Southampton, UK	17:00-17:30 INVITED (L)	First-principles studies on advanced electronic materials L. Tsetseris Department of Physics, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, GR-15780 Athens, Greece

17:30-18:00 INVITED (V)	From atomic scale studies of halide perovskite material properties to surfaces and interfaces in semiconductor devices L. Pedesseau ¹ , P. Jiang ¹ , B. Traore ² , M. Kepenekian ² , C. Katan ² , G. Volonakis ² , J. Even ¹ ¹ Univ Rennes, INSA Rennes, CNRS, Institut FOTON-UMR 6082, France ² Univ Rennes, ENSCR, INSA Rennes, CNRS, ISCR-UMR, France	17:30-18:00 INVITED (L)	Force sensing for smarter and more functional UI – The need for new nanomaterials and device constructs T. Voutsas, T. Mitchell-Williams Peratech HoldCo, NETPark, Thomas Wright Way, Sedgefield, United Kingdom	17:30-18:00 INVITED (L)	Deciphering the Nanoparticles by Atomic Level, Large-Scale Simulations J. Kioseoglou Department of Physics, Aristotle University of Thessaloniki GR-54124, Thessaloniki, Greece
18:00-18:15 (L)	Memristive perovskite solar cells for self-powered IoT edge computing K. Rogdakis ^{1,2} , M. Loizos ¹ , G. Viskadourous ¹ , E. Kymakis ^{1,2} ¹ Dept Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion, Greece ² Institute of Emerging Technologies (i-EMERGE) of HMU Research Center, Heraklion, Greece	18:00-18:15 (V)	Printed temperature and water detection sensors for smart monitoring on customized LSF structures D. Campanhã ¹ , C. Furtado ¹ , C. Ferreira ¹ , K. Rodrigues ¹ , N. Simões ² , R. Vicente ³ , C. Pires ⁴ , F. Pereira ⁵ ¹ CeNTI, Centre of Nanotechnology and Smart Materials, Portugal ² Inst. Research & Techn. Development in Construction, Energy, Environment, Sustainability, Portugal ³ RISCO, Risks and Sustainability in Construction, Universidade de Aveiro, Portugal ⁴ Catim, Technological Center for the Metal Working Industry, Porto, Portugal ⁵ Sucorema, Lda., Zona Industrial da Carriça, Muro, Portugal		

18:30
UTC/GMT+3**PLENARY SESSION**
(V: FORUM, L: GRAND PIETRA)

18:30-19:00 (L)		Introduction by Prof. S. Logothetidis, ISFOE22 & NN22 Chairman Greetings from Regional and National Authorities
19:00-19:30 (V)		Device operation of organic light-emitting diodes based on thermally activated delayed fluorescence Prof. Paul Blom Managing Director Max Planck Institute for Polymer Research, Germany
19:30-20:00 (V)		Biofabrication in regenerative medicine: from textile scaffolds to bioprinting Prof. Lorenzo Moroni Professor of Biofabrication for Regenerative Medicine & Scientific Director of the MERLN Institute Maastricht University, The Netherlands
20:00-20:30 (L)		Optimising solar energy conversion in molecular electronic materials Prof. Jenny Nelson Royal Society Research Professor Department of Physics, Imperial College London, UK

Wednesday 6 July 2022

11:00-13:00	Workshop on OPVs & Perovskite PVs 5 (Room: Timber Hall 2) Chair: A. Laskarakis	11:00-13:00	Workshop on Graphene (ISFOE22 + NN22) 1 (Room: Timber Hall 1) Chair: G. Deligiorgis	11:00-13:00	Workshop on Computational 3 (Room: Crystal Hall) Chair: P. Kelires
11:00-11:30 INVITED (L)	10% Organic Solar Cells fabricated from Nanoparticle Dispersions A. Colsmann <i>Karlsruhe Institute of Technology, Germany</i>	11:00-11:30 INVITED (L)	Self-consistent modelling of mid-IR optoelectronics based on graphene E. Lidorikis <i>Department of Materials Science and Engineering, University of Ioannina, 45110 Ioannina, Greece</i> <i>Institute of Materials Science and Computing, University Research Center of Ioannina, Ioannina, Greece</i>	11:00-11:30 INVITED (L)	DFT+Σ2 method for electron correlation effects at transition metal surfaces and nano-devices M. M. Radonjic <i>Institute of Physics Belgrade, University of Belgrade, Serbia</i>
11:30-12:00 INVITED (L)	Using High throughput screening methods and genetic algorithms to develop ternary blend-based photovoltaics M. Campoy-Quiles <i>Institute of Materials Science of Barcelona, ICMAB-CSIC, Campus UAB, Bellaterra, 08193, Spain</i>	11:30-11:45 (L)	Interaction of graphene-related materials with sensory neurons of the dorsal root ganglia Lieselot Deleye <i>Center for Synaptic Neuroscience and Technology, Istituto Italiano di Tecnologia, Italy</i>	11:30-12:00 INVITED (L)	Topological quantum chemistry for quasi-one-dimensional systems with either translational or helical periodicity I. Milošević <i>Faculty of Physics, University of Belgrade, Serbia</i>
		11:45-12:00 (V)	Energetic bombardment and defect generation during magnetron-sputter-deposition of metal layers on graphene N. Pliatsikas ^{1,2} , F. Nadji Adjim ³ , O. Karabinaki ⁴ , M. Zarshenas ¹ , G.A. Almyras ¹ , I. Shtepliuk ¹ , R. Yakimova ¹ , J. Arvanitidis ² , D. Christofilos ⁴ , K. Sarakinos ^{3,5} <i>1 Dept of Physics, Chemistry & Biology, Linköping Un., Sweden</i> <i>2 Physics Dept., Aristotle University of Thessaloniki, Greece</i> <i>3 Department of Physics, University of Helsinki, Finland</i> <i>4 School of Chemical Engineering & Physics Laboratory, Aristotle University of Thessaloniki, Thessaloniki, Greece</i> <i>5 KTH Royal Institute of Technology, Dept. Physics, Sweden</i>		
12:00-12:30 INVITED (L)	In-line characterization of compositional, electronic and structural properties of advanced thin film solar cells C. Defranoux, F.Korsos, P.Basa, T.Brigancz <i>Semilab Co. Ltd., Prielle Kornelia 4/A. str., H-1117 Budapest, Hungary</i>	12:00-12:15 (L)	Thin-film assembly of few-layer nanosheet networks: transport properties and chemiresistive sensing S.P. Ogilvie <i>University of Sussex, Brighton, UK</i>	12:00-12:30 INVITED (V)	Linear dispersions in low-dimensional structures: the role of crystalline symmetries, time reversal, and spin-orbit coupling N. Lazić <i>NanoLab, Faculty of Physics, University of Belgrade Serbia</i>
		12:15-12:30 (L)	Evaluation of Strain and Doping in 2D Materials by Raman Spectroscopy F. Lee <i>Dept. Physics and Astronomy, University Sussex, UK</i>		
12:30-12:45 (L)	Emerging Printed Electronics Research Infrastructure- EMERGE K. Rogdakis ^{1,2,*} and E. Kymakis ^{1,2,*} <i>1 Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Crete, Greece</i> <i>2 Inst. Emerging Technologies (i-EMERGE) of HMU Research Center, Crete, Greece</i>	12:30-12:45 (L)	Size-dependent porosity defines conductivity in liquid-exfoliated nanosheet networks Hannah J. Wood <i>University of Sussex, United Kingdom</i>	12:30-12:45 (L)	Unraveling the atomic structure and reconstruction mechanisms of carburized W{110} by ab initio calculations A. Kyritsakis <i>Institute of Technology, University of Tartu, Estonia</i>

12:45-13:00 (L)	Optimization study of fully printed flexible OPV devices based on PBDB-T:BTP-12 system and photoactivation process investigation V. Heben, C. Kapnopoulos, C. Stavrakis, A. Paliagkas, E. Doudis, D. Tselekidou, A. Zachariadis, C. Gravalidis, A. Laskarakis, S. Logothetidis <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece</i>	12:45-13:00 (L)	Tuneable synthetic reduced graphene oxide scaffolds elicit high levels of glioblastoma interconnectivity in vitro C. J. Brown <i>Department of Physics and Astronomy, University of Sussex, Brighton, BN1 9QH, UK</i>	12:45-13:00 (L)	The interplay between local and global dynamics for nano-filaments using computer simulations I. Andricioaei <i>Departments of Chemistry, and of Physics and Astronomy, University of California, Irvine, USA</i>
13:00-14:30	Lunch Break	Exhibition-Networking	Poster Display & Presentations: Biosensors & Bioelectronics, Graphene and Related Materials, I3D		Poster Display: Nanomaterials and Devices
14:30-16:30	Workshop on OLEDs, OTFTs and Wearables 3 (Room: Timber Hall 2) Chair: M. Gioti				
14:30-15:00 KEYNOTE (L)	NanoManufacturing of Sustainable Circular Electronics T. Anthopoulos <i>King Abdullah University of Science and Technology, Saudi Arabia</i>		15:00-16:30	Workshop on Graphene (ISFOE22 + NN22) 2 (Room: Timber Hall 1) Chair: E. Lidorikis	15:00-15:45 I3D Conference Session 1 (Room: Doc Six 1) Chair: R. Kargl
15:00-15:30 INVITED (V)	Organic and Hybrid films as platform for Large-area and Flexible Detection of Ionizing Radiation L. Basiricò <i>Department of Physics and Astronomy, University of Bologna and INFN Bologna, Bologna, Italy</i>		15:00-15:30 INVITED (L)	Next generation electronics using low dimensionality nanomaterials G. Deligeorgis <i>FORTH IESL, Greece</i>	15:00-15:30 INVITED (L) Nanoscribe: An overview from sub-micron and to high speed 3D printing A. Legant <i>Nanoscribe GmbH & Co. KG, Germany</i>
15:30-15:45 (L)	Manufacturing of Conductive and Insulating Features at Micrometer Scale for Flexible Organic Electronics Piotr Kowalczewski ¹ , Aneta Wiatrowska ¹ , Karolina Fińczyk ¹ , Mateusz Łysień ^{1,2} , Łukasz Witczak ¹ , Jolanta Gadzalińska ¹ , Ludovic Schneider ¹ , Filip Granek ¹ <i>1 XTPL SA, Stabłowicka 147, 54-066 Wrocław, Poland</i> <i>2 Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Poland</i>		15:30-16:00 INVITED (V)	Environmental effects on the electric transport and the photoresponse in 2D-materials based FETs A. Di Bartolomeo <i>Department of Physics E. R. Caianiello, University of Salerno, and CNR-SPIN, Italy</i>	15:30-15:45 (L) 3D-printed metasurfaces for potential energy harvesting applications at 2.4 GHz Z. Viskadourakis <i>FORTH IESL, Greece</i>
15:45-16:00 (L)	Inkjet Printing of heaters and temperature sensors for PCR and LAMP analysis on Lab-on-a-chip devices T. Schönfelder ¹ , F. Kemper ¹ , E. Beckert ¹ , A. Tünnermann ^{1,2} , S. Allelein ³ , D. Kuhlmeier ³ , C. Freese ⁴ <i>¹ Fraunhofer Institute for Applied Optics and Precision Engineering (IOF), Jena, Germany, ² Institute of Applied Physics, Abbe Center of Photonics, Friedrich Schiller University Jena, Germany, ³ Fraunhofer Institute for Cell Therapy and Immunology (IZI), Leipzig, Germany, ⁴ Fraunhofer Institute for Microengineering and Microsystems (IMM), Mainz, Germany</i>				15:45-16:00 (V) HAPTIC Digital 3D printing on textile surfaces for high volume footwear manufacturing T.W. Schmidt <i>Key Lab for Sport Shoes Upper Materials of Fujian Province, China</i>

16:00-16:15 (L)	Solution-processable red phosphorescent OLEDs with different Ir(dmpq)2(acac) doped organic materials as emitting layers D. Tselekidou ¹ , L. Panagiotidis ¹ , K. Papadopoulos ¹ , V. Kyriazopoulos ² , S. Kassavetis ¹ , S. Logothetidis ¹ , M. Gioti ¹ ¹ Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece ² Organic Electronic Technologies P.C. 20 th km Thessaloniki - Tagarades, Themi, Greece	16:00-16:15 (L)	Two dimensional MoS2 DC Field Effect Transistor for switching applications F. Iacovella FORTH-IESL Greece	16:00-16:15 (L)	Fully printed single-layer functional PCB via digital hybrid printing of polymer and molten metal Zeba Khan Laboratory for MEMS Applications, IMTEK – Department of Microsystems Engineering, University of Freiburg, Germany
16:15-16:30 (V)	A Stretchable and Bendable Electrochromic Device M. Lerond ¹ , W. Skene ² , F. Cicoira ¹ ¹ Dept. Chemical Engineering, Polyt. Montréal, Canada ² Dept Chemistry, Université de Montréal, Canada	16:15-16:30 (L)	Unified Charge Control Model for MoS2 FET A. Mounir Rovira I Virgili University, Tarragona, Spain	16:15-16:30	Title to be announced soon
16:30-17:00	Coffee Break	Exhibition-Networking	Poster Display & Presentations: Biosensors & Bioelectronics, Graphene and Related Materials, I3D	Poster Display: Nanomaterials and Devices	
17:00-18:15	Workshop on OLEDs, OTFTs and Wearables 4 (Room: Timber Hall 2) Chair: P. Keivanidis	17:00-18:15	I3D Conference Session 2 (Room: Doc Six 1) Chair: A. Legant	17:00-18:15	Workshop on Graphene (ISFOE22 + NN22) 3 (Room: Timber Hall 1) Chair: E. Lidorikis
17:00-17:30 INVITED (V)	Going for Gold Wearable heaters for base layers garments for elite athletes A.T. Claypole, J.M. Claypole, D.T. Gethin and T.C. Claypole WCPC, Swansea University Bay Campus, Swansea, UK	17:00-17:30 INVITED (L)	Additive manufacturing of biomimetic vascular tissue models R. Kargl ^{1,2} , F. Lackner ¹ , I. Knechtl ¹ , T. Mohan ^{1,2} , J. Stana, ³ N. Tsilimparis, ³ K. S. Kleinschek ¹ ¹ IBioSys, Graz University of Technology, Austria ² University of Maribor, Slovenia ³ Ludwig Maximilians University Munich, Germany	17:00-17:30 INVITED (L)	Hybrid Graphene/Silicon Integrated Photodetectors Ilya Goykhman Technion- Israel Institute of Technology, Israel
17:30-17:45 (L)	Synergistic effect of screen-printed single-walled carbon nanotubes and phosphorylated cellulose nanofibrils on thermophysiological comfort, thermal/UV resistance and electroconductive properties of FR fabric T. Kolar & V. Kokol University of Maribor, Faculty of Mechanical Eng., Slovenia	17:30-17:45 (L)	Surface texture of biopharmaceutical equipment: Understand the differences between conventional and additive manufacturing techniques Álvaro Morales-López KTH Royal Institute of Technology, Department of Fibre and Polymer Technology, School of Engineering Sciences in Chemistry, Biotechnology and Health, Sweden	17:30-17:45 (L)	Fabrication of sensors based on graphene via laser direct transfer M. Filipescu National Institute for Laser, Plasma, and Radiation Physics, Laser Department, Atomistilor, Romania
17:45-18:00 (L)	An all textile sensor integration concept for Smart Textiles K.M.B. Jansen Faculty of Industrial Design Engineering, Delft University of Technology, The Netherlands	17:45-18:00 (V)	Development of 3D printed ceramic monolithic structures and membranes for gas separation applications C. Zisis Information Technologies Institute, Centre for Research & Technology Hellas, Greece	17:45-18:00 (V)	Light Emission Mechanisms from Graphene: a Review A. Beltaos Centre for Science, Athabasca University, 1 University Drive, Athabasca, Alberta, Canada
18:00-18:15 (V)	Design and development of textile-based strain sensors via screenprinting T. Caliskan ¹ , F.E. Altun ² , M.A. Kumru ³ , B. Kostekci ⁴ , A. Arslan ⁵ , M. Acer Kalafat ⁶ , I. Gocek ⁷	18:00-18:15 (V)	3D Printed Inconel mechanical response related to Volumetric Energy Density A.K. Kampouris	18:00-18:15 (L)	Size-dependent packing in nanosheet networks yields record-high electrical conductivities Keiran Clifford University of Sussex, UK

	<p>^{1,7} Department of Textile Engineering, Istanbul Technical University, Gumussuyu/Beyoglu, Istanbul, Turkey</p> <p>^{3,4,5,6} Department of Mechanical Engineering, Istanbul Technical University, Gumussuyu/Beyoglu, Istanbul, Turkey</p> <p>² Department of Control and Automation Engineering, Istanbul Techn. University, Maslak/Sariyer, Istanbul, Turkey</p>		<p>Laboratory of Engineering Mechanics, School of Civil Engineering, Faculty of Engineering, Aristotle University of Thessaloniki, Greece</p>		
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Thursday 7 July 2022

		10:30-13:00	Workshop on Biosensors & Bioelectronics (ISFOE22-NN22) 2 (Room: Timber Hall 1) Chair: P. Gkoupidenis		
11:00-13:00	Workshop on OLEDs, OTFTs and Wearables 5 (Room: Crystal Hall) Chair: M. Gioti	10:30-11:00 INVITED (L)	The route towards an organic liquid retina nano-prosthesis Guglielmo Lanzani <i>Polytechnic University of Milan, Italy</i>	11:10-13:00	I3D 3 3D Bioprinting (Room: Doc Six 2) Chair: I. Zergioti
11:00-11:30 INVITED (L)	Sensing and energy harvesting technologies for wearable devices M.A. Costa Angeli, Mattia Petrelli, Raheel Riaz, L. Petti, and P. Lugli <i>Faculty of Science and Technology, Free University of Bozen-Bolzano, Bolzano, Italy</i>	11:00-11:30 INVITED (V)	Organic photovoltaics for wireless wide-area retinal stimulation Diego Ghezzi <i>EPFL, Switzerland</i>	11:00-11:30 INVITED (V)	3D-Printing and Sustainable Research V. Prasad Shastri <i>Institute for Macromolecular Chemistry, University of Freiburg, Stefan-Meier Str. 31, Freiburg, 79104 Germany</i>
11:30-11:45 (L)	Towards Large Scale Manufacturing of Fully Printed Solution Processed OLEDs V. Kyriazopoulos ¹ , K. Papadopoulos ² , A. Zachariadis ² , D. Tselekidou ² , E. Mekeridis ¹ , M. Gioti ² , S. Logothetidis ^{1,2} ¹ <i>Organic Electronic Technologies P.C. (OET), 20th KM Thessaloniki - Tagarades, 57001 Themi Greece</i> ² <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i>	11:30-12:00 INVITED (V)	Nanoscale effects in organic transistors for bioelectronics F. Biscarini ^{1,2} , S. Drakopoulou ² , M. Murgia ^{1,3} , M. Di Lauro ¹ , M. Bianchi ¹ , C. Albonetti ^{1,3} ¹ <i>Center for Translational Neurophysiology – Istituto Italiano di Tecnologia, Italy</i> ² <i>Life Sciences Dept. – Università di Modena e Reggio Emilia, Italy</i> ³ <i>Institute for Nanostructured Materials – Consiglio Nazionale delle Ricerche (CNR-ISMN), Italy</i>	11:30-12:00 INVITED (L)	Laser Induced Forward Transfer as an enabling bioprinting technology I. Zergioti <i>School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece</i>
11:45-12:00 (V)	Printed sensors as monitoring solutions for the environmental conservation conditions of food and pharmaceutical packaging D. Campanhã, L. Truta, S. Bogas, B. Sorathiya, A. Faria, F. Gomes <i>CeNTI – Centre for Nanotechnology and Smart Materials, Vila Nova de Famalicão, Portugal</i>				
12:00-12:15 (V)	Bringing interaction to the next level: Printed haptic feedback and stretchable cabling for integration in Magos gloves C. Patron, F. Conrady, K.U. Fritz, G. Agriopoulos, A. Bakalidis <i>ZOEK gGmbH, Luxemburgerstraße 90, Köln, Germany</i>	12:00-12:15 (L)	Development of 3D organic polymer dendrites as neuromorphic device K. Janzakova <i>Institut d'Électronique, Microélectronique et Nanotechnologie (IEMN), CNRS, UMR ⁸⁵²⁰, France</i>	12:00-12:30 INVITED (L)	Global health impacts of nanotechnology law: Nanoregulations governing food Ilise Feitshans JD and ScM and DIR1, <i>Director, ESI SAFERNANO European Scientific Institute, Archamps France</i> <i>AND Research Assistant O'Neill Institute for National and Global Health Law</i>
12:15-12:30 (V)	Laser patterning of soli-state flexible supercapacitor: Smart textiles V. Babaahamdi ¹ , V. Shakeri Siavashani ² ¹ <i>Department of Materials Science and Textile Engineering, Razi University, Kermanshah, Iran</i> ² <i>Textile Engineering Department, Faculty of Textile Technologies Design, Istanbul Technical University, Turkey</i>	12:15-12:30 (V)	A hybrid piezoelectric and electrostatic energy harvester for scavenging arterial pulsations I. Sopianin <i>School of Engineering & Innovation, The Open University Milton Keynes MK7 6AA, UK</i>		

12:30-12:45 (V)	A novel low temperature synthesis method to produce durable multifunctional stretchable fabrics Vahid Shakeri Siavashani ¹ , Gursoy Nevin ¹ , Majid Montazer ² , Pelin Altay ¹ ¹ <i>Textile Engineering Department, Faculty of Textile Technologies and Design, Istanbul Technical University, Istanbul, Turkey</i> ² <i>Dept Textile Engineering Amirkabir University of Technology, Tehran Polytechnic, Iran</i>	12:30-12:45 (V)	Real-time reaction monitoring of liquids on the chip-scale B. Hinkov <i>Institute of Solid State Electronics & Center for Micro- and Nanostructures, Technische Universität, Austria</i>	12:30-12:45 (L)	Biomechanical performances of PCL/HA micro- and macro-porous lattice scaffolds for tissue engineering application produced by LPBF Maria Laura Gatto <i>Department DIISM, Polytechnic University of Marche, Italy</i>
12:45-13:00 (L)	Real Time controlling of In-Organic material deposition by SE tool for Organic Light Emitting Diodes fabricated on Cluster OVPD PPL M. Chatzidis ¹ , A. Zachariadis ¹ , P.K. Baumann ² , A. Laskarakis ¹ , M. Gioti ¹ , S. Logothetidis ¹ ¹ <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki, Greece</i> ² <i>AIXTRON SE, Germany</i>	12:45-13:00 (L)	Wearable Microneedle-Based Extended Gate Transistor Biosensor for Real-Time Detection of Biomarkers in Interstitial Fluids Rawan Omar <i>Department of Chemical Engineering and Russell Berrie Nanotechnology Institute, Technion-Israel Institute of Technology, Israel</i>	12:45-13:00 (L)	Laser bioprinting of cells and tumor organoids for organ-on-chip applications E. Elezoglou ^{1,3} , M. Chliara ¹ , M. Chatzipetrou ¹ , S. Papazoglou ³ , K. Tsilingiri ² , A. Klinakis ² , I. Zergioti ¹ ¹ <i>National Technical University of Athens, School of Applied Mathematical and Physical Sciences, Athens, Greece</i> ² <i>Biomedical Research Foundation of Academy of Athens, Greece</i> ³ <i>PhosPrint P.C., Attika Technology Park Lefkippos, Agia Paraskevi, Athens, Greece</i>
13:00-14:30	Coffee Break	Exhibition-Networking	Poster Display: Nanomaterials and Devices, Graphene and Related Materials, Biosensors & Bioelectronics, I3D		
14:30-16:30	Workshop on Real-time Metrology and Quality Control for Nano-Manufacturing (Room: Crystal Hall) Chair: A. Laskarakis	14:30-16:30	Workshop on Biosensors & Bioelectronics (ISFOE22-NN22) 3 (Room: Timber Hall 1) Chair: G. Lanzani		
14:30-15:00 INVITED (L)	Pathway to R2R production of components for green hydrogen and fuel cells Thomas Kolbusch <i>COATEMA Coating Machinery GmbH, Germany</i>	14:30-15:00 INVITED (V)	Bioelectronics with photosynthetic microorganisms G. M. Farinola ¹ , M. Grattieri ¹ , M. Trotta ² , F. Biscarini ^{3,4} , D. Vona ¹ , G. Buscemi ¹ , C. Vicente Garcia ¹ , S. Cicco ¹ , R. Ragni ¹ , F. Milano ² , M. Di Lauro ^{3,4} ¹ <i>Department of Chemistry, Università degli Studi di Bari "Aldo Moro", Bari, Italy</i> , ² <i>CNR IPCF Bari, Italy</i> , ³ <i>Dipartimento di Scienze della Vita, Università di Modena e Reggio Emilia, Italy</i> , ⁴ <i>Center for Translational Neurophysiology of Speech and Communication, IIT Ferrara, Italy</i>		
15:00-15:30 INVITED (L)	Large Scale Roll-to-Roll Fabrication of fully printed Organic Photovoltaics (OPVs) E. Mekeridis ¹ , C. Varlamis ¹ , V. Kyriazopoulos ¹ , A. Galatsopoulos ¹ , S. Fachouri ¹ , C. Kapnopoulos ² , A. Laskarakis ² , S. Logothetidis ^{1,2} ¹ <i>Organic Electronic Technologies P.C. 20th KM Thessaloniki - Tagarades, Themi, Greece</i> ² <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece</i>	15:00-15:30 INVITED (V)	Towards electronic drug delivery implants for the brain Christopher Proctor <i>University of Cambridge, UK</i>		
15:30-15:45 (L)	In-line and Real-time Nano-characterization technologies for the high yield digital manufacturing of Flexible Organic Electronics (RealNano) A. Laskarakis, S. Logothetidis <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece</i>	15:30-16:00 INVITED (L)	Organic neuromorphic electronics for learning and bio-interfacing Paschalis Gkoupidenis <i>Max Planck Institute for Polymer Research, Germany</i>		
15:45-16:00 (L)	Realization of roll-to-roll inline photoluminescence imaging for organic photovoltaic structures T. Brigancz, Zs. Sánta, Z. Kiss, F. Korsós <i>Semilab Co. Ltd., Budapest, Hungary</i>				

16:00-16:15 (L)	Hyperspectral Imaging for in-line thin film characterization in large area roll to roll processing P. Schlenz ¹ , F. Gruber ² , P. Wollmann ² , J. Hernandez ³ , Stefan Jakobs ⁴ , Ch. Maurer ⁴ , J. Fahlteich ¹ and S. Cornelius ¹ ¹ Fraunhofer FEP, Dresden, Germany, ² Fraunhofer IWS, Dresden, Germany, ³ Norsk Elektro Optikk AS, Ostensjoveien 34, 0667, Oslo, Norway, ⁴ Bruker AXS GmbH, Karlsruhe, Germany	16:00-16:30 INVITED (V)	Hydrogen-bonded molecules for bio-organic electronic applications Cigdem Yumusak Linz Institute for Organic Solar Cells (LIOS), Physical Chemistry, Johannes Kepler University Linz, Austria
16:15-16:30 (L)	Sustainable & smart packaging: A closer look at material choice and industrial process development K. Stephan, D. Kourkoulos, H. Rooms, T. Kolbusch Coatema Coating Machinery GmbH, Dormagen, Germany		
16:30-17:00	Exhibition-Networking	Poster Display: Nanomaterials and Devices, Graphene and Related Materials, Biosensors & Bioelectronics, I3D	
17:00-19:30	SPECIAL Workshop on Agrivoltaics (Room: Crystal Hall) Chair: A. Laskarakis	17:30-18:30	Workshop on Biosensors & Bioelectronics (ISFOE22-NN22) 4 (Room: Timber Hall 1) Chair: C. Yumusak
17:00-17:30 KEYNOTE (L)	Agrivoltaics: a Sustainable Solution to Revolutionize Energy-Efficient Agriculture S. Logothetidis Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece	17:00-17:30 INVITED (L)	Biomedical devices and Therapeutic applications Dimitrios A. Koutsouras Imec High Tech Campus 31, 5656 AE Eindhoven, The Netherlands
17:30-17:45 INVITED (L)	Agrivoltaics applications in Greenhouses E. Athanasiadou, E. Mekeridis, C. Varlamis, S. Logothetidis Organic Electronic Technologies P.C. 20th KM Thessaloniki - Tagarades, Themi, Greece	17:30-17:45 (L)	Design and evaluation of a Double-Gate Organic Thin Film Transistor (OTFT) for biosensing T. Fresneau, K. Romanjek, P. Mailley Organic Components Laboratory, Université Grenoble-Alpes, CEA Grenoble, France
17:45-18:00 (L)	OPV in Agrivoltaics: Synergistic use of land for renewable energy and crop harvesting C. Varlamis ¹ , E. Athanasiadou ¹ , E. Mekeridis ¹ , S. Logothetidis ² ¹ Organic Electronic Technologies P.C. 20th KM Thessaloniki - Tagarades, Themi, Greece ² Aristotle University of Thessaloniki – LTFN, Thessaloniki Greece	17:45-18:00 (L)	Inkjet Printing of heaters and temperature sensors for PCR and LAMP analysis on Lab-on-a-chip devices T. Schönfelder Fraunhofer Institute for Applied Optics and Precision Engineering (IOF), Germany
18:00-18:15 (L)	Best Practices on Energy and Production in Agriculture: The Photokipia, AGRORES and OPENERGY Projects C. Gravalidis, S. Logothetidis Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece	18:00-18:15 (L)	Bio-Electronic platforms and digitization of Biosensor Devices A. Orfanos BL NanoBiomed P.C. 20th KM Thessaloniki - Tagarades, Themi, Greece
18:15-19:00 4-7 July 2022	CLOSING CEREMONY	18:15-18:30 (V)	Gas Mixtures Recognition with Feature Extracted from the Single Gas: A KNN Model-Based Approach for Diabetes-specific Odor Diagnosis X. Li Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Chiba Japan
		18:30-18:45 (V)	Direct writing of conducting polymer 2D/3D microelectrodes for physiological recording and stimulation P. Zhang School of Chemical Sciences, The University of Auckland, New Zealand

POSTERS

* The posters will be displayed from Monday to Thursday

Nanomaterials: Organic Semiconductors, Electrodes, Barriers, Hybrids and Devices: OPVs, OTFTs, OLEDs		POSTER AREA Monday 4 July (13:00-14:30, 16:30-17:00): Poster Display & Presentations Tuesday 5 July, Wednesday 6 July, Thursday 7 July: Poster Display
Nanomaterials: Organic Semiconductors, Electrodes, Barriers, Hybrids and Devices		
PI1-1 (L)	Optical and electrical characteristics of ZnO-PEDOT:PSS heterojunction Nagpal K.* ¹ , M. Rosario Soares ² , Rauwel E. ² , Rauwel P. ³ <i>Institute of Forestry and Engineering, Estonian University of Life Science, Tartu, Estonia, CICECO, University of Aveiro, Aveiro, Portugal</i>	
PI1-2 (L)	Dual-State Emission Exhibiting Derivatives of Bis(trifluoromethyl)biphenyl and Various Donor Moieties Rasa Keruckiene ¹ , Nerijus Kusas ¹ , Vitaly E. Matulis ² , Juozas V. Grazulevicius ¹ ¹ <i>Department of Polymer Chemistry and Technology, Faculty of Chemical Technology, Kaunas University of Technology, Kaunas, Lithuania</i> ² <i>Belarusian State University, Minsk, Republic of Belarus</i>	
PI1-3 (L)	Flexible Neural Interfaces Based on 3D PEDOT:PSS micropillars Alice Lunghi* ^{1,2} , Michele Bianchi ¹ , Mauro Murgia ^{1,3} , Pierpaolo Greco ^{1,2} , Michele Di Lauro ¹ , Luciano Fadiga ^{1,2} , Fabio Biscarini ^{1,4} ¹ <i>Center for Translational Neurophysiology of Speech and Communication, Fondazione Istituto. Italiano di Tecnologia, Ferrara, Italy.</i> ² <i>Sezione di Fisiologia, Università di Ferrara, Ferrara, Italy.</i> ³ <i>Institute for Nanostructured Materials (ISMN), Consiglio Nazionale delle Ricerche, Bologna, Italy.</i> ⁴ <i>Life Science Department, Università di Modena e Reggio Emilia, Modena, Italy</i>	
PI1-4 (L)	Benign Electron Carrier Traps in Organic Semiconductors for Electrical Bistability Ratheesh K. Vijayaraghavan, Biswajit K. Barman <i>Department of Chemical Sciences, Indian Institute of Science Education and Research, Kolkata (IISER- K), West Bengal, India</i>	
PI1-5 (L)	New Donor–Acceptor–Donor–Acceptor–Donor architected crosslinkable conjugated pentamers Arife Aktas ^{1,2} , Mücahit Özdemir ³ , Sermet Koyuncu ^{1,2} ¹ <i>Canakkale Onsekiz Mart University, Department of Chemical Engineering, Canakkale, Turkey.</i> ² <i>Canakkale Onsekiz Mart University, Science and Technology Application and Research Center, Canakkale, Turkey.</i> ³ <i>Marmara University, Department of Chemistry, Istanbul, Turkey</i>	
PI1-6 (L)	Fluorene based crosslinkable conjugated polymers containing different length of PEG subunit Sinem Altinisik ^{1,2} , Arzu Kortun ¹ , Ahmet Nazlı ² , Ugur Cengiz ^{1,2} , Sermet Koyuncu ^{1,2} ¹ <i>Canakkale Onsekiz Mart University, Department of Chemical Engineering, Canakkale, Turkey</i> ² <i>Canakkale Onsekiz Mart University, Department of Energy Resources and Management, Canakkale, Turkey</i>	
PI1-7 (L)	Hydrogen bonding-controlled transfer-printing of PEDOT:PSS films for flexible and stretchable electronics C. Volkert, R. Colucci, P. Blom, U. Kraft <i>Max Planck Institute for Polymer Research, Mainz (Germany)</i>	
PI1-8 (L)	Synthesis and characterization of blue emitting multicarbazolyl-substituted benzonitriles with different additional electron accepting moieties R. Butkute, K. Leitonas, M. Guzauskas, D. Volyniuk, J.V. Grazulevicius <i>Department of Polymer Chemistry and Technology, Kaunas University of Technology, Kaunas, Lithuania</i>	
PI1-9 (L)	Overcoming solid-state solvation and conformation disorder corollaries of blue TADF emitters in non-doped and doped OLEDs D. Volyniuk ¹ , M. Mahmoudi ¹ , D. Gudeika ¹ , J. Simokaitiene ¹ , R. Butkute ¹ , L. Skhirtladze ¹ , J. Keruckas ¹ , K.L. Woon ² , J.V. Grazulevicius ¹ ¹ <i>Department of Polymer Chemistry and Technology, Kaunas University of Technology, Kaunas, Lithuania</i> ² <i>Low Dimensional Materials Research Centre, Department of Physics, Faculty of Science, University of Malaya, Malaysia</i>	
PI1-10	Triphenylamine and dibenzothiophene-2-yl(phenyl)methanone derivatives exhibiting long persistent luminescence as oxygen probes of optical sensors	

(L)	L. Volyniuk¹, M. Ghasemi¹, M. Mahmoudi¹, D. Gudeika¹, K. Leitonas¹, A. Panchenko², B.F Minaev², D. Volyniuk¹, J.V. Grazulevicius¹ ¹ Department of Polymer Chemistry and Technology, Kaunas University of Technology, Kaunas, Lithuania ² Department of Chemistry and Nanomaterials Science, Bohdan Khmelnytsky National University, Cherkasy, Ukraine
PI1-11 (L)	Exploitation of phenothiazine–pyrimidine linking pattern for the achievement of efficient TADF Starykov H.* , Simokaitiene J., Volyniuk D., Grazulevicius J.V. Department of Polymer Chemistry and Technology, Kaunas University of Technology, Kaunas, Lithuania
Organic Electronics in Energy: OPVs and Perovskite PVs	
PI1-12 (L)	Molecular doping of fully printed flexible organic solar cells using F4-TCNQ additive A. Paliagkas, C. Stavragi, C. Kapnopoulos, V. Heben, I. Kortidis, D. Tselekidou, C. Gravalidis, S. Logothetidis, A. Laskarakis Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece
PI1-13 (L)	Fabrication of non-fullerene based organic solar cells with potential for flexible large-scale coating A. Panagiotopoulos, K. D. G. I. Jayawardena, Jae Sung Yun D. Kutsarov, S.R.P. Silva Department of Electrical and Electronic Engineering, Advanced Technology Institute (ATI), University of Surrey, Guildford, Surrey GU2 7XH, UK
PI1-14 (L)	A route towards the fabrication of large-scale and high-quality perovskite films for optoelectronic devices E. Rezaee, D. Kutsarov, A. Panagiotopoulos, B. Li, J. Bi, S.R.P. Silva Department of Electrical and Electronic Engineering, Advanced Technology Institute (ATI), University of Surrey, Guildford, Surrey GU2 7XH, UK
PI1-15 (L)	Optical and structural characterization of lead-free tin-based perovskite nanolayers for high performance solution processed solar cells C. Stavragi ¹ , A. Galatsopoulos ² , A. Paliagkas ¹ , C. Kapnopoulos ¹ , V. Heben ¹ , I. Kortidis ¹ , D. Tselekidou ¹ , C. Gravalidis ¹ , S. Logothetidis ¹ , A. Laskarakis ¹ ¹ Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ² Organic Electronic Technologies P.C. 20 th km Thessaloniki - Tagarades, Thermi, Greece
PI1-16 (L)	Fully printed ternary organic photovoltaic devices based on PPDT2FBT- PC70BM - BTP-12 system G. Atsas, O. Heben, C. Kapnopoulos, I. Kortidis, C. Gravalidis, D. Tselekidou, S. Logothetidis, A. Laskarakis Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
PI1-17 (L)	Passivation of electron transport layer to achieve better efficiency of perovskite solar cells I. Panžić ¹ , V. Mandić ¹ , T. Rath ² ¹ Faculty of Chemical Engineering and Technology, Marulićev trg 20, 10000 Zagreb, Croatia ² Institute for Chemistry and Technology of Materials, Stremayrgasse 9, 8010 Graz, Austria
OLEDs, OTFTs and Sensors	
PI1-18 (L)	Flexible, fully textile-based force sensors for wearable applications A. K. Stavrakis, M. Simić, G.M. Stojanović Faculty of Technical Sciences, University of Novi Sad Trg Dositeja Obradovica 6, 21000, Novi Sad, Serbia
PI1-19 (V)	Printed, flexible and low power consumption wind sensor for Urban Wind Turbines S. Bogas, A. Fonseca, D. Campanhã, M. Peixoto, J. Fonseca CeNTI – Centre for Nanotechnology and Smart Materials, Vila Nova de Famalicão (Portugal).
PI1-20 (V)	Ink-jet printing of n-acenes: from TIPS-pentacene to pentaceno-hexacene M.Y. Aliouat ¹ , F. Mesnilgrente ¹ , R. Monflier ¹ , A. Gourdon ² , A. Jančařík ³ , and I. Séguy ¹ ¹ LAAS-CNRS, Université de Toulouse, UPS, 31031 Toulouse, France ² CEMES-CNRS, 29 Rue J. Marvig, 31055 Toulouse France ³ CRPP, UMR CNRS 5031, Université de Bordeaux, 33600 Pessac, France.

PI1-21 (V)	The study on Patterning and Overlay defects caused by laser Bum Suk Kim ^{1,2} , Jae Wook Jeon ¹ ¹ Department of Semiconductor and display Engineering, Sungkyunkwan University, Suwan, 16419, Republic of Korea ² Memory Photo Technology team, Samsung Electronics, Hwaseong, 18448, Republic of Korea		
PI1-22 (V)	ZnO ALD thin film FET's ultra high on/off ratio by using assembly molecule buffer layer Tae hyeon Kim, Woo jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University, Suwon 16419, South Korea		
PI1-23 (V)	Solution-Processed Organic Polymer Semiconductor and Ferroelectric Copolymer in a Dual-Gate Structure for Multi-Bit Nonvolatile Memory Transistor A.A. Boampong ¹ , Y. Choi ² , M.-H. Kim ³ ¹ Research Institute of Printed Electronics & ³ D Printing, Daejeon, South-Korea ² Department of Electronic Engineering, Hanbat National University, Daejeon, South-Korea ³ Department of Creative Convergence Engineering, Hanbat National University, Daejeon, South-Korea		
PI1-24 (V)	Fully Printed semi-transparent Resisting Switching Devices (RSDs) based on Poly(4-vinylphenol) organic layer A. Mourkas, I. Panagiotopoulos Materials Science Engineering, University of Ioannina, Greece		
PI1-25 (V)	Dilute donor organic solar cell and its application in semitransparent photovoltaic Nannan Yao, Fengling Zhang Department of Physics, Chemistry and Biology (IFM), Linköping University, Linköping, 58183, Sweden		
PI1-26 (V)	Hole Mobility via Impedance Spectroscopy as a Diagnostic Analysis in materials for OPV devices G. Bianchi ¹ , N. Camaioni ² , C. Carbonera ¹ , A. Chiodini ¹ , A. Congiu ¹ , R. Marrazzo ¹ , F. Melchiorre ¹ , N. Perin ³ , R. Po ¹ , M. Salvalaggio ¹ , A. Savoini ¹ , A. Siviero ¹ , S. Spera ¹ , A. Tacca ¹ , F. Tinti ² , S. Zanardi ¹ ¹ Renewable, New Energies and Material Science Research Center, Eni S.p.A, Via G. Fauser 4, Novara, Italy ² Istituto per la Sintesi Organica e la Fotoreattività - Consiglio Nazionale delle Ricerche, Bologna, Italy ³ Versalis S.p.A. - Stabilimento di Ferrara, Ferrara, Italy		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 40%; padding: 5px;">Biosensors & Bioelectronics (common with NN22)</td> <td style="padding: 5px;"> POSTER AREA: Wednesday 6 July (13:00-14:30, 16:30-17:00): Poster Display & Presentations Tuesday 5 July, Thursday 7 July: Poster Display </td> </tr> </tbody> </table>		Biosensors & Bioelectronics (common with NN22)	POSTER AREA: Wednesday 6 July (13:00-14:30, 16:30-17:00): Poster Display & Presentations Tuesday 5 July, Thursday 7 July: Poster Display
Biosensors & Bioelectronics (common with NN22)	POSTER AREA: Wednesday 6 July (13:00-14:30, 16:30-17:00): Poster Display & Presentations Tuesday 5 July, Thursday 7 July: Poster Display		
P4-1 (L)	Electrodeposition of gold nanoparticles on flexible substrate for electrochemical bio-sensing applications P. Stavropoulos ¹ , A. Batsi ¹ , K. Tsimenidis ² , A. Orfanos ² , A. Laskarakis ¹ , S. Logothetidis ¹ ¹ Nanotechnology Lab LTFN, Faculty of Sciences, Aristotle University of Thessaloniki, Greece, ² BL-NanoBiomed P.C.		
P4-2 (L)	Electroactive polymer films for Bioelectronics: P3HT-MWCNT properties G.M.L. Messina, P. Campione, G. Marletta Dept of Chemical Sciences, University of Catania and CSGI, Laboratory for Molecular Surfaces and Nanotechnology (LAMSUN), Italy		
P4-3 (L)	Electrolyte-Gated Organic Transistors as Versatile Building Blocks in Translational Neuroelectronics De Salvo A. ^{*1,3} , Di Lauro M. ¹ , Zucchini E. ^{1,3} , Calandra S. G. ² , Murgia M. ^{1,4} , Bianchi M. ¹ , Biscarini F. ^{1,5} , Fadiga L. ^{1,3} ¹ Center for Translational Neurophysiology of Speech and Communication, Fondazione Istituto Italiano di Tecnologia (IIT-CTNSC), Italy ² Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università di Modena e Reggio Emilia, Italy ³ Sezione di Fisiologia, Dipartimento di Neuroscienze e Riabilitazione, Università di Ferrara, Italy ⁴ Istituto per lo Studio dei Materiali Nanostrutturati (CNR-ISMN), National Research Council, Italy ⁵ Dipartimento di Scienze della Vita, Università di Modena e Reggio Emilia, Italy		

P4-4 (L)	Biofunctionalization of Au nanoparticles for printed biosensors I.E. Chatziioannou ¹ , A. Orfanos ² , K. Tsimenidis ² , S. Logothetidis ¹ , A. Laskarakis ¹ ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki, Greece ² BL NanoBioMed, Greece
P4-5 (L)	Substrate influence on carbon based bioprinted sensors C. Marculescu ¹ , B. Tincu ¹ , T. Burinaru ^{1,2} , P. Preda ¹ , E. Chiriac ^{1,3} , A. Matei ¹ , M. Avram ¹ ¹ IMT Bucharest, Erou Iancu Nicolae Street, Voluntari, Ilfov, ROMANIA ² USAMV Bucharest, Bucharest, ROMANIA ³ UPB, Splaiul Independenței, Bucharest, ROMANIA
P4-6 (L)	Study of the biofunctionalization of chitosan-capped gold nanoparticles for the detection of cardiac Troponin T (cTnT) using electrochemical sensors D.E. Georgiadis ¹ , A. Orfanos ² , K.Tsimenidis ² , S. Dermenoudis ¹ , D.Tselekidou ¹ , A. Zachariadis ¹ , L. Malletzidou ³ , S. Logothetidis ¹ , A. Laskarakis ¹ ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki, Greece ² BL NanoBioMed, Thessaloniki, Greece ³ . Advanced Materials and Devices Laboratory (AMDe Lab), Aristotle University of Thessaloniki, Greece
P4-7 (L)	Multiplexed biofunctionalisation of GaAs for sepsis diagnostics, a photochemical approach B. Santos Gomes, F. Masia School of Biosciences, Cardiff University, Cardiff, UK
P4-8 (L)	Biohybrid microelectrodes coated with human brain microvascular endothelial cells (hBMECs) as a novel therapeutic tool for tackling foreign body reaction Guzzo S. ^{1,2} , Zucchini E. ^{1,2} , Pavan B. ^{1,2} , Biscarini F. ^{1,3} , Bianchi M. ^{1,2} , Fadiga L. ^{1,2} ¹ Department of Neuroscience and Rehabilitation, Section of Physiology, Università di Ferrara, Ferrara, Italy ² Center for Translational Neurophysiology of Speech and Communication, Fondazione Istituto Italiano di Tecnologia, Ferrara, Italy. ³ Life Science Department, Università di Modena e Reggio Emilia, Modena, Italy
P4-9 (L)	Poly(3, 4 -ethylenedioxythiophene):Poly(styrenesulfonate) (PEDOT:PSS) Properties Improvement Through Cross-linking with an Oxetane Unit Jorge S. M. ^{1,2} , Santos L. F. ² , Galvão A. ² , Morgado J. ^{1,3} and Charas A. ¹ ¹ Instituto de Telecomunicações, Instituto Superior Técnico, Lisboa, Portugal ² Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal ³ Department of Bioengineering, Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal
P4-10 (L)	Wearable Microneedle-Based Biosensor for Detecting Biomarkers in Interstitial Fluids R. Omar, Y. Zheng, H. Haick Department of Chemical Engineering and Russell Berrie Nanotechnology Institute, Technion-Israel Institute of Technology, Haifa, Israel
P4-11 (L)	Synthesis of Mastiha based PCL nanofibers for coating of angioplasty balloon I.Giagtzidis ^{1,2} , Z. Chakim, S. Dermenoudis ¹ , M. Didagelos ^{1,3} A. Laskarakis ¹ , S. Logothetidis ¹ ¹ Nanotechnology Lab LTFN AUTH ² E' Surgical Department Ippokrateio General Hospital AUTH ³ 1 st Cardiology Department AHEPA University Hospital AUTH
P4-12 (V)	Cost-effective Synthesis of Graphene (and its derivatives) Materials for Non-Enzymatic Glucose Electrochemical Sensors: A Review G. Balkourani ¹ , C. Molochas ¹ , A. Brouzgou ² , P. Tsiakaras ¹ ¹ Laboratory of Alternative Energy Conversion Systems, Department of Mechanical Engineering, School of Engineering, University of Thessaly, Volos, Greece ² Department of Energy Systems, Faculty of Technology, University of Thessaly, Geopolis, Larissa, Greece

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P5-2 (L)	Low-temperature exciton behaviour in van der Waals heterostructures of WS₂, WSe₂ and MoS₂ 2D materials S. Aškračić, U. Ralević Institute of Physics Belgrade, University of Belgrade, Serbia	
P5-3 (L)	Greenhouse monitoring system using graphene-based sensor S.M. Iordache ¹ , A.M. Iordache ¹ , A. Sobetkii ² , E. Tanasa ³ , E. Vasile ³ , V. Barna ⁴ , I.C. Vasiliu ¹ , M. Elisa ¹ , I. Chilibon ¹ , C.E.A. Grigorescu ¹ ¹ National Institute for Research and Development in Optoelectronics-INOE, Optospintronics Department, Magurele Romania ² S.C. MGM STAR Construct S.R.L, Romania ³ Politehnica University of Bucharest, Bucharest, Romania ⁴ University of Bucharest, Faculty of Physics, Magurele, Romania	
P5-4 (L)	Pressure effects on electrical and optical transport in few-layer ReSe² FETs Enver Faella ^{1,2} , Kimberly Intonti ¹ , Loredana Viscardi ¹ , Filippo Giubileo ² , Arun Kumar ¹ , Otto Lam ³ , Anastasiou Konstantinos ³ , Monica Craciun ³ , Saverio Russo ³ and Antonio Di Bartolomeo ^{1,2} , ¹ Department of Physics "E.R. Caianiello", University of Salerno, Fisciano, Salerno, Italy ² CNR-SPIN, Fisciano, Salerno, Italy ³ University of Exeter, Devon, UK	
P5-5 (L)	Development of a graphene field-effect transistor for the fabrication of functional mesobots J. Reif ¹ , R. Kirchner ¹ , C. Strobel ¹ , J. Zhang ² , M. Albert ¹ , J. W. Bartha ¹ , T. Mikolajick ¹ ¹ Technische Universität Dresden, Institute of Semiconductors and Microsystems, Dresden, Germany ² Technische Universität Dresden, Center for Advancing Electronics Dresden, Dresden, Germany	
P5-6 (L)	Graphene-Silicon Device for Visible and Infrared Photodetection A. Pelella ^{1,2} , A. Grillo ^{1,2} , E. Faella ^{1,2} , G. Luongo ³ , M. B. Askari ⁴ , A. Di Bartolomeo ^{1,2} ¹ Department of Physics, University of Salerno, Fisciano, Salerno, Italy ² CNR-SPIN, Fisciano, Salerno, Italy ³ IHP-Microelectronics, Frankfurt Oder, Germany ⁴ Department of Physics, Faculty of Science, University of Guilan, Rasht, Iran	
P5-7 (L)	Study of HfO₂ deposition on MoS₂ by Atomic Layer Deposition G. Fanourakis ^{1,2} , F. Iacovella ² , G. Deligeorgis ² ¹ Department of Materials Science and Technology, University of Crete, Heraklion, Greece ² Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology – Hellas (FORTH), Greece	
P5-8 (L)	Fabrication study of relative humidity sensors based on ²D materials N. Armaou ^{1,2} , G. Fanourakis ^{1,2} , F. Iacovella ^{1,2} , G. Deligeorgis ^{1,2} ¹ Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology – Hellas (FORTH), Greece ² Department of Physics, University of Crete Heraklion, Greece	
P5-9 (L)	Preparation and doping of single-walled carbon nanotube membranes D.M. Kosmidis ¹ , F. Iacovella ² , G. Deligeorgis ³	

	<p>¹ Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology-Hellas (FORTH), Greece ² Department of Physics, University of Crete, Heraklion, Greece</p>
P5-10 (L)	<p>Carbon nanotube and fullerene based nano-rectifiers A. Provias^{1,2}, D. Kosmidis¹, G. Deligeorgis^{1,2} ¹ Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology, – Hellas (FORTH), Heraklion ⁷⁰⁰¹³, Greece ² Department of Physics, University of Crete Heraklion, Greece</p>
P5-11 (L)	<p>Electrically modulated wavelength selective photodetection enabled by MoS2/ZnO heterostructure Kishan Lal Kumawat¹, Pius Augustine^{1,2}, Deependra Kumar Singh¹, Karuna Kar Nanda¹, Saluru Baba Krupanidhi¹ ¹ Materials Research Centre, Indian Institute of Science, Bangalore 560012, India. ² Materials Research Laboratory, Sacred Heart College (Autonomous), Kochi-682013, India.</p>
P5-12 (L)	<p>Raman study under simultaneous mechanical deformation and electrochemical doping in 2D MoS2 N. Balakeras¹, K. Filintoglou^{1,4}, A. Michail^{2,3}, I. Samaras¹, I. Parthenios³, and K. Papagelis^{1,3} ¹ School of Physics Department of Solid State Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece ² Department of Physics, University of Patras, Patras, Greece ³ FORTH/ICE-HT, Institute of Chemical Engineering Sciences, Rio Patras, Greece ⁴ HENANOTECH, Thessaloniki ⁵⁴⁶²⁴, Greece</p>
P5-13 (V)	<p>Heterojunction Biosensor of MoS2 and Graphene with Increased On/Off Controllability via Modification of Schottky Barrier Yeahyun Kim, Woojong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University, 2066 Westbound Janan-gu, Suwon-si, South Korea</p>
P5-14 (V)	<p>Optical-to-Voltage Spike Conversion based on Graphene/Silicon Photodetector Sungbum Park, Woojong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University 2066 Westbound Janan-gu, Suwon-si, South Korea</p>
P5-15 (V)	<p>Non-volatile memory and synaptic devices using interlayer intercalation of ions into 2D material Gayoung Cho, Woojong Yu Electrical and Electronic Computer Engineering, Sungkyunkwan University Suwon 16419, Korea</p>
P5-16 (V)	<p>2D van der Waals heterostructure with MoS2/WSe2 on Al2O3 insulator making photosensor Seok won Choi, Woo jong Yu¹ Department of Electrical and Computer Engineering, Sungkyunkwan University, 2066 Westbound Janan-gu, Suwon-si, South Korea</p>
P5-17 (V)	<p>Water droplet detection above an on the surface by microcrystalline graphene layer Algimantas Lukša¹, Vladimir Astachov¹, Saulius Balakauskas¹, Virginijus Bukauskas¹, Mindaugas Kamaraukas¹, Artūras Suchodolskis³, Marius Treideris¹, Martynas Talaikis², Arūnas Šetkus¹ ¹ Department of Physical Technologies, State research institute Center for Physical Sciences and Technology (FTMC), Vilnius, Lithuania ² Department of Organic Chemistry, State research institute Center for Physical Sciences and Technology (FTMC), Vilnius, Lithuania ³ Department of Optoelectronic, State research institute Center for Physical Sciences and Technology (FTMC), Vilnius, Lithuania Saulėtekio ave. 3, Vilnius, Lithuania</p>
I3D	<p>POSTER AREA Wednesday 6 July (13:00-14:30, 16:30-17:00): Poster Display & Presentations Tuesday 5 July, Thursday 7 July: Poster Display</p>
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I3DP-2 (L)	<p>Reverse Engineering and ³D Printing for Replica Fabrication of a Paleontological Human Skull E. Tzitzimis^{1,2}, D. Tzetzis^{1,2}, C. Achilles^{1,3}, A. Athanasiou⁴, A. Darlas⁴, D. Bochtis¹ ¹ Institute for Bio-Economy and Agri-Technology, Centre for Research & Technology Hellas (CERTH), Volos, Greece</p>

	<p>² <i>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic University, Themi, Greece</i></p> <p>³ <i>Department of Supply Chain Management, International Hellenic University, Katerini, Greece</i></p> <p>⁴ <i>Ephorate of Palaeontology and Speleology, Ministry of Culture and Sports, Greece</i></p>
I3DP-3 (L)	<p>End-to-end procedure for the restoration of an archaeological find using 3D printing technologies</p> <p>N. Papas¹, K. Tsongas¹, D. Karolidis², D. Tzetzis¹, A. Arvanitaki²</p> <p>¹ <i>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic University, Greece</i></p> <p>² <i>Archeological Museum of Thessaloniki, Thessaloniki, Greece</i></p>
I3DP-4 (L)	<p>Artifacts' digital restoration and their implementation in Tactile Museums by utilizing 3D scanning and 3D printing</p> <p>S. Koltsakidis^{1,2}, K. Tsongas^{2,3}, E. Kargioti³, D. Tzetzis², C. Achillas¹, N. Moussiopoulos¹</p> <p>¹ <i>Laboratory of Heat Transfer and Environmental Engineering, Department of Mechanical Engineering, Aristotle University Thessaloniki, Thessaloniki, Greece</i></p> <p>² <i>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic University, Themi, Greece</i></p> <p>³ <i>Teloglion Fine Arts Foundation – Aristotle University Thessaloniki, Thessaloniki, Greece</i></p>
I3DP-5 (L)	<p>Increasing cell viability in 3D Bioprinted tissue</p> <p>A. Papadopoulos, S. Dermenoudis, S Logothetidis</p> <p><i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p>
I3DP-6 (V)	<p>Development of a food-waste derived bio-ink for soilless cultivation</p> <p>C. Febo^{1,2}, M. Ciocca¹, P. Lugli¹, L. Petti^{1,3}</p> <p>¹ <i>Sensing Technologies Lab, Faculty of Science and Technology, Free University of Bozen-Bolzano, Italy</i></p> <p>² <i>Smart Materials Lab, Istituto Italiano di Tecnologia, via Morego, Genova, Italy</i></p> <p>³ <i>Competence Centre for Plant Health, Free University of Bozen-Bolzano, Bolzano, Italy</i></p>
I3DP-7 (V)	<p>A portable real-time fiber density measurement system for electrospinning setups</p> <p>A. Evangelidis, G. Dobrescu, C. Ciobotaru, M. Enculescu</p> <p><i>National Institute of Materials Physics, Măgurele, Romania</i></p>
I3DP-8 (V)	<p>3D printing of Zirconia ceramics for dental applications</p> <p>E. Garmpi^{1,4}, I. Kitsou¹, P. Angelopoulou¹, E. Kalithinou¹, O. Alexiadou¹, P. Gkomoza¹, E. Roussi¹, S. Koltsakidis², D. Tzetzis², E. Mavropoulis³, C. Andreouli⁴, A. Tsetsekou¹</p> <p>¹ <i>School of Mining and Metallurgical Engineering, National Technical University of Athens, Greece</i></p> <p>² <i>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic University, Themi, Greece</i></p> <p>³ <i>Lino3D, Athens, Greece</i></p> <p>⁴ <i>MIRTEC S.A., Greece</i></p>
I3DP-9 (V)	<p>Development of nanocrystalline yttria stabilized zirconia feedstock for 3D-printing in dental applications</p> <p>I. Kitsou¹, P. Angelopoulou¹, E. Kalithinou¹, O. Alexiadou¹, E. Roussi¹, P. Gkomoza¹, E. Garmpi^{1,4}, S. Koltsakidis², D. Tzetzis², E. Mavropoulis³, C. Andreouli⁴, A. Tsetsekou¹</p> <p>¹ <i>School of Mining and Metallurgical Engineering, National Technical University of Athens, Greece</i></p> <p>² <i>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic University, Themi, Greece</i></p> <p>³ <i>Lino3D, Athens, Greece</i></p> <p>⁴ <i>MIRTEC S.A., Greece</i></p>