

Tuesday 8 July 2025

08:00 – 18:00	Registration	
09:00-11:00 ⬆CH	WELCOME SESSION	
09:00-09:30 WELCOME	NN25 8-11 July 2025	Welcome and Opening Remarks S. Logothetidis NN25 Chairman
09:30-10:00 NANOTEX KEYNOTE	Porous Carbon Electrocatalysts for Energy Conversion and Storage E. P. Giannelis <i>Materials Science and Engineering, Cornell Univ., Ithaca, NY 14853, USA</i>	
10:00-11:00 ⬆CH	WS2: Advanced Nanomaterials Chair: J. Pfleger	
10:00-10:30 KEYNOTE	Flux-method Process Informatics for Sodium-ion Battery Materials K. Teshima ^{1,2,3,4} , T. Yamada ^{1,2} , F. Hayashi ^{1,2} , T. Hagio ^{1,2} , C. Terashima ^{1,4} ¹ Inst. for Aqua Regeneration, ² Dept. of Materials Chemistry, Shinshu Univ., Japan ³ Verne Crystal Inc., ⁴ Res. Center for Space System Innovation, Tokyo Univ. of Science, Japan	
10:30-11:00 INVITED	Transmission Electron Microscopy Studies on Complex Nanostructures R. Arenal <i>Un. of Zaragoza, Spain</i>	

11:00-11:30

COFFEE BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session
EXPO25 Exhibition & Networking

11:30-13:30 ⬆ TH1	Workshop on AI, ML, Intelligent Manufacturing and Automation 1 Chair: G. Volonakis						
11:30-11:35	Welcome & Opening Remarks S. Logothetidis ISFOE25/NN25 Chairman						
11:35-12:00 KEYNOTE	Digitalization of every step in the production value chain. How to get from digital twins to Coating as a service T. Kolbusch <i>COATEMA Coating Machinery GmbH, Germany</i>						
		12:00-13:30 ⬆ DS1	Workshop on Bioelectronics 1 (NN25 & ISFOE25) Chair: C. Pitsalidis	12:00-13:30 ⬆ CH	WS1 Nanoelectronics 1 Chair: D. Georgiadou	12:00-13:30 ⬆ DS2	WS2: Polymer Chair: E.P. Giannelis
12:00-12:30 KEYNOTE	Engineering Sensors and AI Technologies To Read the Human Body L. G. Occhipinti <i>University of Cambridge, UK</i>	12:00-12:30 KEYNOTE	Bioadhesive and immune-compatible polymer bioelectronics S. Wang ¹ <i>Pritzker School of Molecular Engineering, The University of Chicago Chicago, Illinois, USA</i>	12:00-12:30 INVITED	Electronic Transport Properties of Two-Dimensional Transition Metal Dichalcogenide Materials at Cryogenic Temperatures F. Gity <i>Tyndall National Inst., Univ. College Cork, Lee Maltings, Ireland</i>	12:00-12:30 INVITED	Architecturally Engineered Self-Healing Nanostructured Solid Polymer Electrolytes E. Glynos <i>Dept. of Materials Science and Engineering, Univ. of Crete, Greece Inst. of Electronic Structure and Laser, Foundation for Res. and Technology-Hellas, Greece</i>
12:30-13:00 INVITED	In line, Integrated and Real-time Metrology for Quality Control	12:30-13:00 INVITED	Advancing bioelectronic technologies for metabolic control A. Güemes ¹ , A. J. Boys ^{2,3} , G. G. Malliaras ¹ , R. M. Owens ³	12:30-13:00 INVITED	"Heterogeneous Integration of Diamond and Wide Bandgap Semiconductors for Advanced Packaging and Novel Devices" A. Christou	12:30-13:00 INVITED	Laser micro/nanotexturing of injection moulds: improving the processing of recycled polymers

13:30-15:00

LUNCH BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session
EXPO25 Exhibition & Networking

15:00-15:30 KEYNOTE Chair: J. Pfleger Room: CH	The Art of Designing Multifunctional Catalysts for Added-Valued Products: fundamentals and market perspectives. K. Polychronopoulou <i>Mechanical & Nuclear Engineering and Center for Catalysis and Separations (CeCaS), Khalifa Univ., Abu Dhabi, UAE</i>			15:00-17:00 TH1	Workshop on AI, ML, Intelligent Manufacturing & Automation 2 (NN25 & ISFOE25) Chair: P. Keliris
15:30-17:30 CH	WS1: Energy Chair: J. Pfleger	15:30-17:00 DS1	Workshop on Bioelectronics 2 (Joined Session of NN25 & ISFOE25) Chair: A. Güemes	15:00-15:30 INVITED	Machine learning approaches in materials characterization and soft matter molecular simulation: Challenges and Perspectives V. Constantoudis^{1,2} and N. Vergadou ¹ ¹ <i>Inst. of Nanoscience and Nanotechnology, NCSR Demokritos, Greece</i> ² <i>Nanometrisis p.c., TEPA Lefkippos Greece</i>
15:30-15:45	The impact of annealing temperature on the performance of biomass-derived hard carbon for Sodium-ion battery A. Rinaldi¹ , N. Ahmad ¹ , G. Magnani ¹ , R. Janot ² , M. Riccò ¹ and D. Pontiroli ¹ ¹ <i>Nanocarbon Lab, Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy</i> ² <i>Laboratoire de Réactivité et Chimie des Solides (LRCS), France</i>	15:30-16:00 INVITED	Electroconductive Synthetic and Bioderived 3D Architectures for Use in Wound Monitoring and Therapy C. Pitsalidis^{1,2} ¹ <i>Dept. of Physics, Khalifa Univ. of Science & Technology, UAE</i> ² <i>Advanced Res. and Innovation Center (ARIC), Khalifa Univ. of Science & Technology, UAE</i>	15:30-16:00 INVITED	GenAI as the Industrial Force Multiplier: Real Applications in Data Analysis T. Naskos¹ , <i>Atlantis Engineering SA, 12km Thessaloniki-Moudania, Thessaloniki, Greece</i>
15:45-16:00	Doping of Fullerene Buffer Layers and Its Impact on The Performance of Perovskite Photovoltaics F. Galatopoulos¹ , S. Biton ² , C. Christodoulou ¹ , A. Ioakeimidis, N. Tessler ² , S. Choulis ¹ ¹ <i>Dept. of Mechanical Engineering and Materials Science and Engineering, Limassol, Cyprus</i> ² <i>Sara and Moshe Zisapel Nano-Electronic Center, Dept. of El. Eng., Technion, Haifa, Israel</i>				
16:00-16:15	Biodegradable Pectin-Based Redox Gel Polymer Electrolyte for High-Performance Supercapacitors with Enhanced Thermal Stability N. Ahmad¹ , A. Rinaldi ¹ , M. Setti ¹ , M. Sidoli ¹ , S. Scaravonati ¹ , G. Magnani ¹ , V. Vezzoni ¹ , M. Riccò ¹ , C. Milanese ² , M. Titirici ³ , D. Pontiroli ¹ ¹ <i>Nanocarbon Laboratory, cIDEA & Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy.</i> ² <i>Pavia Hydrogen Lab, C.S.G.I. & Dipartimento di Chimica, Università di Pavia, Italy.</i> ³ <i>Dept. of Chemical Engineering, Imperial College London, UK</i>	16:00-16:30 INVITED	In Vivo Formation of Organic Mixed Conductors for Soft Bioelectronic Interfaces. X. Strakosas <i>Laboratory of Organic Electronics, Department of Science and Technology, Linköping University, Sweden.,</i>	16:00-16:30 INVITED	Analog-input reconfigurable Threshold Logic Gates for real time learning and classification B. Paroli, F. Borghi, M.A.C. Potenza, and P. Milani* <i>CIMAINA—Interdisciplinary Centre for Nanostructured Materials and Interfaces, Department of Physics “Aldo Pontremoli”, Università degli Studi di Milano, Milano, Italy</i>
16:15-16:30	Optimized Biochar-Based Materials for Hydrogen Storage: Physisorption and Chemisorption Approaches G. Magnani^{1,2} , A. Rinaldi ^{1,2} , M. Sidoli ^{1,2} , C. Milanese ³ , S. Paraboschi ³ , A. Girella ³ , M. Riccò ^{1,2} and D. Pontiroli ^{1,2} ¹ <i>Nanocarbon Laboratory, Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy</i>				

	² GISEL National Centre of Reference for Electrochemical Energy Storage Systems, INSTM National InterUniv. Consortium of Materials Science and Technology, Firenze, Italy ³ Pavia H2 Lab, Chemistry Dept., Univ. of Pavia and C.S.G.I., Italy				
16:30-16:45	Impact of Proton Irradiation on the Structural and Optical Properties of Graphene Nanoscrolls R. Ghosh ^{1,2} , J. Chen ^{1,2} , B. Ozden ³ ¹ Pritzker School of Molecular Engineering, Univ. of Chicago, Chicago, IL 60637, USA ² Chemical Sciences and Engineering Division, Physical Sciences and Engineering Directorate, Argonne National Laboratory, USA ³ Engineering, Penn State Abington,	16:30-16:45	Predicting Pain Flares from Wearable Sensor Data and Patient Reports: Initial Insights from the ADVANTAGE Study M. Alban-Paccha ^{1,2} , N. Shenker ³ , C. Geoffrey Woods ⁴ , G. G Malliaras ² ¹ Division of Anaesthesia, Dept. of Medicine, Univ. of Cambridge, UK ² El. Eng. Division, Dept. of Engineering, Univ. of Cambridge, UK ³ Division of Rheumatology, Dept. of Medicine, Univ. of Cambridge, UK ⁴ Dept. of Medical Genetics, Cambridge Inst. for Medical Res., Univ. of Cambridge, Cambridge, UK	16:30-17:00 INVITED	Pb-free Perovskite and 2D Transition Metal Dichalcogenides for Reservoir Computing D. G. Georgiadou School of Electronics and Computer Science & Optoelectronics Res. Centre, Univ. of Southampton, UK
16:45-17:00	Charge storage mechanism insights within flexible graphite/nanocellulose battery electrodes E. Founta ¹ , M. Carravetta ² , M. Thielke ³ , A.B. Jorge Sobrido ³ , L.W. Gordon ⁴ , T. Prodromakis ⁵ , C.P. de León ⁶ , D.G. Georgiadou ¹ and T. Schoetz ⁷ ¹ Electronics and Computer Science, Univ. of Southampton, UK ² School of Chemistry, Univ. of Southampton, UK ³ School of Engineering and Materials Science, Queen Mary Univ. of London, UK ⁴ Materials Dept., Univ. of California-Santa Barbara, USA ⁵ Centre for Electronics Frontiers, School of Engineering, Univ. of Edinburgh, UK ⁶ Electrochemical Engineering Laboratory, Energy Technology Res. Group, Univ. of Southampton, UK ⁷ Chemical and Biomolecular Engineering, Univ. of Illinois Urbana-Champaign, USA	16:45-17:00	Precise & High Sensitive Detection of Virus using Integrated Graphene FET Array K. Matsumoto SANKEN, Osaka University, Japan		
17:00-18:30	COFFEE BREAK Grand Pietra Exhibition Hall		NN25 POSTER Session		EXPO25 Exhibition & Networking

18:30	Official Opening Ceremony 	
18:30-18:45		Welcome to NANOTECHNOLOGY Prof. S. Logothetidis NANOTECHNOLOGY2025 Chairman
18:45-19:00	Official Salutations PLENARY SESSION	
19:00-19:45		"Physics Approaches to Organic Light Source Enhancements" Prof. Donal Bradley <i>President, NEOM Education, Res. & Innovation Foundation and Vice-President for Res. and Innovation, NEOM Univ., Saudi Arabia</i>
19:45-20:30		MXenes and Assembled 2D Nanosheets Redefine What Materials Can Do Prof. Yury Gogotsi <i>Distinguished Univ. and Charles T. And Ruth M. Bach Professor of Materials Science and Engineering, Director, A. J. Drexel Nanomaterials Inst., Drexel Univ., USA</i>
21:00	OFFICIAL NANOTECHNOLOGY GALA DINNER PORTO PALACE CONFERENCE CENTRE & HOTEL - ROOF GARDEN	

Wednesday 9 July 2025

09:00-09:30 KEYNOTE Chair: Y. Missirlis ⬆DS1		High-Speed Raman Sequential Readout of Single Polypeptides Via Plasmonic Nanopores F. De Angelis Istituto Italiano di Tecnologia, Via Morego 30, 16163, Genoa, Italy					
09:30-11:00 ⬆CH	WS2: Nanoparticles and Nanostructures Chair: C. Gravalidis	09:30-11:00 ⬆DS1	WS3: Nanomedicine in Cancer Chair: Y. Missirlis	09:30-11:00 ⬆TH1	Workshop On Computational Modeling of Materials, Devices & Processes Chair: P. Keliris	09:30-11:00 ⬆DS2	Workshop on Bioelectronics 3 (Joined Session of NN25 & ISFOE25) Chair: X. Strakosas
09:30-10:00 INVITED	ZnO nanowire-based piezoelectric nanogenerators enhanced through compensatory Cu-doping or Sb-doping. E. Sarigiannidou ¹ , J. Villafuerte ^{1,6} , M. Manrique ^{1,3,5} , X. Zhang ² , M-Q Le ² , L. Petit ² , B. Salem ³ , F. Wilhelm ⁴ , G. Le Rhun ⁵ , F. Donatinni ⁶ , J. Pernot, ⁶ and V. Consonni ¹ ¹ Univ. Grenoble Alpes, CNRS, Grenoble INP, France ² Université Lyon, INSA-Lyon, LGEF, France ³ Univ. Grenoble Alpes CNRS, CEA/LETI Minatex, Grenoble INP, LTM, France ⁴ European Synchrotron Radiation Facility (ESRF), France ⁵ Univ. Grenoble Alpes, CEA, LETI, France ⁶ Univ. Grenoble Alpes, CNRS, Grenoble INP, Institut NEEL, France	09:30-09:45	Fluorescent Rhein-Loaded Liposomes: A Novel Approach in Cancer Drug Delivery C.M. Uritu ^{1,2} , S.I. Filipiuc ^{1,2} , A. Coroaba ¹ , N.L. Marangoci ¹ ¹ Centre of Advanced Res. in Bionanoconjugates and Biopolymers, “Petru Poni” Inst. of Macromolecular Chemistry, Romania ² Advanced Center for Res. and Development in Experimental Medicine “Prof. Ostin C. Mungiu”, “Grigore T. Popa” Univ. of Medicine and Pharmacy, Romania	09:30-10:00 INVITED	Properties of Nanostructured Systems Through Simulations and Machine-Learning Methods: From Atoms to the Design of Advanced Materials V. Harmandaris The Cyprus Inst., Cyprus	09:30-10:00 INVITED	Organic semiconductors for regenerative medicine: optical modulation of the cell fate M. R. Antognazza Center for Nano Science and Technology, Italian Inst. of Technology Italy
		09:45-10:00	Theranostic agents: magnetic nanoparticles for Magnetic Resonance Imaging and Magnetic Fluid Hyperthermia F. Brero ^{1,2} , M. Porru ^{1,2} , Manuel Mariani ^{1,4} , Paolo Arosio ^{3,4} , Francesco Orsini ^{3,4} , A. Gallo-Cordova ⁵ , R. Herrera-Aquino ⁵ , M. Puerto Morales ⁵ and Alessandro Lascialfari ^{1,2} ¹ Physics Dept., Univ. of Pavia, Italy ² National Inst. of Nuclear Physics, Italy ³ Physics Dept., Univ. of Milan, Italy ⁴ National Inst. of Nuclear Physics, Section of Milan, Italy ⁵ Inst. of Materials Science of Madrid, ICMM/CSIC, Spain				
10:00-10:30 INVITED	Critical Effects of Polarity and Doping on the UV Photocatalysis of ZnO Nanowires A. Baillard ¹ , E. Appert ¹ , H. Roussel ¹ , L. Rapenne ¹ , V. Jacob ² , J.M. Chauveau ³ , J.M. Becht ⁴ , and V. Consonni ¹ ¹ Université Grenoble Alpes, CNRS, Grenoble INP, LMGP, France ² Université Grenoble Alpes, CNRS, IRD, Grenoble INP, IGE, France ³ Université Versailles Saint-Quentin, CNRS, GEMaC, F-78035 Versailles, France	10:00-10:15	Venetin-1 – an anticancer and antifungal nanoparticle obtained from the coelomic fluid of the earthworm <i>Dendrobaena veneta</i> . M. J. Fiolka ¹ , K. Lewtak ² , P. Czaplewska ³ , M. Rawski ⁴ , M. Dryglewska ⁵ , J. Nowak ⁶ , T. Buchwald ⁷ ¹ Dept. of Immunobiology, Inst. of Biological Sciences, Faculty of Biology and Biotechnology, Maria Curie-Skłodowska Univ., Poland; ² Dept. of Cell Biology, Inst. of Biological Sciences, Faculty of Biology and	10:00-10:30 INVITED	2D Chalcogenides for Waste Heat Recovery: A Computational Perspective N. Singh and S. Suresh Nair Dept. of Physics, Khalifa Univ., United Arab Emirates	10:00-10:30 INVITED	Sensors for real-time monitoring of electroactive cyanobacteria P. Rocha Univ. of Coimbra, Portugal

	⁴ Institut de Science des Matériaux de Mulhouse IS2M, CNRS, UHA, F- 68057 Mulhouse, France		Biotechnology, Maria Curie-Skłodowska Univ., Lublin, Poland ³Intercollegiate Faculty of Biotechnology, Univ. of Gdansk and Medical Univ. of Gdansk, Poland; ⁴SOLARIS National Synchrotron Radiation Centre, Jagiellonian Univ., Kraków, Poland; ⁵Dept. of Rheumatology and Connective Tissue Diseases, Medical Univ. of Lublin, Poland ⁶Malopolska Centre of Biotechnology, Jagiellonian Univ., Kraków, Poland; ⁷Faculty of Materials Science and Technical Physics, Inst. of Materials Res. and Quantum Engineering, Poznan Univ. of Technology, Poland.				
		10:15-10:30 YRA	Biocompatibility Evaluation of Titanium Nitride Nanoparticles T. Odutola¹, N. Pliatsikas¹, S. Panos¹, I. Tsamesidis², S. Kassavetis¹, C. Papoulia¹, J. Arvanitidis¹, D. Christofilos³, E. Pavlidou¹, E. Kontonasaki², M. Gioti¹, P. Patsalas¹ ¹Dept. of Physics, Aristotle Univ. of Thessaloniki, Greece ²School of Dentistry, Aristotle Univ. of Thessaloniki, Greece ³School of Chemical Engineering and Physics Laboratory, Faculty of Engineering, Aristotle Univ. of Thessaloniki, Greece				
10:30-10:45	Controlled Synthesis of ZnO Microstructures: Impact of Citrate Concentration and Reaction Temperature on Morphology and Growth Kinetics L. Benhamou, J. Lejeune, F. Salaün. Univ. Lille, ENSAIT, ULR 2461-GEMTEX- Génie et Matériaux Textiles, F-59000 Lille, France			10:30-11:00 INVITED	Topology of Non-Rotating States in Layers I. Milosevic¹, M. Damnjanovic² ¹Faculty of Physics, Univ. of Belgrade, Serbia ²Serbian Academy of Sciences and Arts, Serbia	10:30-11:00 INVITED	Organic materials for bioelectronic devices D. A. Koutsouras Dept. of Electronic and El. Eng., Univ. of Bath, UK
10:45-11:00 Company	ZetaView® Evolution, latest news in Nanoparticle Tracking Analysis R. Jerlerud Perez Particle Metrix GmbH						

11:00-11:30

COFFEE BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session
EXPO25 Exhibition & Networking

11:30-12:00 KEYNOTE ⬆DS2 Chair: P. Rocha	Novel Materials and Device Architectures for Wearables G. Malliaras Univ. of Cambridge, UK				
12:00-13:30 ⬆TH1	Workshop on Artificial Intelligence, Machine Learning, Intelligent Manufacturing and Automation 4 Chair: V. Harmandaris	12:00-13:30 ⬆DS2	Workshop on Bioelectronics 4 (Joined Session of NN25 & ISFOE25) Chair P. Rocha	12:00-13:30 ⬆DS1	WS1: NanoPhotonics Chair: N. Pliatsikas

12:00-12:15 EU-PROJECT	EU-Project on AI-Powered Manipulation System for Advanced Robotic Service, Manufacturing and Prosthetics P. Panagiotou¹, D. Gutu² <i>Bavarian Research alliance, Germany</i>				
12:15-12:30	AI-Driven VLC Framework for Efficient Airport Navigation and Traffic Management M. Vieira^{1,2,3}, M. A. Vieira^{1,2}, G. Galvão¹, A. Fantoni^{1,2}, P. Vieira^{1,4}, M. Véstias^{1,5}, P. Louro^{1,2} ¹ <i>Electronics Telecommunication and Computer Dept. ISEL, R. Conselheiro Emídio Navarro, Portugal</i> ² <i>UNINOVA –CTS and LASI, Quinta da Torre, Monte da Caparica, 2829-516, Caparica, Portugal.</i> ³ <i>NOVA School of Science and Technology, Quinta da TorrePortugal.</i> ⁴ <i>Instituto de Telecomunicações, Instituto Superior Técnico, Portugal</i> ⁵ <i>INESC-ID, Instituto Superior Técnico, Universidade de Lisboa, Portugal</i>	12:00-12:30 INVITED	Enhancing the accuracy of bioelectronic point-of-care tests through machine learning. V. Mongelli ¹ , M. Caputo ¹ , F. Intranuovo ¹ , L. Sarcina ² , L. Torsi ^{2,3,4} , E. Macchia^{*1,3,4} ¹ <i>Dept. of Pharmacy, Univ. of Bari, Bari, Italy</i> ² <i>Dept. of Chemistry, Univ. of Bari, Bari, Italy</i> ³ <i>The Faculty of Science and Engineering, Åbo Akademi Univ., Turku, Finland</i> ⁴ <i>CSGI (Center for Colloid and Surface Science), Bari, Italy</i>	12:00-12:30 INVITED	Ultrafast non-reciprocal photo-magnetic dynamics in dielectrics and hybrid plasmonic structures A. Stupakiewicz¹, A. Kazlou¹, T. Zalewski¹, I. Razdolski² ¹ <i>Faculty of Physics, Univ. of Białystok, Poland</i> ² <i>Photonics Res. Centre, Universiti Malaya, Malaysia</i>
12:30-12:45	Hybridizing machine learning and physics-based modelling of plasma etching process in semiconductor manufacturing E. Boniakou ¹ , S. Mouchtouris ^{1,2} , T. Boura ³ , A. Kondi ² , V. Constantoudis², E. Gogolides², G. Kokkoris¹ ¹ <i>School of Chemical Engineering, National Technical Univ. of Athens, Greece</i> ² <i>Inst. of Nanoscience and Nanotechnology, NCSR Demokritos Greece</i> ³ <i>Inst. of Informatics & Telecommunications, NCSR Demokritos, Greece</i>			12:30-12:45	Amorphous Ge quantum dot networks in SiC and Si₃N₄ matrices for application in photo-sensitive devices G. Svalina¹, M. Mumelaš Petričević¹, I. Periša¹, M. Tkalčević^{1,2}, K. Salamon¹, P. Nadazy³, P. Siffalovic³, M. Mičetić¹ ¹ <i>Ruder Bošković Inst., Croatia</i> ² <i>Univ. of Salerno-Via Giovanni Paolo II, Italy</i> ³ <i>Inst. of Physics, Slovak Academy of Sciences, Dubravska Slovakia</i>
12:45-13:00	Cyber Physical Integration: Advanced Visible Light Communication and AI Techniques for Autonomous Guided Vehicles P. Louro^{1,2}, G. Galvão^{1,3}, M. A. Vieira^{1,2}, M. Vieira^{1,2,3}, M. Véstias^{1,4} ¹ <i>Electronics Telecommunication and Computer Dept. ISEL, Portugal</i> ² <i>UNINOVA –CTS and LASI, Portugal.</i> ³ <i>NOVA School of Science and Technology, Quinta da Torre, Portugal.</i> ⁴ <i>INESC-INOV, Instituto Superior Técnico, Universidade de Lisboa, Portugal</i>	12:30-13:00 INVITED	Organic Mixed Ionic–Electronic Conductors for Circumferential Spinal Cord Interfacing S. El Hadwe <i>Univ. of Cambridge, UK</i>	12:45-13:00	Colloidal GaN Nanoparticles via 355 nm Laser Ablation in Organic Solvents: Pulse Energy Dependence and Characterization S. Panos¹, N. Pliatsikas¹, T. Odutola¹, S. Kassavetis¹, C. Papouli¹, J. Arvanitidis¹, D. Christofilos², M. Gioti¹, E. Pavlidou¹, X. Li³, P. Patsalas¹ ¹ <i>Department of Physics, Aristotle University of Thessaloniki, Greece</i> ² <i>School of Chemical Engineering and Physics Laboratory, Faculty of Engineering, Aristotle University of Thessaloniki, Greece</i> ³ <i>Advanced Semiconductor Laboratory, Electrical, and Computer Engineering Program, CEMSE Division, King Abdullah University of Science and Technology (KAUST), Saudi Arabia</i>
13:00-13:15	Machine Learning-Based sEMG Classification for Scaled-Down Bioelectronic Systems and Nanotechnology-Enhanced Wearable Interfaces C. Tsemekidis¹, A. Arvanitidis¹, K. Mitsopoulos¹, V. Fiska¹, V. Mantiou¹, P.D. Bamidis¹ and A. Athanasiou¹	13:00-13:15	Organic Artificial Soma for Classification of Electromyographic signals I. Sergi^{1,2}, F. Rondelli^{1,2}, F. Torricelli¹, F. Velluto^{1,2}, A. De Salvo¹, M. Di Lauro¹, L. Fadiga^{1,2}, F. Biscarini^{1,3}.	13:00-13:15	Flexible Metal-Nanoparticle-Decorated Laser-Induced Graphene for Water Splitting M. Sidoli¹, M. Setti¹, N. Ahmad¹, A. Rinaldi¹, M. Setti¹, S. Scaravonati¹, G. Magnani¹, V. Vezzoni¹, M. Riccò¹, D. Pontiroli

	¹ Lab of Medical Physics & Digital Innovation (iMedPhysLab), School of Medicine, Faculty of Health Sciences, Aristotle Univ. of Thessaloniki (AUTH), Thessaloniki, Greece		¹ Center for Translational Neurophysiology of Speech and Communication, Italian Inst. of Technology (IIT-CTNSC), Italy ² Physiology Section Dept. of Neuroscience and Rehabilitation, Univ. of Ferrara, Italy ³ Dept. of Life Sciences, Univ. of Modena and Reggio Emilia, Italy		Nanocarbon Laboratory, CIDEA & Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy
13:15-13:30	A Scalable AI-VLC Framework for Safe and Efficient Traffic Control M. A. Vieira ^{1,2} , G. Galvão ¹ , M. Vieira ^{1,2,3} , P. Vieira ^{1,4} , M. Véstias ^{1,5} , P. Louro ^{1,2} ¹ Electronics Telecommunication and Computer Dept. ISEL, Portugal ² UNINOVA –CTS and LASI, Quinta da Torre, Portugal. ³ NOVA School of Science and Technology, Quinta da Torre, Portugal. ⁴ Instituto de Telecomunicações, Instituto Superior Técnico, Portugal ⁵ INESC-ID, Instituto Superior Técnico, Universidade de Lisboa, Portugal	13:15-13:30	Influence Of Electrolyte Solution Composition on Charge Transport Properties Of PEDOT: PSS Thin Film in Electrolyte-Gated Transistor Architectures M Geniton ^{1,2} , F. Rondelli ^{1,2} , M. Di Lauro ² , F. Zerbetto ³ , L. Fadiga ^{1,2} , F. Biscarini ^{2,4} ¹ Dept. of Neuroscience and Rehabilitation, Univ. of Ferrara, Italy. ² Center for Translational Neurophysiology of Speech and Communication, Italian Inst. of Technology, Italy. ³ Chemistry Dept. "Giacomo Ciamician", Italy. ⁴ Life Science Dept., Univ. of Modena and Reggio Emilia, Italy.	13:15-13:30	
13:30-13:45	Optoelectronic-Driven Traffic Management: Integrating AI and Visible Light Communication for Smarter Cities G. Galvão ¹ , M. A. Vieira ^{1,2} , M. Vieira ^{1,2,3} , M. Véstias ^{1,5} , P. Louro ^{1,2} ¹ Electronics Telecommunication and Computer Dept. ISEL, R. Conselheiro Emídio Navarro, Portugal ² UNINOVA –CTS and LASI, Quinta da Torre, Monte da Caparica, Portugal. ³ NOVA School of Science and Technology, Quinta da Torre, Portugal. ⁴ Instituto de Telecomunicações, Instituto Superior Técnico, Portugal ⁵ INESC-ID, Instituto Superior Técnico, Universidade de Lisboa, Portugal				

13:30-15:00	LUNCH BREAK Grand Pietra Exhibition Hall	NN25 POSTER Session	EXPO25 Exhibition & Networking
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15:00-15:30 KEYNOTE Chair: K. Sarakinos Room: ACH	Tuning crystallinity in PEG-containing Bottlebrush Copolymers S. Anastasiadis Un. of Crete & FORTH IESL, Greece	15:30-17:00 Chair: A TH1	Workshop on 3D Printing & Bioprinting, Digital & Additive Manufacturing (NN25 & ISFOE25) Chair: C. Gravalidis
15:30-17:00 ACH	WS2: Thin Films 1 Chair: K. Sarakinos	15:00-15:30 INVITED	Laser Printing: A Key Tool for the fabrication of Flexible Electronics and Photonic Integrated Circuits I. Zergioti National Technical Univ. of Athens, Greece
15:30-16:00 INVITED	Textured-induced strain in a WS2 single-layer to monitor spin valley polarization. G. Kourmoulakis ^{1,2} , A. Michail ^{3,4} , D. Anestopoulos ⁴ , J.A. Christodoulides ⁵ , M. Tripathi ⁶ , A.B. Dalton ⁶ , J. Parthenios ⁴ , K. Papagelis ^{4,7} , E. Stratakis ^{1,8} , and G. Kioueoglou ^{1,2}	15:30-16:00 INVITED	Engineering 3D bioprinted grafts for bone tissue regeneration S. Alimperti Georgetown Univ., USA

	¹ Inst. of Electronic Structure and Laser, FORTH, Greece ² Dept of Materials Science and Engineering, Univ. of Crete, Heraklion, 70013, Greece ³ Dept. of Physics, Univ. of Patras, Greece ⁵ Naval Res. Laboratory, USA ⁶ Dept of Physics and Astronomy, Univ. of Sussex, UK ⁷ School of Physics, Aristotle Univ. of Thessaloniki, Greece ⁸ Dept. of Physics, Univ. of Crete, Greece		
16:00-16:30 INVITED	Atomic Layer Deposition Enabled High Voltage Supercapacitors and Mechanism D. Qi Tan Guangdong Technion - Israel Inst. of Technology (GTIT), China	16:00-16:30 INVITED	Hydrogel 3D structure for water harvesting from humidity. J Ding Department of Materials Science & Engineering, National University of Singapore
16:30-16:45	Copper Coordination Polymer Semiconductor for Hydrogen Sensors A. Sfakianou^{1,2}, E. Skliri², E. Gagaoudakis², C.-P. Tsihchlis^{1,2}, S.H Anastasiadis^{2,3}, V. Binas^{1,2} ¹ Dept. of Chemistry, Aristotle Univ. of Thessaloniki, Greece ² Inst. of Electronic Structure and Laser (IESL), FORTH, Greece ³ Dept. of Chemistry, Univ. of Crete, Heraklion, Greece	16:30-16:45	Optical profilometry for 3D mapping of Photonic Integrated Circuits S. Sarigiannidis¹, Y. Papadopoulos¹, D. G. Papazoglou^{2,3}, I. Zergioti¹ ¹ . School of Applied Mathematics and Physical Sciences, NTUA, Greece. ² . Inst. of Electronic Structure and Laser, Foundation for Res. and Technology Hellas, Greece ³ . Materials Science and Technology Dept., Univ. of Crete, Greece
16:45-17:00	DC sputtered Al, Al-Si doped ZnO thin films for CH₄, H₂ gas sensing application. C.P. Tsihchlis^{1,2}, E. Gagaoudakis¹, A. Sfakianou^{1,2}, D. Paretzoglou^{1,3}, V. Binas^{1,2} ¹ Foundation of Res. and Technology – Hellas, Inst. of Electronic Structure & Laser (FORTH-IESL), Greece ² Dept. of Chemistry, Aristotle Univ. of Thessaloniki, Thessaloniki Greece ³ Dept. of Physics, Univ. of Crete, Heraklion Greece	16:45-17:00	Flexible printed metamaterial absorber based for microwave applications. E. Gagaoudakis¹, E. Mantsiou², C.-P. Tsihchlis^{1,2}, M. Zografaki^{1,2}, K. Dovelos³, A. Paraskevopoulos⁴, V. Vardakastani³, D. Tzarouchis³, M. Koutsoupidou³, P. Kosmas³, C. Spandonidis⁵, F. Giannopoulos⁵, A. Petsa⁵, V. Binas^{1,2} ¹ Inst. of Electronic Structure and Laser (IESL), Found. of Res. and Tech.-Hellas, Greece ² Dept. of Chemistry, Aristotle Univ. of Thessaloniki, Thessaloniki, Greece ³ Meta Metamaterials Europe, Greece ⁴ Inst. of Informatics and Telecommunications, NCSR Demokritos, 15310 Athens, Greece ⁵ Prisma Electronics SA, Greece
17:00-17:15	Copolymer-Based Thin Film Fabrication of Chlorhexidine and Triclosan via oCVD M. Tüfekçi¹, S. Hamarat¹, E. Tezer², M. Öztan², J. Sedef Göçmen³, H. Katircioğlu⁴, H. Gökteş^{1*} ¹ Dept. of Biomedical Engineering, Ankara Univ., Türkiye; ² Faculty of Dentistry, Dept. of Clinical Sciences, Division of Endodontics, Ankara Univ., Türkiye; ³ Dept. of Medical Microbiology, Faculty of Medicine, TOBB Univ. of Economics and Technology, Türkiye; ⁴ Faculty of Education, Dept. of Mathematics and Science Education, Biology Education, Gazi Univ., Türkiye		
17:15-17:30	Towards understanding the crystallization of thermochromic perovskite SmNiO₃: A Classical Nucleation Theory approach applied to thin films and nanoparticles. C. Calvo-Mola¹, S. Bruyère¹, V. Torres-Costa², S. Barrat¹ ¹ Univ. of Lorraine, CNRS, IJL, F-54000 Nancy, France, ² Applied Physics Dept., Autonomous Univ. of Madrid, Cantoblanco 28049, Madrid Spain		

NANOTECHNOLOGY 2025 Beach Party

19:00

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

Thursday 10 July 2025

09:00-9:30 KEYNOTE Chair: A. Falk TH2	From nanomaterials to advanced materials and their safe and sustainable future E. Valsami-Jones Univ. of Birmingham, UK			09:00-11:00 TH1	Workshop on Computational Modeling of Materials, Devices & Processes (NN25 & ISFOE25) Chair: P. Keliris
09:30-11:00 TH2	Special Session on Applying nanosafety competencies to the Advanced Materials arena. Chair: A. Falk	09:30-11:00 DS1	Workshop on Bioelectronics 5 (Joined Session of NN25 & ISFOE25) Chair S. El Hadwe	09:00-09:30 INVITED	Coherent, ultrafast charge movement in bio-organic nanowires C. Simserides, Department of Physics, National and Kapodistrian Univ. of Athens
9:30-10:00	The Advanced Materials ecosystem – enabling synergies with cross-sectorial collaboration. F. Andreas ¹ , J. K. Scheper ¹ ¹ BioNanoNet Forschungsgesellschaft mbH (BNN), Kaiser-Josef-Platz 9, 8010 Graz, Austria	9:30-10:00 INVITED	Reliable and Ultrasensitive Colorimetric f-ELISA Biosensors for Rapid Onsite Detection of Biological and Chemical Agents in Fluids G. Sun, B. Pan Dept. of Biological and Agricultural Engineering, Univ. of California, DavisOne Shields Avenue, Davis, California, 95616, USA	09:30-10:00 INVITED	Machine and Deep Learning for Interatomic Potentials in Materials Science J. Kioseoglou ^{1,2} ¹ Physics Dept., Aristotle Univ. of Thessaloniki, Greece ² Center for Interdisciplinary Res. and Innovation, Aristotle Univ. of Thessaloniki, Greece
10:00-10:30 INVITED	Governance and policy aspects towards safety and sustainability of AdMa M. Groenewold, Adrienne J.A.M. Sips, L. G. Soeteman-Hernández National Inst. for Public Health and Environment (RIVM; Centre for Safe Substances and Products) Antonie van Leeuwenhoeklaan9, Bilthoven, The Netherlands	10:00-10:15	Waterproof Polyelectrolyte for Implantable Medical Devices M.-K. Choi ¹ , Y.-J. Choi ¹ , Y.-S. Kim ¹ , J.-H. Lee ¹ , Y.-W. Kim ¹ and S.-K. Kang ^{1,2,3} ¹ Dept. of Materials Science and Engineering, Seoul National Univ., Republic of Korea. ² Res. Inst. of Advanced Materials (RIAM), Seoul National Univ., Republic of Korea. ³ Soft Foundry Inst., Seoul National Univ., Republic of Korea.	10:00-10:30 INVITED	Spectral and transport properties of quantum dot Josephson junctions A. Keliri College de France, France
		10:15-10:30	Biodegradable and biocompatible organic RFID tags Velluto F., ^{1,2} Sergi I., ^{1,2} De Salvo A., ¹ Di Lauro M., ¹ Fadiga L., ^{1,2} Biscarini F. ^{1,3} ¹ Centre for Translational Neurophysiology of Speech and Communication, Italian Inst. of Technology (IIT-CTNSC), Italy ² Physiology section Dept. of Neuroscience and Rehabilitation, Univ. of Ferrara, Italy ³ Dept. of Life Science, Univ. of Modena and Reggio Emilia, Italy		
10:30-10:45	Addressing stakeholders' negotiation process in SSbD decision making for INTEGRANO project nano-enabled solutions M. Perucca ¹ , B. Murray ¹ , A. Garrone ¹ , F. O. Gomes ² , V. Cardoso ² , L. Coelho ² , A. Monteiro ² , I. Zanon ³ , S. Ortelli ³ , C. Artusi ³ , M. Serantoni ³ , M. Blosi ³ , A. Costa ³ , F. Deganello ⁴ , L. Boggioni ⁵ , L. Verdolotti ⁶ , F. Recupido ⁶ , G. Lama ⁶ , I. Tonani Tomasoni ⁷ , V. Battistello ⁷ , M. Genoese ⁷ , H. Hristova, I. Liakos ⁸ , Z. Dajic-Stevanovic ⁸ , Z. Knejevic-Jugovic ⁸ , N. El Aouad ⁸ ¹ -Project-HUB360 Corso Laghi 22, Italy ² - CeNTI – Centre of Nanotechnology and Advanced Materials, Portugal ³ -CNR-ISSMC - Istituto di Scienza e Tecnologia e Sostenibilità dei Materiali Ceramici, Italy ⁴ -CNR-ISMN - Istituto per lo studio dei Materiali Nanostrutturati Italy	10:30-10:45 YRA	Effect of Solution Gating in the Detection of Organophosphate via Meta-Nano-Channel Field Effect Transistor P. Verma ^{1*} , Y. Ben-Shahar ^{5*} , S. Bhattarai ² , S. Harilal ³ , G. Feldheim ⁵ , A. Pavzner ⁵ , I. Columbus ⁶ , E. Pikhay ⁴ , I. Shechter ⁴ , A. Elkayam ⁴ , M. Y. Bashouti ^{3,6} , B. Akabayov ² , A. Weissberg ⁷ , I. Ron ^{1,5} , Y. Roizin ⁴ , G. Shalev ^{1,8**} ¹ School of El. Eng., Ben-Gurion Univ. of the Negev, Israel ² Dept. of Chemistry and Data Science Res. Center, Ben-Gurion Univ. of the Negev, 8410501, Beer-Sheva, Israel ³ Dept. of Solar Energy and Environmental Physics, Swiss Inst. for Dryland Environmental and Energy Res., J. Blaustein Inst.s for Desert Res., Ben-Gurion Univ. of the Negev, Israel ⁴ Tower Semiconductor, PO Box 619, Migdal Haemek, Israel ⁵ Dept. of Physical Chemistry, Israel Inst. for Biological Res., Israel ⁶ Dept. of Analytical Chemistry, Israel Inst. for Biological Res., Israel ⁷ Dept. of Organic Chemistry, Israel Inst. for Biological Res., Israel ⁸ The Ilse-Katz Inst. for Nanoscale Science and Technology, Ben-Gurion Univ. of the Negev, Israel	10:30-11:00 INVITED	Electron beams as probes in nanophotonics: modelling and applications C. Tserkezis Univ. of Southern Denmark, Denmark

	⁵ - CNR-SCITEC Istituto di Scienze e Tecnologie Chimiche "Giulio Natta", ITALIA, ⁶ -Inst. for Polymers, Composites and Biomaterials, National Res. Council (IPCB-CNR), Italy, ⁷ -Red of View S.r.l., Italy ⁸ -VenusRoses Labsolutions Ltd., Bulgaria				
10:45-11:00	Engineered nanoparticles in the workplace: A macro- to nano- scale perspective. A. Alexopoulos¹ Centre for Res. and Technology Hellas (CERTH), Greece	10:45-11:00	Sustainable electrochemical sensors from cork-derived laser induced graphene: non-enzymatic glucose detection in urine. D. Pontiroli¹, M. Setti¹, E. Vaughan², R. Murray², L. Sygellou³, A. J. Quinn², M. Riccò¹, D. Iacopino² ¹ Nanocarbon Laboratory, ciDEA & Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy ² Tyndall National Inst., Univ. College Cork, Dyke Parade, Cork, Ireland ³ Inst. of Chemical Engineering Sciences, Foundation for Res. and Technology-Hellas (FORTH/ICE-HT), Patras 265 04, Greece		

11:00-11:30

COFFEE BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session
EXPO25 Exhibition & Networking

11:30-13:30 ⬆TH2	Special Session on Applying nanosafety competencies to the Advanced Materials arena. Chair: M. Groenewold	11:30-13:30 ⬆DS1	Workshop on Bioelectronics 6 (Joined Session of NN25 & ISFOE25) Chair: G. Sun	11:30-13:30 ⬆DS2	Workshop on Centers of Excellence (NN25 & ISFOE25) Chair: G. Hadziioannou, Un. of Bordeaux, A. Laskarakis, LTFN, AUTH
11:30-12:00 INVITED	Nanocolloids on surfaces: a closer look J. Walker, V. Koutsos Inst. for Materials and Processes, School of Engineering, The Univ. of Edinburgh, UK	11:30-12:00 INVITED	Innovative applications of thin-film transistors (TFTs) technology for novel display, active-matrix sensing and on-chip DNA synthesis J. Du, Z. Liu, Y. Xiao, S. Huo, F. Wu and L. Feng* Hangzhou LinkZill Technology Co., Ltd., Hangzhou, Zhejiang, China	11:30-12:00	Centre of Excellence for Organic, Printed Electronics & Nano-Technologies (COPE-Nano) S. Logothetidis Nanotechnology Lab LTFN, Aristotle Un. of Thessaloniki, Greece
12:00-12:30 INVITED	Micro and Nanofabricated, functional surfaces and devices K. Ellinas^{1*} ¹ Laboratory of Advanced Functional Materials and Nanotechnology, Dept. of Food Science and Nutrition, School of the Environment, Univ. of the Aegean, Greece	12:00-12:15	Blue-Green Algal Polysaccharide 'Sacran' for Ultrathin Flexible and Biodegradable Organic Electrochemical Transistors (OECTs) K. Matura ¹ , C. Putz ² , S. Hradilova ³ , K. Polakova ³ , M. Okajima ⁴ , T. Kaneko ⁴ , M. Irimia-Vladu ¹ , M. Kaltenbrunner ² , N. S. Sariciftci ¹ , S. Tekoglu¹ ¹ Linz Inst. for Solar Cells and Inst. of Physical Chemistry, Johannes Kepler Univ., Austria ² Division of Soft Matter Physics and Inst. of Experimental Physics, Johannes Kepler Univ., Austria ³ Czech Advanced Technology and Res. Inst. (CATRIN), Regional Centre of Advanced Technologies and Materials (RCPTM), Palacký Univ. Czech Republic ⁴ School of Chemical and Material Engineering, Jiangnan Univ., China	12:00-12:30	Hellenic Robotics Center of Excellence (HERON) G. Yovanof Inst. of Robotics, ATHENA Res. Center, Greece

		12:15-12:30 YRA	Novel gating mechanism employed on nano bio-FET towards real-time, point-of-care diagnostics in human whole blood V. Garika^{1*}, S. Bhattarai⁸, S. Harilal², A. Eisenberg-Lerner³, Z. Rotfogel^{3,4}, E. Pikhay⁵, I. Shehter⁵, A. Elkayam⁵, M. Y. Bashouti^{2,6}, B. Akabayov⁷, I. Ron¹, Y. Roizin⁵, V. Bamm⁸, M. Wills⁸, G. Shalev^{1,6*} ¹ School of El. Eng., Ben-Gurion Univ. of the Negev, Israel. ² Dept. of Solar Energy and Environmental Physics, Swiss Inst. for Dryland Environmental and Energy Res., J. Blaustein Inst.s for Desert Res., Ben-Gurion Univ. of the Negev, Israel. ³ Ophthalmology Res. Laboratory, Kaplan Medical Center, Rehovot, Israel. ⁴ Faculty of Medicine, Hadassah Medical School, The Hebrew Univ. of Jerusalem, Jerusalem, Israel. ⁵ Tower Semiconductor, PO Box 619, Migdal Haemek, Israel ⁶ The Ilse-Katz Inst. for Nanoscale Science and Technology, Ben-Gurion Univ. of the Negev, POB 653, Beer-Sheva 8410501, Israel. ⁷ Dept. of Chemistry and Data Science Res. Center, Ben-Gurion Univ. of the Negev, 8410501, Beer-Sheva, Israel. ⁸ Dept. of Molecular and Cellular Biology, Univ. of Guelph, 50 Stone Road East, Guelph, Ontario, Canada.		
12:30-12:45	Impacts of Defects in Large-Area Grown 2D Materials on Device Performance L. Ansari and F. Gity Tyndall National Inst., Univ. College Cork, Ireland	12:30-12:45 YRA	Addressing the challenge of solution gating in biosensors based on field-effect transistors V. Garika^{1*}, S. Babbar¹, S. Samanta¹, S. Harilal², A. Eisenberg-Lerner³, Z. Rotfogel^{3,4}, E. Pikhay⁵, I. Shehter⁵, A. Elkayam⁵, M. Y. Bashouti^{2,6}, B. Akabayov⁷, I. Ron¹, G. Hazan^{8,9}, Y. Roizin⁵, G. Shalev^{1,6*} ¹ School of El. Eng., Ben-Gurion Univ. of the Negev, Israel. ² Dept. of Solar Energy and Environmental Physics, Swiss Inst. for Dryland Environmental and Energy Res., J. Blaustein Inst.s for Desert Res., Ben-Gurion Univ. of the Negev, Israel. ³ Ophthalmology Res. Laboratory, Kaplan Medical Center, Rehovot, Israel. ⁴ Faculty of Medicine, Hadassah Medical School, The Hebrew Univ. of Jerusalem, Jerusalem, Israel. ⁵ Tower Semiconductor, Israel ⁶ The Ilse-Katz Inst. for Nanoscale Science and Technology, Ben-Gurion Univ. of the Negev, Israel. ⁷ Dept. of Chemistry and Data Science Res. Center, Ben-Gurion Univ. of the Negev, Israel. ⁸ School of Medicine, Faculty of Health Sciences, Ben-Gurion Univ. of the Negev, Beer-Sheva, Israel. ⁹ Pediatric Dept. D, Soroka Univ., Medical Center, Beer-Sheva, Israel.	12:30-13:00	Exploring Collaboration Opportunities with Baltic Biomaterials Centre of Excellence A. Dubnika^{1,2}, D. Loca^{1,2}, J. Locs^{1,2} ¹Inst. of Biomaterials and Bioengineering, Faculty of Natural Sciences and Technology, Riga Technical Univ., Latvia. ²Baltic Biomaterials Centre of Excellence, Headquarters at Riga Technical Univ., Riga, Latvia.

12:45-13:00	Nanocomposite hydrogels for single step water purification and quality monitoring F. Norouzi ^{1,2} , K. Dziza ² , A. Athanassiou, ² D. Fragouli² ¹ Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS), Università di Genova, Italy ² Smart Materials, Istituto Italiano di Tecnologia, Italy	12:45-13:00	Label free biosensors based on Laser Induced Graphene for micro/nano plastics detection. G. Genovese¹ , V. Vezzoni ¹ , M. Setti ¹ , N. Ahmad ¹ , A. Rinaldi ¹ , M. Sidoli ¹ , S. Scaravonati ¹ , G. Magnani ¹ , S. Fortunati ² , M. Giannetto ² , M. Riccò ¹ , D. Pontiroli ¹ ¹ Nanocarbon Laboratory, cIDEA & Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy. ² Dept. of chemistry life sciences and environmental sustainability, Univ. of Parma, Italy.	13:00-13:30	Teaming for excellence in micro-nanofabrication and flexible electronics for widespread socio-economic impact - TEAM-NANO A. Kara Sabanci University Nanotechnology Center (SUNUM), Turkey
13:00-13:15	Determination of the Specific Surface Area of Silver Nanowires Using the Ellman Method Lech A.^{1,2} , Celichowski G. ² ¹ Univ. of Lodz, Doctoral School of Exact and Natural Sciences, Matejki 21/23, 90-237 Lodz, ² Univ. of Lodz, Faculty of Chemistry, Dept. of Materials Technology and Chemistry, Lodz	13:00-13:15	Biological transistor (bioFET) for the specific and label-free sensing of CRP in unprocessed blood S. Babbar^{*1} , A. Eisenberg-Lerner ² , Z. Rotfogel ^{2,3} , E. Pikhay ⁴ , I. Shehter ⁴ , A. Elkayam ⁴ , M. Y. Bashouti ⁵ , B. Akabayov ⁶ , I. Ron ¹ , G. Hazan ^{7,8} , Y. Roizin ⁴ , G. Shalev ^{1,5} ¹ School of El. Eng., Ben-Gurion Univ. of the Negev, Israel. ² Ophthalmology Res. Laboratory, Kaplan Medical Center, Rehovot, Israel. ³ Faculty of Medicine, Hadassah Medical School, The Hebrew Univ. of Jerusalem, Jerusalem, Israel. ⁴ Tower Semiconductor, Israel ⁵ The Ilse-Katz Inst. for Nanoscale Science and Technology, Ben-Gurion Univ. of the Negev, Israel. ⁶ Dept. of Chemistry and Data Science Res. Center, Ben-Gurion Univ. of the Negev, Israel. ⁷ School of Medicine, Faculty of Health Sciences, Ben-Gurion Univ. of the Negev, Beer-Sheva, Israel. ⁸ Pediatric Dept. D, Soroka Univ., Medical Center, Beer-Sheva, Israel.		
13:15-13:30	Wrap Up and Discussion	13:15-13:30			

13:30-15:00

LUNCH BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session
EXPO25 Exhibition & Networking

15:00-17:00 🏠 TH2	Special Session on Law and ethics of nanotechnology safety and health: NANOMEDICINE TRANSFORMING Disability INTO Health Chair: I. Feitshans	15:00-17:00 🏠 TH1	WS1: Nanoelectronics 2 Chair: C. Gravalidis	15:00-17:00 🏠 DS1	Workshop on Computational Modeling of Materials, Devices & Processes (NN25 & ISFOE25) Chair: P. Keliris
15:00-15:30 INVITED	You Wear It Well: Wearable electronics as a Game changer for EMS provider and High Risk Patients Dr. Ilise Feitshans , JD and ScM and DIR, and LLM PRESIDENT Virginia Mountain Valley Lawyers Alliance Specialty Bar, Roanoke Virginia Expert, O'Neill Inst. for National and Global Health Law, Georgetown Univ. Law Center Class of 2025	15:00-15:30 INVITED	1D and 2D nanodevices for sensing F. Giubileo¹ , L. Viscardi ^{1,2} , K. Intonti ^{1,2} , S. De Stefano ² , A. Mazzotti ² , E. Faella ³ , A. Pelella ⁴ , O. Durante ^{1,2} , M. Passacantando ³ , A. Di Bartolomeo ² ¹ CNR-SPIN Salerno, via Giovanni Paolo II n.132, 84084 Fisciano, Italy ² Dept. of Physics "E.R. Caianiello", Univ. of Salerno, Italy ³ Dept. of Physical and Chemical Science, Univ. of L'Aquila, Italy ⁴ Physics Dept., Univ. of Roma Tor Vergata, 00133 Rome, Italy	15:00-15:30 INVITED	High-Throughput Unified Framework for Local Disorder and Anharmonic Electron-Phonon Coupling M. Zacharias Computation-based Science and Technology Research Center, The Cyprus Institute, Aglantzia 2121, Nicosia, Cyprus

15:30-15:45	Legal and ethical challenges raised for modern physicians by disruptive technologies Dr. Vasiliki Papadoulis, Vrije Universiteit Brussel	15:30-15:45	NMOS inverters based on InAs nanowire field-effect transistor pairs I. H. Abbas¹, T. Albrow-Owen¹, F. Abualnaja¹, R. Mouthaan², T. Potočnik¹, P. J. Christopher³, H. Hoe Tan^{4,5}, C. Jagadish^{4,5}, J. Wong-Leung⁴, J. A. Alexander-Webber¹, H. J. Joyce¹ ¹Dept. of Engineering, Univ. of Cambridge, UK ²Centre of Light for Life, Univ. of Adelaide, North Terrace, Australia ³Dept. of Engineering, Univ. of Nottingham, Nottingham, UK ⁴Dept. of Electronic Materials Engineering, Res. School of Physics, The Australian National Univ., Canberra Australia ⁵Australian Res. Council Centre of Excellence for Transformative Meta-Optical Systems, Res. School of Physics, The Australian National Univ., Canberra, Australia	15:30-16:00 INVITED	Standardizing data, workflows, and executions in a modelling platform for organic electronic materials and processes E. Lidorikis Department of Materials Science & Engineering, University of Ioannina, Greece
15:45-16:00	AI as caretaker and companion- ethical and legal personality aspects A. Kornilakis Faculty of Law, AUTH, Greece	15:45-16:00	Combined Capacitive and Electrochemical Charge Storage Mechanism in High Performance Graphene-Based Lithium-Ion Batteries S. Scaravonati^{1,2}, D. Pontiroli^{1,2}, A. Morenghi^{1,2}, G. Magnani^{1,2}, M. Sidoli^{1,2}, M. Canova³, J. H. Kim³, M. Riccò^{1,2} ¹Dept. of Mathematical, Physical and Computer Sciences, Univ. of Parma, Italy ²GISEL & INSTM InterUniv. Consortium, Italy ³Center for Automotive Res., The Ohio State Univ., Columbus, Ohio, USA		
16:00-16:15	Returning to Life: Nanomedicine Developments that May Upend Guardianship and End of Life Directives H. Browning Shirkey Hyatt Browning Shirkey Law Firm & The Virginia Mountain Valley Lawyer Alliance, USA	16:00-16:15	Optically Sensitised Titanium Dioxide Nanotube Memristors T. E. Braben¹, M. Gater¹, J.A. Fernandes², N.T. Kemp¹ ¹ School of Physics and Astronomy, Univ. of Nottingham, U.K. ² School of Chemistry, Univ. of Nottingham, U.K.	16:00-16:15	Memristive Implementation of Explainable Fuzzy Classifiers M. Klimo¹, L. Kralik⁴, O. Such², J. Dzuba³, V. Kolomaznik³, D. Voltmann³ ¹ - Univ. of Zilina, Slovakia ² - Slovak Academy of Science, Slovakia ³ - Bizzcom, Slovakia
16:15-16:30	Wrap Up and Discussion			16:15-16:30	Charge transfer in B-DNA, including the backbone, via a four-channel Tight Binding (TB) model and TB parameters obtained by density functional theory (DFT) A. Kordas, A. Morphis, C. Simserides Dept. of Physics, National and Kapodistrian Univ. of Athens, Greece
				16:30-16:45	Applications of Artificial Intelligence in Nanotechnology V. Karanassios¹ Dept. of Chemistry and Waterloo Inst. of Nanotechnology, Waterloo, Ontario, Canada N2L 3G1

17:00-18:30

COFFEE BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session

EXPO 25 Exhibition & Networking

Friday 11 July 2025

09:00-09:30 KEYNOTE Chair: S. Kassavetis 🏠CH	Multiscale atomic arrangement in thin alloy films synthesized far from equilibrium K. Sarakinos <i>Univ. of Helsinki, Finland</i>		
09:30-11:00 🏠CH	WS1: Graphene & Other 2D NanoMaterials Chair: S. Kassavetis	09:30-11:00 🏠TH1	WS3: Nanoparticles in Medicine Chair: Y. Missirlis
09:30-10:00 INVITED	Excited state dynamics of Ni(II) containing porphyrin-nanographene conjugates S. Garcia-Orrit, V. Vega-Mayoral, J. Cabanillas Gonzalez <i>Madrid Inst. for Advanced Studies in Nanoscience, IMDEA</i>	09:30-10:00 INVITED	Silica-Based Mesoporous Nanoparticles: Bridging Structural Properties and Biological Functionality in Tissue Engineering E. Kontonasaki <i>Aristotle Univ. of Thessaloniki, Greece</i>
10:00-10:30 INVITED	Hybrid 2D materials integration for light detection and manipulation on-chip I. Goykhman <i>Hebrew Univ. of Jerusalem, Israel</i>	10:00-10:30 INVITED	Room Temperature Consolidation of Nanostructured Calcium Phosphates J. Locs <i>Riga Technical Univ., Latvia</i>
10:30-10:45	Precision Photoheating: Enhancing Control in Thermal Processing Applications in Display Manufacturing and Nanofabrication of Graphene-Based Supercapacitive Materials A. Bonaccini Calia, M. Lampridi, E. Bilcai, <i>IonoQure IKE Pontou 10, Thermi 57001, Greece</i>	10:30-10:45	Tailored Ca and Sr Doped Silica-Based Mesoporous Nanoparticles for Enhanced Bioactivity and Hemocompatibility in Bone Tissue Applications G. K. Pouroutzidou ¹ , S. Kioura ¹ , Maria-Aspasia Kosma ² , Sotirios P. Fortis ² , E. Meletis ² , I. Pitterou ³ , A. Detsi ³ , A. Kriempardis ² , E. Kontonasaki ¹ ¹ Dept. of Dentistry, Aristotle Univ. of Thessaloniki, Greece ² Dept. of Biomedical Sciences, Univ. of West Attica, Greece ³ School of Chemical Engineering, National Technical Univ. of Athens, Greece
10:45-11:00	Aerosol Jet Print technology: Fabrication, Electrical Characteristics and Applications M. Karani ¹ , K. Kourtzanidis ¹ , P. Dimitrakellis ¹ , N. Hastas ² , N. Vlachos ¹ , G. Karagiannakis ¹ ¹ Centre for Res. & Technology, CETH ² Dept. of Physics, Aristotle Univ. of Thessaloniki, Thessaloniki, Greece	10:45-11:00	Antiviral potential of metallic nanoparticles functionalized with tannic acid K. Bednarczyk, E. Tomaszewska, G. Celichowski, J. Grobelny, K. Ranaszek-Soliwoda <i>Dept. of Materials Technology and Chemistry, Faculty of Chemistry, Univ. of Lodz Poland</i>

11:00-11:30

COFFEE BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session
EXPO25 Exhibition & Networking

11:30-13:30 🏠CH	WS1: Nanoelectronics 3 Chair: J. Cabanillas Gonzalez	11:30-13:30 🏠TH1	WS2: Thin Films 2 Chair: N. Pliatsikas
11:30-12:00 INVITED	Memristors as Building Blocks for Neuromorphic Systems N. Kemp <i>Univ. of Nottingham, UK</i>	11:30-12:00 INVITED	Photophysics of perovskite nanocrystal films and superlattices G. Itskos <i>Univ. of Cyprus, Cyprus</i>
12:00-12:30 INVITED	2D Piezoelectric Materials for High Performance Acoustic Wave Resonators Q. Zhang and Jiayi Sun <i>School of Electrical and Electronic Engineering, Nanyang Technological Univ., Singapore</i>	12:00-12:30 INVITED	X-ray absorption spectroscopy: a powerful tool to decipher the magnetism in thin films and multilayer structures F. Wilhelm and A. Rogalev <i>European Synchrotron Radiation Facility, France</i>

12:30-12:45	18.5 GHz large area doped organic rectifiers with high voltage output L. Panagiotidis¹ , F. Aniés ¹ , Y. Yu ² , M. Ghadiyali ¹ , H. Faber ¹ , Z. Bizak ² , Y. Kabri ³ , P. Tzourmpakis ² , S. Mandal ¹ , L. Luo ⁴ , T. Maksudov ¹ , M. Insan Nugraha ⁴ , H. F. Mazo-Mantilla ¹ , P. Vanelle ³ , J. Broggi ³ , K. N. Salama ² , U. Schwingenschlög ¹ , M. Heeney ¹ , A. Shamim ² and T. D. Anthopoulos ⁵ ¹ Physical Science and Engineering Division, KAUST Solar Center (KSC), King Abdullah Univ. of Science and Technology (KAUST), Saudi Arabia. ² Computer, Electrical and Mathematical Science and Engineering Division, King Abdullah Univ. of Science and Technology (KAUST), Saudi Arabia. ³ Aix Marseille Univ., CNRS, ICR, Institut de Chimie Radicale, Faculté de Pharmacie, France. ⁴ Res. Center for Nanotechnology Systems, National Res. and Innovation Agency (BRIN), Indonesia. ⁵ Photon Science Inst., Henry Royce Inst., Dept. of Electrical and Electronic Engineering, The Univ. of Manchester, Manchester M13 9PL, UK.	12:30-13:00 INVITED	CMOS-compatible chemoresistive nanosensors functionalised with gas-phase synthesised nanoparticles P. Grammatikopoulos Univ. of Castilla-La Mancha (UCLM), Spain
12:45-13:00	Optoelectronic Synapses Based on Hybrid ZnO Nanorods/Polymer Material A. Jaafar^{1,2} , N. Kemp ¹ School of Physics and Astronomy, Univ. of Nottingham, UK		

13:30-15:00

LUNCH BREAK
Grand Pietra Exhibition Hall

NN25 POSTER Session
EXPO25 Exhibition & Networking

15:00-17:00 🏠CH	WS3: Latest Advances in Nanomedicine Chair: C. Gravalidis
15:00-15:30 INVITED	Essential nano-biomechanics: the ubiquitous role of talin Y. Missirlis Univ. of Patras, Greece
15:30-15:45	Novel Nano-based Approaches for Hearing loss D. Li Dept. of Otorhinolaryngology, Head and Neck Surgery, Univ. of Pennsylvania, USA
15:45-16:00	Development of adjuvanted lipid nanocarriers for the effective delivery of Leishmania antigens E. Tsanaktidou ¹ , O. Kammona¹ , M. Agallou ³ , M. Margaroni ³ , F. Badounas ⁴ , C. Kiparissides ^{1,2} and E. Karagouni ³ ¹ Chemical Process & Energy Resources Inst., Centre for Res. and Technology Hellas, P.O. Box 60361, 57001 Thessaloniki, Greece ² Dept. of Chemical Engineering, Aristotle Univ. of Thessaloniki, Thessaloniki, Greece ³ Immunology of Infection Laboratory, Hellenic Pasteur Inst., Athens 125 21, Greece ⁴ Molecular Genetics Laboratory, Dept. of Immunology, Transgenic Technology Laboratory, Hellenic Pasteur Inst., Athens 125 21, Greece
16:00-16:15	Micro-spectroscopic analysis of complex biological systems at the subcellular level A. Khmaladze Physics Dept., SUNY Univ. at Albany, USA
16:15-16:30	Effect of Zn²⁺ and Mn²⁺ doping on the 1H-NMR relaxometric properties of iron oxide magnetic nanoparticles with different sizes M. Porru^{1,2} , F. Brero ^{1,2} , C. Diaz-Ufano ⁵ , M. Mariani ^{1,4} , F. Orsini ^{3,4} , P. Arosio ^{3,4} , M. Puerto Morales ⁵ and A. Lascialfari ^{1,2} ¹ Physics Dept., Univ. of Pavia, Via Agostino Bassi 6, 27100, Pavia, Italy ² National Inst. of Nuclear Physics, Section of Pavia, Via Agostino Bassi 6, 27100, Pavia, Italy ³ Physics Dept., Univ. of Milan, Via Giovanni Celoria 16, 20133, Milan, Italy ⁴ National Inst. of Nuclear Physics, Section of Milan, Via Giovanni Celoria 16, 20133, Milan, Italy ⁵ Inst. of Materials Science of Madrid, ICMN/CSIC, Madrid, Spain
16:30-17:00	NN25 Closing Ceremony Closing Remarks and Discussion Ceremony for NN25 Awards Farewell comments & End of NN25

WS1 POSTER SESSION
Tuesday 8 July to Friday 11 July: Poster Display
Thursday 10 (17:30-20:00): Poster Presentation

P1-1	Study of Zinc-Tin-Oxide / Molybdenum-Oxide heterostructures for photovoltaic applications S. Spasova, M. Sendova-Vassileva, V. Palankovski , A. Benkovski, V. Dulev, H. Dikov, E. Radeva, M. Ganchev <i>Central Laboratory of Solar Energy and New Energy Sources, Bulgarian Academy of Sciences, Tsarigradsko Shose blvd. 72, 1784 Sofia, Bulgaria;</i>
P1-2	Amorphous molybdenum oxide: The effect of stoichiometry on resistive switching mechanism A. Soultati ¹ , A. Verykios ¹ , G. Kalemali ¹ , S. Kaminaris ² , M. Vasilopoulou ¹ , D. Davazoglou ¹ ¹ <i>Inst. of Nanoscience and Nanotechnology (INN), National Center for Scientific Res. Demokritos, 15310 Agia Paraskevi, Athens, Greece</i> ² <i>Dept. of Electrical and Electronics Engineering, Univ. of West Attica, P. Ralli & Thivon 250, 12244, Aegaleo, Greece</i>
P1-3	Asparagus waste derived nanostructured carbon for assembling high performance quasi-solid-state supercapacitors M. Riccò ¹ , N. Ahmad ¹ , A. Rinaldi ¹ , G. Magnani ¹ , M. Sidoli ¹ , A. Morengi ¹ , C. Milanese ² , D. Pontiroli ¹ ¹ <i>Mathematical, Physical and Computer Sciences Dept., Univ. of Parma, 43124, Italy</i> ² <i>Pavia Hydrogen Lab, C.S.G.I.-Dept. of Chemistry, Physical Chemistry Division Univ. of Pavia, Pavia, Italy</i>
P1-4	Study on long term stability of electric and thermoelectric properties and reduced oxidation for Sb₂Te₃ nanoparticle/PEO hybrid thermoelectric material Bitmets O.* , Pudzs K., Hamawandi B., Grzibovskis R. <i>Inst. of Solid State Physics, Univ. of Latvia, Kengaraga street 8, Riga, LV-1063, Latvia</i>
P1-5	Microring Resonator-Assisted Directly Modulated Reflective Semiconductor Optical Amplifier Z. V. Rizou ¹ , K. E. Zoiros ² ¹ <i>Dept. of Electrical and Computer Engineering, Univ. of Western Macedonia, Kozani GR 50131, Greece</i> ² <i>Dept. of Electrical and Computer Engineering, Democritus Univ. of Thrace, Xanthi GR 67100, Greece</i>
P1-6	Disentangling Radiative and Non-Radiative Deactivation Pathways in CuI -Based Thermally Activated Delayed Fluorescence Emitters L. Llanos ¹ , S. Staforelli ¹ , A. G. Oliver ² , L. Lemus ¹ , D. Aravena ¹ , R. Wannemacher ² , J. Cabanillas-Gonzalez ² ¹ <i>Departamento de Química de los Materiales, Facultad de Química y Biología, Universidad de Santiago de Chile (USACH), Santiago, 9170002 Chile</i> ² <i>Dept. of Chemistry and Biochemistry, Univ. of Notre Dame, Notre Dame, IN, 46556 USA</i> ³ <i>Madrid Inst. for Advanced Studies in Nanoscience, IMDEA Nanociencia, Calle Faraday, Ciudad Universitaria de Cantoblanco, 28049 Madrid, Spain</i>
P1-7	Modeling of Zinc-Tin-Oxide and Molybdenum-Oxide for Simulation of Solar Cells S. Spasova, M. Sendova-Vassileva, V. Palankovski , A. Benkovsky, V. Dulev, H. Dikov, E. Radeva, M. Ganchev <i>Central Laboratory of Solar Energy and New Energy Sources, Bulgarian Academy of Sciences, Tsarigradsko Shose blvd. 72, 1784 Sofia, Bulgaria;</i>
P1-8	Titanium Nitride Nanostructures by pulsed laser processing for Plasmonic Applications I. Paschalis ¹ , S. Kassavetis ² , N. Pliatsikas ¹ , S. Panos ¹ , Ch. Stavraki ² , P. Patsalas ¹ ¹ <i>Dept. of Physics, Aristotle Univ. of Thessaloniki, Univ. Campus, 54124 Thessaloniki, Greece</i> ² <i>Nanotechnology Lab LTFN, Dept. of Physics, Aristotle Univ. of Thessaloniki, Univ. Campus, 54124 Thessaloniki, Greece</i>

WS2 POSTER SESSION
Tuesday 8 July to Friday 11 July: Poster Display
Thursday 10 (17:30-20:00): Poster Presentation

P2-1	The impact of nano-sized wear debris on the tribological properties of powder metallurgy bearings J.C. Yeh ¹ , Y.C. Lee ¹ , J.H. Horng ¹ <i>Dept. of Power Mechanical Engineering, National Formosa Univ., Taiwan (ROC)</i>
P2-2	Tailored Deposition System for the Fabrication of Multilayered Nanostructures Containing Metal and Semiconducting Nanoparticles S. Lethbridge , J. Eccleston Etxebarria, N. T. Kemp <i>School of Physics and Astronomy, Univ. of Nottingham, UK</i>
P2-3	On the nature of CO₂ adsorption and activation on doped aluminum clusters K. Šulková , M. Šulka <i>Advanced Technologies Res. Inst., Faculty of Materials Science and Technology in Trnava, Slovak Univ. of Technology in Bratislava, Slovakia</i>
P2-4	Template Synthesis and Optical Characterization of Copper Selenite Nanostructures G. Sarsekhan ¹ , Z. Baimukhanov ² , A. Akyzbekova ² , A. Usseinov ² , A. Akilbekov ² ¹ <i>Dept. of Thermal Power Engineering, L.N. Gumilyov Eurasian National Univ., Satpayev Str. 2, Astana 010008, Kazakhstan</i> ² <i>Dept. of Technical Physics, L.N. Gumilyov Eurasian National Univ., Satpayev Str. 2, Astana 010008, Kazakhstan</i>

P2-5	Fabrication and characterization of Ni nanostructures R. Grigore^{1,2}, R. Lavric^{2,3}, E. Matei², C. Ghica², L. Nedelcu², V. Kuncser², G. Schinteie², I. Enculescu² ¹ Faculty of Physics, Univ. of Bucharest, 077125 Magurele, Ilfov, Romania ² National Inst. of Materials Physics, Atomistilor 405A, 077125 Magurele, Ilfov, Romania ³ Faculty of Chemical Engineering and Biotechnology, National Univ. of Science and Technology Politehnica Bucharest, RO-060042 Bucharest, Romania
P2-6	Synthesis and characterization of CoNi alloy nanowires R. Lavric^{1,2}, R. Grigore^{2,3}, E. Matei², V. Kuncser², C. Ghica², L. Nedelcu², G. Schinteie², C. Busuioc¹, I. Enculescu² ¹ Faculty of Chemical Engineering and Biotechnology, National Univ. of Science and Technology POLITEHNICA Bucharest, RO-060042 Bucharest, Romania ² National Inst. of Materials Physics, Atomistilor 405A, 077125 Magurele, Ilfov, Romania ³ Faculty of Physics, Univ. of Bucharest, 077125 Magurele, Ilfov, Romania
P2-7	Study on Mechanical Reinforcement of Porous Silicone Polymeric Nanocomposites Prepared by Surface Treatment of Porous Silica Particles Y. Kwon Dept. of Energy System Battery Engineering, Daegu Univ., Gyeongsan, Gyeongbuk 38453, Republic of Korea
P2-8	Study on the properties of conductive ink and substrate for printed periodic metallic structures applied as microwave absorbers E. Gagaoudakis¹, E. Mantsiou², C.-P. Tsihli^{1,2}, M. Zografaki^{1,2}, A. Sfakianou^{1,2}, C. Spandonidis³, V. Binas^{1,2} ¹ Inst. of Electronic Structure and Laser (IESL), Foundation of Res. and Technology-Hellas (FORTH), Heraklion Crete, Greece ² Dept. of Chemistry, Aristotle Univ. of Thessaloniki, Thessaloniki, Greece ³ Prisma Electronics SA, 87 Dimokratias Ave., 68100, Alexandroupolis, Greece
P2-9	Green Superhydrophobic Coatings and Biphilic Surface Engineering for Enhanced Fog Harvesting K. Taliantzis¹, K. Ellinas^{1,*}, D. Nioras^{1,2,3} ¹ Laboratory of Advanced Functional Materials and Nanotechnology, Dept. of Food Science and Nutrition, School of the Environment, Univ. of the Aegean, Greece ² Inst. of Nanoscience and Nanotechnology NCSR "Demokritos", 15341 Aghia Paraskevi, Attiki, Greece ³ Physics Dept., National Technical Univ. of Athens, Zografou Campus, Athens, Greece 15780
P2-10	Nanowire layers as laser particle accelerator targets C. Diplasu, M. Balan, D. Ticos, A. Scurtu, A. Marcu, M. Serbanescu , R. Ungureanu, R. Mihalcea, E. Stancu, A. Tiulean, A. Mihalcea, C. Oancă, I. Dinca, C. Staicu, G. Giubega, G. Cojocaru, B. Paraschiv, and S. Simion National Inst. for Laser, Plasma and Radiation Physics, Magurele, Romania
P2-11	Tackling water scarcity by using advanced technologies in business-academia-society cooperation V. Tselepi, K. Ellinas Laboratory of Advanced Functional Materials and Nanotechnology, Dept. of Food Science and Nutrition, School of the Environment, Univ. of the Aegean, Greece
P2-12	Monitoring of nanoparticles in the bakery industry T. Jankowski, S. Kamocki, M. Płocińska Central Inst. for Labour Protection – National Res. Inst., Dept. of Chemical, Biological and Aerosol Hazards, Warsaw, Poland
P2-13	Air purification while generating nanoparticles in the room T. Jankowski, S. Kamocki Central Inst. for Labour Protection – National Res. Inst., Dept. of Chemical, Biological and Aerosol Hazards, Warsaw, Poland
P2-14	Testing of air filters for efficiency of removal nanoparticles T. Jankowski, S. Kamocki Central Inst. for Labour Protection – National Res. Inst., Dept. of Chemical, Biological and Aerosol Hazards, Warsaw, Poland
P2-15	Hybrid materials based on Spin Crossover Nanoparticles in polymeric matrices and 2D substrates. V. Tsilogianni¹, N. Kalemaki¹, K. Anastasopoulos¹, E. Tsaptsali¹, O. Malina², N. Lalioti¹ ¹ Dept. of Chemistry, Univ. of Patras, 26504 Patras, Greece ² Regional Centre of Advanced Technologies and Materials, Czech Advanced Technology and Res. Inst. (CATRIN), Palacký Univ. Olomouc, Olomouc 783 71 Czech Republic
P2-16	Solvothermal Synthesis of Coated Cu-doped ZnO Nanoparticles: Optical, photocatalytic and antioxidant properties G. Amiridou¹, E. Chatzatzoglou¹, K. Giannousi¹, A. Koutsoukakis², I. M. Oikonomou², V. Nicolosi², C. Dendrinou-Samara¹ ¹ Laboratory of Inorganic Chemistry, Dept. of Chemistry, Aristotle Univ. of Thessaloniki, Thessaloniki, 54124, Greece ² School of Chemistry, CRANN & AMBER centers, Trinity College Dublin, Dublin 2, Ireland

P2-17	A Facile Synthesis Route to Highly Uniform and Air-Stable SnTe Nanocrystals T. Phutthaphongloet^{1,2}, R.D. Septianto^{1,3}, Y. Kubota², N. Matsushita², Y. Iwasa¹, S.Z. Bisri^{1,3} ¹ <i>RIKEN Center for Emergent Matter Science (CEMS), 2-1 Hirosawa, Wako, Saitama, Japan</i> ² <i>Dept. of Materials Science and Engineering, Inst. of Science Tokyo, 2-12-1 Ookayama, Meguro, Tokyo, Japan</i> ³ <i>Dept. of Applied Physics and Chemical Engineering, Tokyo Univ. of Agriculture and Technology, 2-24-16 Naka-cho, Koganei, Tokyo, Japan</i>
P2-18	Production of high-purity nanostructured Ni-Co alloy and other valuable products by recycling spent lithium-ion batteries V. Barsukov¹, B. Haliuk¹, R. Derkach¹, A. Mishuk¹, V. Khomenko², I. Makyeyeva², M. Durbin³, A. Doninger³, M. Kubakh³, I. Barsukov³ ¹ <i>Inst. for Sorption and Problems of Endoecology (ISPE), Kyiv, Ukraine</i> ² <i>Kyiv National Univ. of Technologies and Design (KNUVD), Kyiv, Ukraine</i> ³ <i>American Energy Technologies Co. (AETC), Wheeling, IL, USA</i>
P2-19	Synthesis of Colloidal Metal Oxide Nanoparticles via Pulsed Laser Ablation E. Karkadaki, K. Kyrtopoulou, S. Panos, N. Pliatsikas, S. Kassavetis, P. Patsalas. <i>Dept. of Physics, Aristotle Univ. of Thessaloniki, GR-54124 Thessaloniki, Greece</i>
P2-20	Engineering Stable Multilayer Interfaces for Radiative Cooling M. Ferrer A.¹, J. Drevillon², D. Pilloud¹, F. Capon¹ ¹ <i>Team of Thin Films for Energy and Applications, Univ. of Lorraine, CNRS, Inst. Jean Lamour, Campus Artem 2 allée André Guinier – BP 50840 54011 Nancy Cedex, France.</i> ² <i>Inst. Pprime, CNRS, Univ. of Poitiers ISAE-ENSMA, F-86962 Futuroscope Chasseneuil, Poitiers, France.</i>
P2-21	Foldable polymeric heat pipes incorporating surfaces of extreme wettability for electronic device cooling V. Tselepi¹, D. Nioras^{1,2,3}, K. Ellinas^{1*} ¹ <i>Laboratory of Advanced Functional Materials and Nanotechnology, Dept. of Food Science and Nutrition, School of the Environment, Univ. of the Aegean, Greece</i> ² <i>Inst. of Nanoscience and Nanotechnology NCSR “Demokritos”, 15341 Aghia Paraskevi, Attiki, Greece</i> ³ <i>Physics Dept., National Technical Univ. of Athens, Zografou Campus, Athens, Greece 15780</i>
P2-22	N-integration in Ni-Fe-Cr-Ru-Mo High-Entropy Electrocatalytic Materials Eslami M.^{1,2}, Zorzi S.*¹, Bordin M.¹, De Gregorio G.¹, Gottardi G.¹, Testi M.¹, Crema L.¹ ¹ <i>Centre for Sustainable Energy (SE), Bruno Kessler Foundation (FBK), Trento 38123, Italy</i> ² <i>Applied Res. Inst., The Grainger Collage of Engineering, Univ. of Illinois Urbana-Champaign, Champaign 61820, Illinois, US</i>
P2-23	Plasma-based deposition techniques for green and versatile synthesis of advanced materials for hydrogen technologies Bordin M., Zorzi S., Gottardi G., Bartali R., Testi M. <i>Center for Sustainable Energy, Fondazione Bruno Kessler, Via Sommarive 18, 38123, Trento, TN, Italy</i>

WS3 POSTER SESSION
Tuesday 8 July to Friday 11 July: Poster Display
Thursday 10 (17:30-20:00): Poster Presentation

P3-1	Preclinical Study of ⁵²Mn-labeled Beta-cyclodextrin for Melanoma Imaging I. Hajdu¹, L. A. Komor¹, R. A. Dienes^{1,2}, J. P. Szabó¹, I. Kertész¹, Z. Képes¹, G. Trencsényi¹, ¹ <i>Division of Nuclear Medicine and Translational Imaging, Medical Imaging Dept., Univ. of Debrecen, Debrecen, Hungary,</i> ² <i>Gyula Petranyi Doctoral School of Allergy and Clinical Immunology, Univ. of Debrecen, Debrecen, Hungary,</i>
P3-2	Ultra-small carbon nanodots based on ketoglutaric acid synthesized by the hydrothermal method N. L. Marangoci¹, I.-A. Turin-Moleavin¹, C. Uritu², F. Doroftei¹, A. Coroaba¹, F. Adrian¹ ¹ <i>Centre of Advanced Res. in Bionanconjugates and Biopolymers Dept., “Petru Poni” Inst. of Macromolecular Chemistry, 700487 Iasi, Romania</i> ² <i>Advanced Center for Res. and Development in Experimental Medicine “Prof. Ostin C. Mungiu”, “Grigore T. Popa” Univ. of Medicine and Pharmacy, 700115 Iasi, Romania</i>
P3-3	Bone cements with antibacterial mesoporous bioactive glasses and hyaluronic acid for dental implant re-osseointegration A. Beketova¹, O. Demir¹, K. Smits¹, K. Rubenis¹, V. Stepanova¹, D. Loca¹, E. Kontonasiaki², J. Locs¹ ¹ <i>Baltic Biomaterials Centre of Excellence, Riga Technical Univ., Paula Valdena 3, k-1, Riga, Latvia</i> ² <i>Aristotle Univ. of Thessaloniki, Greece</i>
P3-4	Tailoring FDM Parameters for High-Performance Biocompatible Composite Filaments with Biogenic Hydroxyapatite and Graphene Nanoplatelets A.E. Constantinescu¹, A.C. Mocanu¹, A.M. Pandele^{2,3}, D. Batalu¹, M. Miculescu¹, F. Miculescu¹ ¹ <i>Dept. of Metallic Materials Science, Physical Metallurgy, National Univ. of Science and Technology POLITEHNICA Bucharest, 313 Splaiul Independentei, RO-060042, Bucharest, Romania</i> ² <i>Dept. of Analytical Chemistry and Environmental Engineering, National Univ. of Science and Technology POLITEHNICA Bucharest, 1-7 Gh. Polizu Str., RO-011061, Bucharest, Romania</i> ³ <i>Advanced Polymer Materials Group, National Univ. of Science and Technology POLITEHNICA Bucharest, 1-7 Gh. Polizu Str., RO-011061, Bucharest, Romania</i>

P3-5	Composite materials with induced antibacterial effect used for 3D printing implantable devices E.-S. Dondea¹, F. Miculescu¹, A.-Cătălina Mocanu¹, M.-A. Pandele^{2,3}, A. Ghebaure^{2,3}, A. A. Dobre⁴ ¹National Univ. of Science and Technology POLITEHNICA Bucharest, Dept. of Metallic Materials Science, Physical Metallurgy, 313 Splaiul Independentei, RO-060042, Bucharest, Romania ²National Univ. of Science and Technology POLITEHNICA Bucharest, Dept. of Analytical Chemistry and Environmental Engineering, 1-7 Gh. Polizu Str., RO-011061, Bucharest, Romania ³National Univ. of Science and Technology POLITEHNICA Bucharest, Advanced Polymer Materials Group, 1-7 Gh. Polizu Str., RO-011061, Bucharest, Romania ⁴National Res. and Development Inst. for Food Bioresources – IBA Bucharest, 6 Dinu Vintila Str., RO-021102, Bucharest, Romania
P3-6	Antimicrobial Featured Thin Film Coating Development Against <i>S. epidermidis</i> on Gutta-Percha S. Hamarat¹, M. Tüfekçi¹, E. Tezer², M. Öztan², J. Sedef Göçmen³, H. Katırcıoğlu⁴, H. Göktaş^{1*} ¹Dept. of Biomedical Engineering, Ankara Univ., Türkiye; ²Faculty of Dentistry, Dept. of Clinical Sciences, Division of Endodontics, Ankara Univ., Türkiye; ³Dept. of Medical Microbiology, Faculty of Medicine, TOBB Univ. of Economics and Technology, Türkiye; ⁴Faculty of Education, Dept. of Mathematics and Science Education, Biology Education, Gazi Univ., Türkiye
P3-7	From hybrid peptides to structured bioorganic-inorganic materials A. Qassem^{1,2}, C. Echallier¹, L. Valot¹, A. Bittner², A. Mehdi¹, G. Subra¹ ¹IBMM, Univ. of Montpellier, CNRS, ENSCM, Montpellier, France ²CIC nanoGUNE, The Univ. of Basque Country UPV/EHU, Donostia San Sebastian, Spain
P3-8	Study of the influence on the microstructure and the bactericidal effect of silver nanoparticles in high entropy coatings of (TiAlTaZrNbN)Agx G. Bejarano, Daniela M. Chimá Center for Res., Innovation and Development of Materials – CIDEMAT, Dept. of Materials Engineering, Faculty of Engineering, Antioquia Univ., Calle 67 No. 53–108, Medellín, Colombia
P3-9	Internalisation of Angiopep-functionalized ferrite nanoparticles in lung and triple-negative breast cancer cells to minimise their metastasis to the brain SR Mokhosi, M Singh Nano-Gene and Drug Delivery Laboratory, Discipline of Biochemistry, Univ. of KwaZulu-Natal, Private Bag X54001, Durban 4000, South Africa
P3-10	Tannic acid as a natural compound in the synthesis of silver nanoparticles Bednarczyk K.*¹, Tomaszewska E., Celichowski G., Grobelny J., Ranošek-Soliwoda K. Dept. of Materials Technology and Chemistry, Faculty of Chemistry, Univ. of Lodz, Poland
P3-11	Surface Modification of Silver Nanostructures with Sodium 2-Mercaptoethanesulfonate Lech A.*^{1,2}, Celichowski G.² ¹Univ. of Lodz, Doctoral School of Exact and Natural Sciences, Matejki 21/23, 90-237 Lodz, ²Univ. of Lodz, Faculty of Chemistry, Dept. of Materials Technology and Chemistry, ul. Pomorska 163, 90-236 Lodz
P3-12	Formation of PLGA drug nanocarriers with adaptable physicochemical properties R. Szostecki, K. Szczepanowicz Jerzy Haber Inst. of Catalysis and Surface Chemistry PAS, Niezapominajek 8, 30-239 Krakow, Poland
P3-13	In vitro study of insulin amyloidosis of coated Mn-based nanoparticles Z. Kourpouanidou¹, K. Giannousi¹, S. Mourdikoudis², C. Dendrinos-Samara¹ ¹Laboratory of Inorganic Chemistry, Dept. of Chemistry, Aristotle Univ. of Thessaloniki, Thessaloniki, 54124, Greece ²CINBIO, Dept. of Physical Chemistry, Campus Universitario, Lagoas Marcosende, Universidade de Vigo, Vigo, 36310, Spain
P3-14	MRI and Hyperthermia Studies of Ga-substituted ε-Fe₂O₃ for biomedical applications. E. Zygouri¹, S. Koryllos¹, V. Tangoulis¹, M. Angelakeris², A. Makridis², I. Tsougos³, D. Tsivaka³, O. Malina⁴ ¹Dept. of Chemistry, Univ. of Patras, 26504 Patras, Greece ²Dept. of Physics, Aristotle Univ. of Thessaloniki, 54124, Thessaloniki, Greece ³Dept. of Medical Physics, Univ. Hospital of Larissa, Univ. of Thessaly, Biopolis, GR-41110 Larissa, Greece ⁴Regional Centre of Advanced Technologies and Materials, Czech Advanced Technology and Res. Inst. (CATRIN), Palacký Univ. Olomouc, Olomouc 783 71 Czech Republic
P3-15	Harnessing Hybrid ZnO-based nanostructures for biological Applications A. Mikras¹, P. Bekeridou¹, K. Giannousi¹, G. Vourlias², N. Florini², P. Komninou², C. Dendrinos-Samara¹ ¹Laboratory of Inorganic Chemistry, Dept. of Chemistry, Aristotle Univ. of Thessaloniki, Thessaloniki, 54124, Greece ²Dept. of Physics, Aristotle Univ. of Thessaloniki, Thessaloniki, 54124, G

P3-16	Synthesis of hybrid hydrogels GelMA/PEDOT:PSS enhanced with magnetic core-shell nanoparticles of Fe₃O₄/mSi/Ca, for tissue regeneration D. Kordonidou¹, I. Tsamesidis², D. Gilliopoulos³, G. Vourlias^{1,4}, M. Angelakeris^{5,6}, X. Chatzistavrou⁷, E. Kontonasaki², P. Patsalas¹ ¹ Dept. of Physics, Aristotle Univ. of Thessaloniki, Greece, dkordoni@physics.auth.gr ² Division of Prosthodontics, Dept. of Dentistry, School of Health Sciences, Aristotle Univ. of Thessaloniki, Greece ³ Laboratory of Chemical and Environmental Technology, Dept. of Chemistry, Aristotle Univ. of Thessaloniki, GR-54124 Thessaloniki, Greece ⁴ Laboratory of Advanced Materials and Devices, Dept. of Physics, Aristotle Univ. of Thessaloniki, Greece ⁵ Dept. of Condensed Matter and Materials Physics, AUTH, Thessaloniki, 54124, Greece ⁶ Center for Interdisciplinary Res. and Innovation (CIRI-AUTH), Thessaloniki, 57001, Greece ⁷ Dept. of Chemical Engineering, Aristotle Univ. of Thessaloniki, Greece
	Nanoengineered PBAT-Based Delivery System for Glioblastoma: Gallic Acid-Loaded Nanoparticles Coated with <i>Opuntia ficus indica</i> Mucilage D. Çakır, M. Gümüşderelioğlu Chemical Engineering Dept., Hacettepe Univ., Beytepe, Ankara, TURKEY
	Synthesis and characterization of chitosan coated mesoporous silica nanoparticles for chlorhexidine delivery G. Kourti¹, G. Pouroutzidou², G. Vourlias¹, E. Kontonasaki² ¹ Dept. of Physics, Aristotle Univ. of Thessaloniki (AUTH), 54124 Thessaloniki, Greece ² Dept. of Dentistry, Aristotle Univ. of Thessaloniki (AUTH), 54124 Thessaloniki, Greece
	Synthesis of zinc oxide nanoparticles by laser ablation in water as potential photosensitizer for photodynamic therapy M. Trohopoulou, N. Pliatsikas, E. Pavlidou, G. Vourlias, S. Panos, T. Odutola, S. Kassavetis, P. Patsalas Dept. of Physics, Aristotle Univ. of Thessaloniki, GR-54124 Thessaloniki, Greece
	Antimicrobial Testing of Laser-processed Titanium Nitride Thin Films M. Keloglou¹, I. Paschalis¹, S. Kassavetis^{1,2,3}, N. Pliatsikas¹, S. Panos¹, P. Patsalas¹ ¹ Department of Physics, Aristotle University of Thessaloniki, University Campus, 54124 Thessaloniki, Greece ² Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, University Campus, 54124 Thessaloniki, Greece ³ Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), 57001 Thessaloniki (Greece)
P3-17	
P3-18	
P3-19	
P3-20	

WS4 Biosensors & Bioelectronics (Common POSTER Session in ISFOE25 & NN25)
Tuesday 8 to Friday 11 July: Poster Display
Thursday 10 (17:30-20:00): Poster Presentation

P4-1	Selective electrochemical sensing of dopamine via β-cyclodextrin-functionalized selenium quantum dots J Kim¹, Roopkumar Sangubotla¹, Kyusik Yun², Chang-Hyun Jang³ ¹ Dept. of Chemical and Biological Eng., ² Bionano Technology, ³ Chemistry, Gachon Univ., Korea
	Functional Bacterial Cellulose Membranes via Imprinting and Surface Chemistry Modification I. Ntovolou¹, D. Farkatsi¹, D.I Koukoumaki², D. Sarris² and K. Ellinas¹ ¹ Laboratory of Advanced Functional Materials and Nanotechnology, Dept. of Food Science and Nutrition, School of the Environment, Univ. of the Aegean, Greece ² Laboratory of Physico-Chemical and Biotechnological Valorization of Food By-Products, Dept. of Food Science & Nutrition, School of Environment, Univ. of the Aegean, Greece
	Wearable System for Gastric Motility Monitoring using High-Resolution Electrogastrography C. Slaughter, L. Gatecliff, X. Tao, R.R.M. Serrano, A. Dominguez-Alfaro, G. Malliaras Dept. of Engineering, Univ. of Cambridge

P4-4 YRA	Effect of Solution Gating in the Detection of Organophosphate via Meta-Nano-Channel Field Effect Transistor P. Verma ^{1*} , Y. Ben-Shahar ^{5*} , S. Bhattarai ² , S. Harilal ³ , G. Feldheim ⁵ , A. Pavzner ⁵ , I. Columbus ⁶ , E. Pikhay ⁴ , I. Shechter ⁴ , A. Elkayam ⁴ , M. Y. Bashouti ^{3,6} , B. Akabayov ² , A. Weissberg ⁷ , I. Ron ^{1,5} , Y. Roizin ⁴ , G. Shalev ^{1,8**} ¹ School of El. Eng., Ben-Gurion Univ. of the Negev, Israel ² Dept. of Chemistry and Data Science Res. Center, Ben-Gurion Univ. of the Negev, 8410501, Beer-Sheva, Israel ³ Dept. of Solar Energy and Environmental Physics, Swiss Inst. for Dryland Environmental and Energy Res., J. Blaustein Inst.s for Desert Res., Ben-Gurion Univ. of the Negev Israel ⁴ Tower Semiconductor, PO Box 619, Migdal Haemek, Israel ⁵ Dept. of Physical Chemistry, Israel Inst. for Biological Res., P.O. Box 19, Ness-Ziona 74100, Israel ⁶ Dept. of Analytical Chemistry, Israel Inst. for Biological Res., P.O. Box 19, Ness-Ziona 741000, Israel ⁷ Dept. of Organic Chemistry, Israel Inst. for Biological Res., P.O. Box 19, Ness-Ziona 741000, Israel ⁸ The Ilse-Katz Inst. for Nanoscale Science and Technology, Ben-Gurion Univ. of the Negev, POB 653, Beer-Sheva 8410501, Israel
	Conceptualization of a portable device for non-invasive creatinine detection Francalanci B.*¹ , Rovini E. ¹ , Cavallo F. ¹ Dept. of Industrial Engineering, Univ. of Florence, via di Santa Marta 3, 50139, Florence, Italy
	Memristive Nanodevices for Highly Sensitive Bio/Chemical Sensing Applications I. Tzouvadaki ¹ , S. Carrara ² , G. De Micheli ² ¹ Centre for Microsystems Technology (CMST), imec and Ghent Univ., Technologiepark 126, 9052 Gent, Belgium ² Integrated System Laboratory, EPFL, 1015 Lausanne, Switzerland
	Biological transistor (bioFET) for the specific and label-free sensing of CRP in unprocessed blood S. Babbar ^{1*} , A. Eisenberg-Lerner ² , Z. Rotfogel ^{2,3} , E. Pikhay ⁴ , I. Shechter ⁴ , A. Elkayam ⁴ , M. Y. Bashouti ⁵ , B. Akabayov ⁶ , I. Ron ⁴ , G. Hazan ^{7,8} , Y. Roizin ⁴ , G. Shalev ^{1,5} ¹ School of El. Eng., Ben-Gurion Univ. of the Negev, Israel. ² Ophthalmology Res. Laboratory, Kaplan Medical Center, Rehovot, Israel. ³ Faculty of Medicine, Hadassah Medical School, The Hebrew Univ. of Jerusalem, Jerusalem, Israel. ⁴ Tower Semiconductor, PO Box 619, Migdal Haemek, Israel ⁵ The Ilse-Katz Inst. for Nanoscale Science and Technology, Ben-Gurion Univ. of the Negev, POB 653, Beer-Sheva 8410501, Israel. ⁶ Dept. of Chemistry and Data Science Res. Center, Ben-Gurion Univ. of the Negev, 8410501, Beer-Sheva, Israel. ⁷ School of Medicine, Faculty of Health Sciences, Ben-Gurion Univ. of the Negev, Beer-Sheva, Israel. ⁸ Pediatric Dept. D, Soroka Univ., Medical Center, Beer-Sheva, Israel.
	Design and Fabrication of Flexible, Fully Printed Piezoelectric Sensors for Heart Rate Monitoring A. Paliagkas ^{1,2} , E. Paraschoudi ^{1,2} , S. Kassavetis ^{1,2} , C. Kapnopoulou ^{1,2} , M. Chatzidis ^{1,2} , C. Stavrak ^{1,2} , A. Laskarakis ^{1,2} , S. Logothetidis ^{1,2,3} ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece ² Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), Greece ³ Organic Electronic Technologies P.C. (OET) 20th KM Thessaloniki - Tagarades, Greece

International Conference on AI, Nano, 3D (Bio)Printing, Intelligent Manufacturing & Automation

Tuesday 8 July to Thursday 10 July: Poster Display

Thursday 10 (17:30-20:00): Poster Presentation

AI3D-1	Enhanced Wear Resistance and Formula Optimization of POM materials Studied by Molecular Dynamics Simulation T.-J. Huang , You-Yi Lin Material & Chemical Res. Laboratories, Industrial Technology Res. Inst., Hsinchu, 310, Taiwan
AI3D-2	Data-driven Methods for Thermoplastic Polymer Design T.-J. Huang ¹ , Chuin-Shan Chen ² ¹ Material & Chemical Res. Laboratories, Industrial Technology Res. Inst., Hsinchu, 310, Taiwan ² Dept. of Civil Engineering, Computer-Aided Engineering, National Taiwan Univ., Taiwan 10617, Taiwan
AI3D-3	Influence of transition mutations and disorder on charge localization and transfer in B-DNA sequences P. Banev , A. Falliera, C. Simserides Dept. of Physics, National and Kapodistrian Univ. of Athens, Panepistimiopolis, Zografos GR-15784, Athens, Greece
AI3D-4	Oxygen evolution reaction on rhodium doped BaTiO₃ (001) surface Zh.Ye. Zakiyeva Dept. of Physics and Technology, L.N. Gumilyov Eurasian National Univ., 2 Satpayev Street, Kazakhstan, Astana

AI3D-5

A Bioinspired Bioink for Cartilage Regeneration: Integrating κ -Carrageenan, Silk Fibroin, and PBAT Microcarriers in 3D Bioprinting.

S. Koç Akbayrak, **M. Gümüşderelioğlu**,

Chemical Engineering Dept., Hacettepe Univ., Beytepe, Ankara, TURKEY

AI3D-6

Machine Learning for the Efficiency Optimization of Flexible Printed Organic Photovoltaics

G. Krokidas, S. Kassavetis, A. Laskarakis, Ch. Kapnopoulos, A. Paliagkas, S. Logothetidis

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