NanoBio
International Conference on Nanotechnologies and Bionanoscience

TIME	Sunday 7th September	
19:00-21:00	**REGISTRATION** (at the Registration Desk in Candia Maris Hotel)	
TIME	**Monday 8th September**	
8:00-14:00	**REGISTRATION** (at the Registration Desk in Candia Maris)	
09:00-09:20	**Conference Opening Ceremony (Room: Minos West)**	
	Nanomaterials and Applications I, Chair: I. Konidakis, Moderator E. Agapaki *Room: Minos West*	*Bioelectronics I, Chair: P. Kavatzikidou, Moderator, E. Kanakousaki* *Room: Minos East*
09:20-09:45	**(Invited)** **Metal nanoparticles, clusters, single atom or their combinations for sustainable catalysis** Paolo Fornasiero Dept. of Chemical and Pharmaceutical Sciences, ICCOM-CNR and INSTM, Trieste, Italy	**(Invited)** **Synthetic and Bioderived Electroactive 3D Architectures Enabling Smart Wound Care and Therapeutic Intervention** Charalampos Pitsalidis[1,2] [1] Department of Physics, Khalifa University of Science & Technology, Abu Dhabi, UAE [2] Advanced Research and Innovation Center (ARIC), Khalifa University of Science & Technology, Abu Dhabi, UAE
09:45-10:00	**(MOVED TO ANOTHER DAY)** **Comparative Adsorption Performance of Regionally Derived Bacterial Nanocellulose (BNC) in Wastewater Remediation** Ogujuba Solomon[1,2], Kudratkhojayeva Medinakhon[3], Martina DiSessa[1,2], Sandra Pucciarelli[2] [1.] Scuola Universitaria Superiore (IUSS), Pavia, Italy [2.] University of Camerino, Camerino, Italy [3.] Tashkent State Technical University, Tashkent, Uzbekistan	**Clinically Effective Scar Treatment via a siRNA Transdermal Gene Silencing Technology: From Bench to Bedside and Beyond** Timothy Tan School of Chemistry, Chemical Engineering and Biotechnology Nanyang Technological University Singapore

10:00-10:15	**Advanced Optical Waveguide Design via Encapsulation of 2,4,6-Triphenylpyrylium Chloride in Oxide Glasses** Eleni Agapaki*[1], Ioannis Konidakis[1], Egor Evlyukhin[1], Klytaimnistra Katsara[1], Georgios Kenanakis[1], David King[2], Haesook Han[2], Pradip K. Bhowmik[2] and Emmanuel Stratakis[1] [1.] Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology-Hellas (FORTH), Heraklion-Crete, Greece [2.] Department of Chemistry and Biochemistry, University of Nevada Las Vegas, Las Vegas, United States		**Natural lignocellulose scaffolds for sustainable electronics** Rakesh R. Nair, Klara Haenisch, Niloofar Saeedzadeh Khaanghah, Hrisheekesh Thachoth Chandran Dresden Integrated Center for Applied Physics and Photonic Materials (IAPP) and Institute for Applied Physics, Technische Universität Dresden, Dresden, Germany
10:15-10:30	**Laser-Induced Graphene: A Scalable 3D Material Advancing Proton Exchange Membrane Water Electrolysis for High-Efficiency Green Hydrogen Generation** Maria Pervolaraki[1], Theodora Gounela[1], Sofía Luján [2], Alba Rubí [2], Bruno Branco [2], Diogo Garcia [2], Emmanuel Stratakis[1] [1]Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology (FORTH), Heraklion, Crete, Greece [2]Unit of Functional Printing and Embedded Devices, Technology Centre of Catalonia, Eurecat, Mataró, Spain		**On-fiber printed polymeric tapers for chronically implantable neural interfaces** Stella Aslanoglou [1*], Barbara Spagnolo [1], Cinzia Montinaro [1], Alberto Perna [2], João F. Ribeiro [2], Claudia Latte Bovio [1], Marco Pisanello [3], Luca Berdondini [2], Tommaso Fellin [2], Ferruccio Pisanello [1,†], Massimo De Vittorio [1,4,5,†] [1] Istituto Italiano di Tecnologia, Center for Biomolecular Nanotechnologies, Arnesano, Italy [2] Istituto Italiano di Tecnologia, Center for Convergent Technologies, Genova, Italy [3] OptogeniX s.r.l., Arnesano, Italy [4] Dept. of Health Technology, Technical University of Denmark, Lyngby, Denmark [5] Dip. di Ingegneria dell'Innovazione, Università del Salento, Lecce, Italy †These authors jointly supervised the presented work
10:30-11:00	**COFFEE BREAK**		
	BRIDGE Workshop - Nanocrystals I, Chair: A. Kostopoulou, Moderator: E. Agapaki *Room: Minos West*		*Bioelectronics II, Chair: C. Pitsalidis, Moderator: M. Liapakis* *Room: Minos East*
11:00-11:25	**(Invited)** **Heterostructures involving Metal Halide Nanocrystals:**	11:00-11:25	**(Invited)**

	Synthesis, Growth Mechanisms, Reactivity Liberato Manna Dept. of Nanochemistry, Istituto Italiano di Tecnologia, Genova, Italy		**Point of care devices for the early diagnosis of brain stroke in the ambulance and at the triage emergency units: the POC4Triage project's biosensor** Giulio Rosati[1*], Alejandra Ben Aissa Soler[1], Ramon Santiago Herrera Rastrepo[1], Ellen Yadira Cotrina Celis[1], Robert S. Marks[2,3], Ana Moya Lara[1] [1]Eurecat, Centre Tecnològic de Catalunya, Functional Printing and Embedded Devices Unit, Mataró, Spain [2]Department of Biotechnology Engineering, Avram and Stella GoldsteinGoren, Ben-Gurion University of the Negev, Beer-Sheva, Israel [3]The Ilse Katz Center for Nanoscale Science and Technology, Ben-Gurion University of the Negev, Beer-Sheva, Israel
11:25-11:50	**(Invited)** **Automated Nanomaterials Engineering** Milena P. Arciniegas Nanochemistry, Italian Institute of Technology (IIT), Genoa, Italy	11:25-11:40	**Polydopamine-based molecular imprinting polymer electrochemical sensor for neopterin detection** Elena Dilonardo* Institute of Nanotechnology, CNR-NANOTEC, Bari, Italy
11:50-12:05	**The Effect of Non-solvent Post-Processing Induced Structural and Morphological Changes on the Optoelectronic Properties of $CsPbBr_3$ Nanocrystals** Bapi Pradhan[1*], Irina Skvortsova[1,2], Sumea Klokic[3], Amitrajit Mukherjee[1], Alexis Villanueva-Antolí4, Andrés F. Gualdrón-Reyes[4], Michael Paulus[5], Christian Sternemann[5], Heinz Amenitsch[3], Iván Mora Seró[4], Elke Debroye[1] Sara Bals[2], Eduard Fron1 and Johan Hofkens[1] 1KU Leuven, Heverlee, Belgium 2University of Antwerp, Antwerp, Belgium 3Graz University of Technology, Graz, Austria 4Institute of Advanced Materials (INAM), Castellón, Spain 5Technische Universität Dortmund, Dortmund, Germany	11:40-11:55	**A scalable approach for integrating microelectronics on tapered optical fiber-based neural interfaces** Claudia Latte Bovio[1,*], Stella Aslanoglou[1], Barbara Spagnolo[1], Vincenzo Mariano, Mastronardi[1,2], Sneha Pottekkad[1,2], Ferruccio Pisanello[1,2,+], Massimo de Vittorio[1,2,3,+] [1]Istituto Italiano di Tecnologia, Arnesano, Center for Biomolecular Nanotechnologies, Lecce, Italy [2]Dipartimento di Ingegneria dell'Innovazione, Università del Salento, Lecce, Italy [3]IDUN section, Department of Health Technology, Technical University of Denmark, Kongens Lyngby, Denmark

12:05-12:20	**Exploring the Potential of Perovskites in Water-Based Batteries and Capacitors** K. Brintakis[1*], A. Kostopoulou[1], D. Vernardou[2], E. Stratakis[1] [1]Institute of Electronic Structure and Laser, Foundation for Research and Technology - Hellas, Heraklion, Crete, Greece [2]Dept of Electrical & Computer Engineering, School of Engineering, Hellenic Mediterranean University, Heraklion, Crete, Greece	11:55-12:10	
12:20-12:35	**In-depth TEM characterization of selective area epitaxy Zn_3P_2 nanopyramids and thin films grown via MOCVD** Francesco Salutari[1], Maria Chiara Spadaro[1,2], Simon Escobar Steinvall[3], Aidas Urbonavicius[3], Kimberly A. Dick[3], Jordi Arbiol[1,4] [1.] Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, Campus UAB, Bellaterra, Barcelona, Catalonia, Spain. [2.] Department of Physics and Astronomy "Ettore Majorana", University of Catania and CNR-IMM, Catania, Italy [3.] Center for Analysis and Synthesis and NanoLund, Lund University, Lund, Sweden [4.] ICREA, Barcelona, Catalonia, Spain	12:10-12:25	
	Plenary Session I - Chairs: E. Stratakis & E. Kymakis - Room: Minos West Moderators: E. Agapaki & E. Kanakousaki		
12:40-13:20	**(Plenary I)** **Structural Nanomedicine: Blueprints for Better Drugs** Chad A. Mirkin Northwestern University, Department of Chemistry and International Institute for Nanotechnology, Evanston, IL, USA		
13:20-14:00	**(Plenary II)** **Supercharging Immunotherapy Through Nanotechnology: Chemical Structure Matters** Natalie Artzi Institute for Medical Engineering and Science, Massachusetts Institute of Technology (MIT), Massachusetts & Hansjörg Wyss Institute for Biologically Inspired Engineering, Medical Faculty, Harvard University, Boston, USA		
14:00-15:00	**LUNCH BREAK**		

	Nanomaterials Applications II, Chair: Milena P. Arciniegas, Moderator: E. Katsipoulaki *Room: Minos West*		*Bio-nanomaterials I, Chair: E. Babaliari, Moderator: P. Daskalakis* *Room: Minos East*
15:00-15:25	**(Invited)** **Two-dimensional metal halide perovskite microcrystals: Heterostructures, optical properties and photonic functionality** Martina Borreani[1], Mehrdad Faraji[1], Sudhir Saini[1], Alexander Schleusener[1], Lin-Han Li[2], Miao-Ling Lin[2], Ping-Heng Tan[2], and Roman Krahne[1] [1]Optoelectronics Group, Istituto Italiano di Tecnologia, Genova, Italy [2]State Key Laboratory of Superlattices and Microstructures, Institute of Semiconductors, Chinese Academy of Sciences, Beijing, China	15:00-15:25	**(Invited)** **Single-Cell Nanoencapsulation: Past, Present, and Future** Choi, I. S. Department of Chemistry, KAIST, Daejeon, Korea
15:25-15:40	**High Pressure, Light, and Biofunctionality: Toward a New Platform for Materials Research at Extreme Conditions at IESL** Egor Evlyukhin[*1], Luc Museur[2], Andreas Zerr[3], Petrika Cifligu[4], Emmanuel Stratakis[1] [1]Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology- Hellas (FORTH), Heraklion, Crete, Greece [2]Laboratoire de Physique des Lasers - LPL, CNRS, UMR 7538, Universit´e Sorbonne Paris Nord, Villetaneuse, France [3]Laboratoire des Sciences des Procédés et des Matériaux, CNRS UPR 3407, Université Sorbonne Paris Nord, Alliance Sorbonne-Paris-Cité, Villetaneuse, France [4]Department of Physics and Astronomy, University of Nevada Las Vegas, Las Vegas, NV, USA	15:25-15:50	**(Invited)** **Nanomaterials as antimicrobial agents** Antonios G. Kanaras [a, b] [a] School of Physics and Astronomy, Institute for Life Sciences, University of Southampton, Southampton, UK [b] Current address: Department of Chemistry, School of Science, National and Kapodistrian University of Athens, Zografou, Greece
15:40-15:55	**Enabling Atomic-Scale Imaging of Fragile Materials through Dose-Efficient Ptychography** Tamazouzt Chennit[1,2*], Hoelen Lalandec Robert[1,2], Songge Li[1,2] and Jo Verbeeck[1,2] [1]EMAT, University of Antwerp, Antwerp, Belgium [2]Nanolight Center of Excellence, University of Antwerp, Antwerp, Belgium	15:50-16:05	**(RECORDED PRESENTATION)** **Electrospun Biopolymeric Nanofiber Systems for the Local Delivery of Natural Extracts: A Novel Approach for Oral Infections** Magdalena Paczkowska-Walendowska*, Judyta Cielecka-Piontek

			Department of Pharmacognosy and Biomaterials, Poznan University of Medical Sciences, Poznań, Poland
15:55-16:10	**NIR-emitting electrochromic windows with red and green emission** A. R. Queijo[1*], A. Martins[1], V. Graça1, E. Fortunato[2], V. de Zea Bermudez[3] and R. Rego[3] [1]INESC-TEC - Uni. Invest. Externa, University of Trás-os-Montes e Alto Douro, Quinta de Prados, 5000-801 Vila Real, Portugal [2]CENIMAT/i3N, Departamento de Ciência dos Materiais, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2829-516 Lisboa, Portugal [3]Chemistry Department and CQ-VR, University of Trás-os-Montes e Alto Douro, Quinta de Prados, 5000-801 Vila Real, Portugal		
16:10-16:25	**Defects that Magnetize: Quantum Control of Spins in $PtSe_2$ and Heterostructures** Ilias M. Oikonomou[1,2*], Danielle Douglas-Henry[2], Mohammadreza Daqiqshirazi[1], Zdeněk Sofer[3], Thomas Brumme[1], Valeria Nicolosi[2] and Thomas Heine[1,4] [1]Chair of Theoretical Chemistry, TU Dresden, Dresden, Germany [2]CRANN & AMBER centers, Trinity College Dublin, Dublin, Ireland [3]Department of Inorganic Chemistry, UCT Prague, Prague, Czech Republic [4]CASUS, Helmholtz-Zentrum Dresden-Rossendorf, Görlitz, Germany 8 Institut Universitaire de France, 75231 Paris, France		
14:00-18.00	**Project Meeting GlaS-A-Fuel** *Room: Pasiphae East*		
	END OF DAY 1 OF NANOBIO2025 – ENJOY YOUR EVENING!		

TIME	Tuesday 9th September	
8:00-10:00	**REGISTRATION** (at the Registration Desk in Candia Maris)	
	Nanophotonics, Chair: G. Tsibidis, Moderator: D. Katrisioti *Room: Minos West*	*Biofabrication I, Chair: A. Bakandritsos, Moderator: P. Daskalakis* *Room: Minos East*
09:00-09:25	**(Invited)** **Resonant Light Trapping in Nanoparticle Structures via Electromagnetic Coupling** Andrey B. Evlyukhin[1,2*] [1]Institute of Quantum Optics, Leibniz University Hannover, Hannover, Germany [2]Cluster of Excellence PhoenixD, Leibniz University Hannover, Hannover, Germany	**(Invited)** **High-Resolution 3D Printing with femtosecond lasers for Biomedical Applications** A. Ovsianikov Head of the Research Group 3D Printing and Biofabrication, Inst. Of Materials Science and Technology, TU Wien Austrian Cluster for Tissue Regeneration, Vienna, Austria
09:25-09:50	**(Invited)** **Multiphoton Lithography for Active 3D Micro-Optics** Mangirdas Malinauskas[1*], Artūr Harnik[1], Robertas Virkėtis[2], Dominykas Dapšys[1], Dimitra Ladika[1], Simas Šakirzanova[s2], and Greta Merkininkaitė[2] 1Laser Research Center, Physics Faculty, Vilnius University, Vilnius, Lithuania 2 Institute of Chemistry, Faculty of Chemistry and Geosciences, Vilnius University, Lithuania	**(Invited)** **Additive Manufacturing and Bioprinting: From Tissue Engineered Implants to In vitro Models** Carlos Mota* Complex Tissue Regeneration Department, MERLN Institute for Technology-Inspired Regenerative Medicine, Maastricht University, Maastricht, The Netherlands
09:50-10:05	**Chiral propagation of plasmon polaritons in twisted anisotropic photonic heterostructures** Ze-Hua Tao[1], Icaro R. Lavor[2,3,4*], Hai-Ming Dong[5*], Andrey Chaves[3,1], David Neilson[1], Milorad V. Milošević[1*] [1] Department of Physics and NANOlight Center of Excellence, University of Antwerp, Belgium [2] Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Norte, Brazil [3] Departamento de Física, Universidade Federal do Ceará, Brazil	**3D-printed immersion micro optics for Life Science applications** Marco Wende[1,2*], Amirbahador Zeynali[3], Theresa Kühn[3], Ada Bachmann[1,2], Jule Grunewald[1,2], Michael Heymann[3], and Andrea Toulouse[1,2] [1]Institute of Applied Optics (ITO), University of Stuttgart, Stuttgart, Germany [2]Research Center SCoPE, University of Stuttgart, Stuttgart, Germany [3]Institute of Biomaterials and Biomolecular Systems, University of Stuttgart,

	[4] Department of Physics and NANOlight Center of Excellence, University of Antwerp, Belgium [5] School of Materials and Physics, China University of Mining and Technology, China		Stuttgart, Germany
10:05-10:20	**Deterministic Aperiodic Metasurfaces as Plasmonic Platforms for Polaritonic Systems** Marzia Ferrera[1*], Vincenzo Aglier[i1], Xin Jin[1], Thomas Girardet[1], Jacopo Stefano Pelli Cresi[1], Elena Ghidorsi[1,2], Maria Ashraf[1,2], Muhammad Sohaib[1,2], and Andrea Toma[1*] [1]Istituto Italiano di Tecnologia, Genova, Italy [2]Dipt. di Fisica, Università degli Studi di Genova, Genova, Italy		**3D Bioprinted Cellulose Acetate-Hydroxyapatite Scaffolds for Bone Tissue Engineering** Eleni Kanakousaki [1,2*], Panagiotis Daskalakis [1,3], Paraskevi Kavatzikidou [1], Stella Maragkaki [1], George Kenanakis [1], Emmanuel Stratakis [1,4] and Anthi Ranella [1] [1] Foundation for Reasearch and Technology – Hellas (FORTH) – Institute of Elecronic Structure and Laser (IESL) [2] Biology Department, University of Crete, Greece [3] School of Medicine, University of Crete, Greece [4] Department of Physics, University of Crete, Greece
10:20-10:35	**Single Glass and Polymer Coated Microwire Photoactuators with Instant Response Times and Large Actuating Angles** Ioannis Konidakis[*], Harris Goniotakis and Emmanuel Stratakis Institution Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology - Hellas (FORTH		**Self-Oscillating Smart Bio-Nanomaterials for Mechanical Maturation of Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes** Michal Sarna[1,*], Sylwia Bobis-Wozowicz[2], Takafumi Enomoto[3] and Ryo Yoshida[3] [1]Department of Biophysics, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Poland [2]Department of Cell Biology, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Poland [3]Department of Materials Engineering, School of Engineering, The University of Tokyo, Bunkyo-ku, Japan
10:35-11:05	**COFFEE BREAK**		
	BRIDGE Workshop - Nanomaterials Applications III, Chair: C. Brintakis, Moderator: E. Agapaki *Room: Minos West*		*Bio-nanomaterials II, Chair: S. Aslanoglou, Moderator: M. Liapakis* *Room: Minos East*
11:05-11:30	**(Invited)** **Organic Hydrogen Sensors for the Future Hydrogen Industries** Thomas D. Anthopoulos	11:05-11:30	**(Invited)** **Addressing Healthcare Disparities with Nanotechnology**

	Henry Royce Institute, Photon Science Institute, Dept. of Electrical and Electronic Engineering, The University of Manchester, Manchester, UK		Paul S. Weiss California NanoSystems Institute and Departments of Chemistry & Biochemistry, Bioengineering, and Materials Science & Engineering, UCLA, Los Angeles, USA
11:30-11:55	**(Invited)** **Making sense of gas sensing through analytical validation** Jonathan Beauchamp Fraunhofer Institute for Process Engineering and Packaging IVV, Freising, Germany	11:30-11:55	**(Invited)** **Non-viral cell transfection using nanoneedle injection technology:** **fabrication, mechanistic insights and key applications** N.H. Voelcker [a,b,*] [a] Monash Institute of Pharmaceutical Sciences, Monash University, Parkville, Australia [b] Melbourne Centre for Nanofabrication, Clayton, Australia
11:55-12:10	**Optimizing a perovskite-based gas sensor: Sensitivity, stability and selectivity** A. Kostopoulou*, K. Brintakis, A. Argyrou, E. Stratakis Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Greece	11:55-12:10	**Single Atom Engineered Antibiotics Overcome Bacterial Resistance** Aristides Bakandritsos[1,2], David Panáček[1,2], Jan Belza[1], Milan Kolář[3], Michal Otyepka[1,4], and Radek Zbořil[1,2] [1]Regional Centre of Advanced Technologies and Materials, Czech Advanced Technology and Research Institute (CATRIN), Olomouc – Holice, Palacký, University Olomouc, Czech Republic[2]Nanotechnology Centre, Centre for Energy and Environmental Technologies, VŠB–Technical, University of Ostrava, Ostrava-Poruba, Czech Republic [3]Department of Microbiology, Faculty of Medicine and Dentistry, Palacký University, Olomouc, Czech Republic [4]IT4Innovations, VŠB-Technical University of Ostrava, Ostrava-Poruba, Czech Republic
12:10-12:35	**(Invited)** **2D Material-Based Photodetectors for Near-to-Far-Infrared Applications** Domenico De Fazio[1*] [1]Department of Molecular Science and Nanosystems, Ca' Foscari University of Venice, Venice, Italy	12:10-12:25	**Exosomes detection using Graphene Field Effect Transistors** G. Samara [1,2,*], F. Katsaitis[3], C. Karoussiotis[3], D. Petrovykh[4], J. Borme[4], I. Sotiropoulos[3], P. Dimitrakis[1,5] [1]Institute of Nanoscience and Nanotechnology NCSR "Demokritos", Athens, Greece

			[2]Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece[3]Institute of Biosciences & Applications NCSR "Demokritos", Athens, Greece [4]International Iberian Nanotechnology Laboratory, Braga, Portugal [5]Institute of Quantum Computing & Quantum Technology, NCSR "Demokritos"
	Plenary Session II - Chairs: E. Stratakis & E. Kymakis - Room: Minos West Moderators: D. Katrisioti & P. Daskalakis		
12:35-13:15	**(Plenary III)** **Processing and applications of 2D nanomaterials inks** Valeria Nicolosi Trinity College Dublin, School of Chemistry, CRANN, AMBER, I-Form, Dublin 2, Ireland		
13:15-14:00	**(Plenary IV)** **Listening to light: Advances in optoacoustic imaging** Vasilis Ntziachristos[1,2*] [1] Chair of Biological Imaging, Central Institute for Translational Cancer Research (TranslaTUM), School of Medicine and Health & School of Computation, Information and Technology, Technical University of Munich, Munich, Germany [2] Institute of Biological and Medical Imaging, Bioengineering Center, Helmholtz Zentrum, München, Neuherberg, Germany		
14:00-15:00	**LUNCH BREAK**		
	Bio-nanomaterials Characterization, Chair: A. Kanaras, Moderator: E. Kanakousaki *Room: Minos East*		
15:00-15:25	**(Invited)** **Integrated Analytical Research Infrastructures impacting nano-biology research** Giorgio Rossi Dipartimento di Fisica, Università di Milano, Italy		
15:25-15:40	**Characterization of the delivery of nanoparticles** Neus Feliu		

	Fachbereich Physik, Universität Hamburg, Hamburg, Germany
15:40-15:55	**Raman spectroscopy for characterization of brain thrombi** Barbara Spagnolo[1,*],Michele Petracca[1], Mohammadrahim Kazemzadeh[1], Luciano Abbruzzese[2], Massimo De Vittorio[1,3,§] , Emilio Lozupone[4,§] and Ferruccio Pisanello[1,§] [1]Istituto Italiano di Tecnologia, Center for Biomolecular Nanotechnologies, Arnesano, Lecce, Italy [2]Servizio di Immunoematologia e Medicina Trasfusionale, Azienda Ospedaliera Vito Fazzi, Lecce, Italy [3]Technical University of Denmark, Anker Engelunds Vej, Kongens Lyngby [4] Dipt. di Neuroradiologia, Azienda Ospedaliera Vito Fazzi, Lecce, Italy
15:55-16.10	**A fluorescent ratiometric potassium sensor based on IPG4-silica microparticles for selective detection and fluorescence imaging of potassium cations** Francesco Colella*, Stefania Forciniti, Valentina Onesto, Giuliana Grasso, Helena Iuele, Giuseppe Gigli and Loretta L. del Mercato CNR NANOTEC, National council of research, c/o Campus Ecotekne, Lecce, Italy
16:10-16:25	**Nanoengineered Fullerene–PLA Films for Light-Triggered Biofouling Resistance** Wanessa Melo*, Gabrielė Saulėnienė, Monika Kirsnytė and Samuelis Dobilaitis State Research Institute Center for Physical Sciences and Technology (FTMC), Department of Functional Materials and Electronics, Vilnius, Lithuania
	ENJOY YOUR AFTERNOON AND GET READY FOR THE DINNER
20:00	**CONFERENCE GALA DINNER**
	END OF DAY 2 OF NANOBIO2025

TIME	**Wednesday 10th September**		
	Workshop on Emerging PVs, Chair: C. Chochos, Moderator: M. Loizos *Room: Minos West*		*Biofabrication II, Chair: E. Babaliari, Moderator: M. Liapakis Room: Minos East*
09:00-09:25	**(Invited)** **Next-Generation Energy-Harvesting Systems Based on Metal Halide Perovskite Nanohybrids** Raquel E. Galian* Institute of Molecular Science, University of Valencia, Valencia, Spain	09:00-09:25	**(Invited)** **Real-Time Thermometry in Femtosecond Laser Microfabrication** Amirbahador Zeynali[2], Giuseppe Chirico[1], Michael Heymann[2]

			[1]Department of Physics, University of Milano-Bicocca, Milano, Italy [2]IBBS, Institut für Biomaterialien und Biomolekulare Systeme, Universität Stuttgart, Stuttgart, Germany
09:25-09:50	**(Invited)** **Interface engineering strategies for robust and efficient PSCs** Polycarpos Falaras Institute of Nanoscience and Nanotechnology, National Centre for Scientific Research "Demokritos", Athens, Greece	09:25-09:50	**(Invited)** **Laser-ablative processing for biomedical and tissue engineering applications** Joseph Chaussard, Adrien Casanova and Ahmed Al-Kattan*, Aix Marseille University, CNRS, LP3 UMR 7341, Campus de Luminy, Marseille cedex 9, France
09:50-10:05	**Comprehensive High-Throughput DFT Study of Intrinsic Defects and Dopability in p-type Zn_3P_2 for Photovoltaic Applications** Nico Kawashima[1,2*] and Silvana Botti[1] [1]RC-FEMS & ICAMS, Faculty of Physics and Astronomy, Ruhr University Bochum,Germany [2]IFTO, Faculty of Physics and Astronomy, Friedrich-Schiller University Jena,Germany	09:50-10:05	**Architecturally Simple Organic Photodiodes for High Performance and Advanced Functionalities** Hrisheekesh Thachoth Chandran [1, 2], Johannes Benduhn[1], Karl Leo[1] and Gang Li[2] [1] Dresden Integrated Center for Applied Physics and Photonic Materials (IAPP), TU Dresden, Germany [2] Department of Electrical and Electronic Engineering, Research Institute for Smart Energy (RISE), The Hong Kong Polytechnic University, Hong Kong SAR
10:05-10:20	**A volatile additive to control crystallization of $CuInS_2$ quantum dots** Thomas Stergiopoulos Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Athens, Greece	10:05-10:20	**Metal Oxide-Doped Elastomers for Catheter Photodecontamination** Darragh Lavelle[1], Ross MacLeod[1], John Selkirk[1], Jade Teixeira[1], Ruth Brown[1], David T. Griffin[2], Michelle Maclean[1,2] and Mairi E. Sandison[1*] [1]Dept of Biomedical Engineering, University of Strathclyde, Glasgow, UK [2]The Robertson Trust Laboratory for Electronic Sterilisation Technologies, Department of Electronic and Electrical Engineering, University of Strathclyde, Glasgow, UK
10:20-10:35	**Memristive switching in mixed-halide perovskite transistors**	10:20-10:35	**Synthetic Microbiome Platform for Living Cell Medicine**

	Konstantinos Rogdakis [a,b], George Psaltakis[a], Konstantinos Chatzimanolis[a], Konstantinos Blazakis[a], Leadros Spachis [a] and Emmanuel Kymakis [a,b] a Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion, Crete, Greece b Institute of Emerging Technologies (i-EMERGE) of HMU Research Center, Heraklion, Crete, Greece		Valeriia Kravchik[1*†], Rawan Zaatry[2 †], Naama Geva-Zatorsky[2,3] and Ramez Daniel[1] [1] Department of Biomedical Engineering Technion—Israel Institute of Technology, Technion City, Haifa, Israel[2] Department of Cell Biology and Cancer Science, Rappaport Technion Integrated Cancer Center (RTICC), Rappaport Faculty of Medicine, Technion – Israel Institute of Technology, Haifa, Israel [3] CIFAR, MaRS Centre, Toronto, Canada [†] These authors contributed equally
10:35-11:00	**(Invited)** **Semiconducting Polymers for Organic Electronics** A. K. Andreopoulou,[1] K. C. Andrikopoulos,[1] C. Anastasopoulos,[1] S. Giosi,[1] M. Karra,[1] K. Koumoutsou,[1] J. K. Kallitsis[1] *[1]Department of Chemistry, University of Patras, 26504 Patras, Greece*	10:35-10:55	**Development of innovative MIP based sensors for liquid biopsy** Giulia Siciliano[1,2*], M.S. Chiriacò[2], F. Ferrara[2], A. Turco[2], S. Romano[3], G. Zito[3], L. De Stefano[3], V. Nocerino[3], L. Velardi[4], M.A. Signore[4], A. Colombelli[4], M. Esposito[2], G. Gigli[1] and E. Primiceri[2] [1]University of Salento, Dept. of Experimental Medicine, Lecce, Italy [2]Institute of Nanotechnology, CNR-Nanotec, Lecce, Italy [3]Institute of Applied Sciences and Intelligent Systems (ISASI), National Research Council (CNR), Napoli, Italy [4]Institute for Microelectronics and Microsystems, CNR-IMM, Lecce, Italy
11:00-11:30	**COFFEE BREAK**		
	Workshop on Emerging PVs, Chair: K. Rogdakis, Moderator: K. Anagnostou *Room: Minos West*		*Nanoparticles I, Chair: W. Parak, Moderator: E. Kanakousaki* *Room: Minos East*
11:30-11:55	**(Invited)** **Efficient Structures And Processes for Upscaling of Perovskite Modules and Tandems** T. Aernouts[1,2,3*] [1i]mo-imomec, Thin Film PV Technology, Imec, Genk, Belgium		**(Invited)** **Magnetic Nanoparticles for magnetic hyperthermia, cancer immune therapy and cell tracking** Teresa Pellegrino Italian Institute of Technology, Genoa, Italy

	[2]EnergyVille, Thor Park 8320, 3600 Genk, Belgium [3]Hasselt University, Hasselt, Belgium	
11:55-12:20	**(Invited)** **Enabling the Factory Floor: Industrially Relevant Strategies for All-Printed Carbon-based Perovskite Photovoltaics** D.A. Chalkias, [1,2] A. Nikolakopoulou,[1] A. Mourtzikou,[2] E. Stathatos [1] [1] Nanotechnology & Advanced Materials Laboratory, Department of Electrical and Computer Engineering, University of the Peloponnese, Patras, Greece [2] Brite Hellas S.A., Patras Science Park, Rio-Patras, Greece	**(Invited)** **Immunomodulatory Nanoplexes: Polycationic and Lipid-Based Platforms for Targeted Drug and Nucleic Acid Delivery** Maryam Tabrizian[1,2,3*] [1]Biomedical Engineering, McGill university, Montreal Canada [2]Faculty of Dental Medicine and Oral Health Sciences, McGill University, Montreal, Canada [3]Department of Anatomy and Cell Biology, McGill University, Montreal, Canada
12:20-12:35	**Unveiling the Impact of Molecular Doping on the Efficiency and Optoelectronic Properties of Fully Printed Flexible Organic Solar Cells** A. Paliagkas[1,2*], C. Stavraki[1,2], C. Kapnopoulos[1,2], A. Zachariadis[1,2], S. Logothetidis[1,2,3], A. Laskarakis[1] [1] Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece [2] Centre of Excellence for Organic, Printed Electronics & NanoTechnologies (COPE-Nano), Thermi, Thessaloniki, Greece [3] Organic Electronic Technologies P.C. (OET) 20th KM Thessaloniki - Tagarades, 57001, Thermi, Thessaloniki, Greece	**Biological Activity of Silver Nanoparticles Stabilized with Low-Molecular-Weight Polyphenols Against Mouse Neuroblastoma (N2A) Cells** Piotr Smoleń[1*], Anna Barbasz[2], Natalia Piergies[3], Piotr Niemiec[4], Magdalena Oćwieja[1] [1]Jerzy Haber Institute of Catalysis and Surface Chemistry, PAS, Krakow, Poland [2]Department of Biochemistry and Biophysics, Institute of Biology and Earth Sciences, University of the National Education Commission, Krakow, Poland [3]Institute of Nuclear Physics PAS, Krakow, Poland [4]Faculty of Mathematics and Natural Sciences, Department of Chemistry, University of Applied Sciences in Tarnow, Tarnow, Poland
12:35-12:50	**Outdoor Evaluation of Perovskite Photovoltaics: Long-Term Stability and Performance** Georgios Viskadouros[1*], Konstantinos Rogdakis[2], Emmanuel Spiliarotis[3], Ioannis Kalogerakis[4] and Emmanuel Kymakis[5] [1,2] E-SYNERGY PPC, Heraklion, Greece [1,2,3,4,5] Nanomaterials for Emerging Devices (Nano@HMU), Hellenic Mediterranean University, Heraklion, Greece	**Targeting tumor associated macrophages (TAM) with vectorized magnetic nanoparticles for anticancer therapies** Chloé Bazile*, Véronique Gigoux and Mary Poupot Inserm UMR1037-Cancer Research Center of Toulouse ERL 5294 CNRS Univ. Toulouse III, France
12:50-13:00	**Towards scalable synthesis of high-quality Zn_3P_2 thin films for**	**Boron-10-doped carbon dots for neutron capture therapy – a**

	photovoltaic applications Aidas Urbonavicius[1*], Francesco Salutari[2], Sebastian Lehmann[1], Maria Chiara Spadaro[2,3,4], Jordi Arbiol[2,5], Kimberly Dick[1] and Simon Escobar Steinvall[1] [1]Center for Analysis and Synthesis, and NanoLund, Lund, Sweden [2]Catalan Institute of Nanoscience and Nanotechnology (ICN2), Barcelona, Catalonia, Spain [3]Department of Physics and Astronomy "Ettore Majorana", Catania, Italy 4CNR-IMM, Catania, Italy [5]ICREA, Barcelona, Catalonia, Spain	**theranostic nanosystem for the treatment of glioblastoma multiforme** Duarte Almeida [1,2,3*], Renata Maia[3], Maria Lobita[3], Hélder A. Santos[3] and Gil Gonçalves[1,2] [1] TEMA – Centre for Mechanical Technology and Automation, Department of Mechanical Engineering, University of Aveiro, Aveiro, Portugal [2] Intelligent Systems Associate Laboratory (LASI), Guimarães, Portugal [3] Department of Biomedical Engineering, University Medical Center of Groningen, University of Groningen, Groningen, The Netherlands
13:00-13:15	**Fabrication of Fully Printed Flexible Perovskite Solar Modules and Investigation of Stability and Degradation Mechanisms** C. Stavraki[1,2*], S. Kassavetis[1,2], C. Kapnopoulos[1,2], A. Zachariadis[1,2], E. Paraschoudi[1,2], A. Paliagkas[1,2], E. Mekeridis[3], A. Laskarakis[1,2], S. Logothetidis[1,2,3] [1]Nanotechnology Lab LTFN, Department of Physics, Aristotle University Of Thessaloniki, Thessaloniki (Greece) [2]Centre of Excellence for Organic, Printed Electronics & Nanotechnologies (COPE-Nano), Thermi, Thessaloniki (Greece) [3]Organic Electronic Technologies P.C. (OET), Thermi, Thessaloniki (Greece)	**Assessing the cytotoxicity of zinc oxide (ZnO) nanoparticles across static and dynamic cultures** Eleftheria Babaliari[1*], Dionysios Xydias[1,2], Maria Kefalogianni[1,3], Anna Pantelaiou[1,4,5], Sotiris Psilodimitrakopoulos[1], Paraskevi Kavatzikidou[1], Anthi Ranella[1] and Emmanuel Stratakis[1,3] [1]Foundation for Research and Technology – Hellas (F.O.R.T.H.), Institute of Electronic Structure and Laser (I.E.S.L.), Heraklion, Crete, Greece [2]Department of Materials Science and Technology, University of Crete, Heraklion, Crete, Greece [3]Department of Physics, University of Crete, Heraklion, Crete, Greece [4]University of Crete, Heraklion, Crete, Greece [5]Technical University of Crete, Heraklion, Crete, Greece
13:15-13:30	**Lead-free, optoelectronic memristive perovskite solar cells for self-powered neuromorphic edge computing** Michalis Loizos[1*], Konstantinos Chatzimanolis[1], Katerina Anagnostou[1], Kyriakos Mouratis[1], Konstantinos Rogdakis[1,2], and Emmanuel Kymakis[1,2] [1]Department of Electrical and Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion, Crete, Greece [2]Institute of Emerging Technologies, University Research and Innovation Center, HMU, Heraklion, Crete, Greece	**Advanced Oxygen Sensing Platforms for Live Imaging and Hypoxia Mapping in Complex Cell Systems and Tumor Microenvironment** Stefania Forciniti[1], Giuliana Grasso[1], Helena Iuele[1], Valentina Onesto[1], Anna Chiara Siciliano[1], Francesco Colella[1], Lara Pierantoni[2,3], David Caballero[2,3], Giuseppe Gigli[1,4], Rui L. Reis[2,3], Joaquim M. Oliveira[2,3], Loretta L. del Mercato[1] [1] Institute of Nanotechnology – NANOTEC, Consiglio Nazionale delle Ricerche (CNR), Lecce, Italy; [2] 3B's Research Group, I3Bs – Research Institute on Biomaterials, Biodegradables and Biomimetics, University of Minho, Guimarães,

			Portugal [3] ICVS/3B's - PT Government Associate Laboratory, Braga/Guimarães, Portugal [4] Department of Experimental Medicine, University of Salento, Lecce, Italy
13:30-13:55	**(Invited)** **Rational design of new conjugated polymers with main chain chirality for efficient optoelectronic devices: Carbo [6] Helicene and indacenodithiophene copolymers as model compounds** Christos L. Chochos[1,2*] [1] Institute of Chemical Biology, National Hellenic Research Foundation, Athens, Greece [2] Advent Technologies SA., Stadiou Str, Patras, Platani, Greece		**3D Pancreatic Cancer models with integrated optical pH sensors for noninvasive metabolism monitoring and drug screening** Siciliano Anna Chiara[1*], Forciniti Stefania[2] and del Mercato Loretta L[2] [1]Department of Mathematics and Physics Ennio de Giorgi, University of Salento, via Arnesano, Lecce, Italy [2]CNR Nanotec, National Council of Research, c/o Campus Ecotekne, Lecce, Italy
14:00-15:00	**LUNCH BREAK** **All the Poster Presenters of POSTER SESSION could place their Poster on the Poster Stands**		
	Workshop on Emerging PVs, Chair: E. Stathatos, Moderator: M. Loizos *Room: Minos West*		*Nanoparticles II, Chair: T. Pellegrino, Moderator: M. Kefalogianni* *Room: Minos East*
15:00-15:25	**(Invited)** **Standardizing data, workflows, and executions in a modelling platform for organic electronic materials and processes** Eleftherios Lidorikis Department of Materials Science & Engineering, University of Ioannina, Ioannina, Greece	15:00-15:25	**(Invited)** **Hybrid nanoparticles for delivery** Wolfgang J. Parak Universität Hamburg, Hamburg, Germany
15:25-15:50	**(Invited)** **Material and Device Engineering Concepts for Enhancing the Performance of Inverted Perovskite Photovoltaics** Stelios A. Choulis Department of Mechanical Engineering and Materials Science and Engineering, Cyprus, University of Technology, Molecular Electronics and Photonics Research Unit, Limassol, Cyprus	15:25-15:40	**Cell-membranes derived nanoparticles as biomimetic strategy in precision medicine** Clara Baldari[1*], Claudia Leone[2], Gabriella Leccese[3], Claudia De Stradis[2], Giuseppe Gigli[1,3], Gabriele Maiorano[3], Ilaria E. Palamà[3] [1] Department of Experimental Medicine, University of Salento, Lecce, Italy

			[2] Department of Mathematics and Physics, University of Salento, Lecce, Italy [3] Institute of Nanotechnology, National Research Council (CNR-NANOTEC), Lecce, Italy
15:50-16:05	**Two-Dimensional Nanomaterials Materials for Energy Devices** Katerina Anagnostou[1*], Christos Polyzoidis[1], Michalis Loizos[1], Kyriakos Mouratis[1], Konstantinos Rogdakis[1,2], Emmanuel Kymakis[1,2] [1] Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion, Greece [2] Institute of Emerging Technologies (i-EMERGE), of HMU Research Center, Heraklion, Greece	15:40-15:55	**Towards smart scaffolds for 3D cell culture models: Polymeric nanoparticles as reporters in hydrogel beads** Nikolas Galensowske[1*], Xuan Peng[1], Andreas Schurig[2], Dietmar Appelhans[2] and Larysa Baraban[1] [1]Helmholtz-Zentrum Dresden-Rossendorf, Institute of Radiopharmaceutical Cancer Research, Dresden, Germany [2]Leibniz-Institut für Polymerforschung Dresden, Dresden, Germany
16:05-16:20	**High-Power Optical Field Modulation Based on Micro/Nanostructures and Its Applications** Xiong Li[1,2], Qingsong Wang[1,2], Lianwei Chen[1,2,3] [1] State Key Laboratory of Optical Field Manipulation Science and Technology, Institute of Optics and Electronics, Chinese Academy of Sciences, Chengdu 610209, China [2] College of Materials Science and Opto-Electronic Technology, University of Chinese Academy of Sciences, Beijing 100049, China [3] Research Center on Vector Optical Fields, Institute of Optics and Electronics, Chinese Academy of Sciences, Chengdu 610209, China	16:05-16:20	**Comparative Adsorption Performance of Regionally Derived Bacterial Nanocellulose (BNC) in Wastewater Remediation** Ogujuba Solomon[1,2], Kudratkhojayeva Medinakhon[3], Martina DiSessa[1,2], Sandra Pucciarelli[2] [1.] Scuola Universitaria Superiore (IUSS), Pavia, Italy [2.] University of Camerino, Camerino, Italy [3.] Tashkent State Technical University, Tashkent, Uzbekistan
16:20-18:00	**POSTER SESSION** **To all Poster Presenters – Please be by your Poster at all times!**		
15:00-17:00	**DEMOSAXIA WORKSHOP** **Advanced Synergies for Pilot Demonstration Towards Industrial Innovation in Widening Countries (DEMOSAXIA)** **(CALL: HORIZON-WIDERA-2023-ACCESS-04, GA 101160387)** *Room: Pasiphae East*		
	END OF DAY 3 OF NANOBIO2025		

TIME	Thursday 11th September		
	Advanced Materials, Chair: M. Pervolaraki, Moderator: E. Agapaki *Room: Minos West*		*Nanotechnology in Healthcare I, Chair: P. Kavatzikidou, Moderator: M. Liapakis* *Room: Minos East*
09:00-09:25	(**Invited**) **Advanced Materials and AI to Answer Sustainable Society Demands** Rodrigo Martins*, P. Barquinha, L. Pereira, E. Carlos, A. Kiazadeh, M. Mendes E. Fortunato CENIMAT/i3N, Department of Materials Science, NOVA School of Science and Technology, NOVA University Lisbon (FCT-NOVA) and CEMOP/UNINOVA, Campus de Caparica, Caparica, Portugal	09:00-09:25	(**Invited**) **Self-assembled conductive fibres in live cells** Guglielmo Lanzani[1,2] [1] Center for Nanoscience and Technology, Istituto Italiano di Tecnologia, Milano, Italy [2] Dep.t of Physics, Politecnico di Milano, Milano, Italy
09:25-09:50	(**Invited**) **IAM4EU – the co-programmed public private partnership for Advanced Materials under Horizon Europe** Eva-Kathrin Schillinger Secretary General IAM-I, Rue Belliard 40, 1040 Brussels, Belgium	09:25-09:40	**Ionic Liquid-Assisted Assembly of Human Platelet Lysate-Based Nanoparticles for Antibody Encapsulation** Julián Fuentes[1, 2], Cátia F. Monteiro[1], Ana Beloqui[2], Catarina A. Custódio[1*], João F. Mano[1*] [1]CICECO – Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, Campus Universitário de Santiago, Aveiro, Portugal [2]POLYMAT – University of the Basque Country UPV/EHU, Donostia – San Sebastián, Spain

09:50-10:15	**(Invited)** **The molecular approach to multifunctional 2D electronics: from high-performance pressure sensors to neuromorphic logics** Paolo Samorì ISIS, University of Strasbourg & CNRS, Strasbourg, France	09:40-09:55	**Bio-reconfigurable Impedance based Electronic Platform for Multiplexing Virus Diagnostic** Arianna Adelaide Maurina[1*], Cainã De Oliveira Figares[1], Francesco Damin[2], Chiara Capelli[2], Laura Sola[2], Elena Criscuolo[3], Nicola Clementi[3], Giorgio Ferrari[1], Marco Sampietro[1] [1]Politecnico di Milano, Milan, Italy [2]SCITEC-CNR, Milan, Italy [3]Vita-Salute San Raffaele University, Milan, Italy
10:15-10:40	**(Invited)** **2D Material Inks Enabled by Supramolecular Chemistry: From Synthesis to Applications** Cinzia Casiraghi Department of Chemistry, University of Manchester, Manchester, UK	09:55-10:10	
10:40-11:10	**COFFEE BREAK**		
	Micro-nano Fabrication, Chair: M. Pervolaraki, Moderator: E. Katsipoulaki *Room: Minos West*		*Nanotechnology in Healthcare II, Chair: G. Lanzani Moderator: M. Kefalogianni* *Room: Minos East*
11:10-11:35	**(Invited)** **Laser-surface processing for green Hydrogen energy storage** I. Poimenidis[2], A. Klini[1], M. Konsolakis[2], S.D. Moustaizis[2], P.A. Loukakos[1*] [1]Foundation for Research and Technology - Hellas, Heraklion, Greece [2]Technical University of Crete, Chania, Greece		**(Invited)** **Conformable Electronics for Biomedical Applications** Gianluca Fiori Dipartimento di Ingegneria dell'Informazione, Universita' di Pisa, Italy
11:35-11:50	**Micro and Nanofabricated, functional surfaces and devices** Kosmas Ellinas* Laboratory of Advanced Functional Materials and Nanotechnology, Department of Food Science and Nutrition, School of the Environment, University of the Aegean, Lemnos, Greece		**Advanced GO-Based Hydrogels for Controlled Hyaluronic Acid Release in Knee Osteoarthritis Treatment** Roya Binaymotlagh[*1], Laura Chronopoulou[1,2], Damiano Petrilli[1], Francesca Sciandra[3], Francesco Amato[1], Andrea Giacomo Marrani[1], Cleofe Palocci[1,2*] [1]Department of Chemistry, Sapienza University – Italy

		2Research Center for Applied Sciences to the safeguard of Environment and Cultural Heritage (CIABC) Sapienza University of Rome, Rome, Italy [3]SCITEC-Consiglio Nazionale delle Ricerche – Italy
11:50-12:05	**Ultrafast Laser Nanostructuring of Molybdenum Thin Films: Thickness Effects on High-Spatial Frequency LIPSS Formation** Stella Maragkaki [1], Matina Vlahou[1,2], George Perrakis[1], George D. Tsibidis[1] and Emmanuel Stratakis[1,3] [1] Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology (FORTH), Heraklion, Crete, Greece [2] Department of Material Science and Technology, University of Crete, Heraklion, Greece [3] Department of Physics, University of Crete, Heraklion, Greece	**Instrument-on-a-chip for Attoampere Detection** Cainã de Oliveira Figares*, Arianna Adelaide Maurina, Francesco Zanetto, Marco Sampietro and Giorgio Ferrari Politecnico di Milano, Milan, Italy
12:05-12:20	**Double-Pulse Femtosecond Laser Fabrication of Highly Ordered Periodic Structures on Au Thin Films Enabling Low-Cost Plasmonic Applications** Fotis Fraggelakis [1], Panagiotis Lingos [1], George D. Tsibidis [1*], Emma Cusworth [2], Nicholas Kay [2], Laura Fumagalli [2], Vasyl G. Kravets [2], Alexander N. Grigorenko [2], Andrei V. Kabashin [3], and Emmanuel Stratakis [1,5] [1]Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology (FORTH), Heraklion, Crete, Greece [2]Department of Materials Science and Technology, University of Crete, Heraklion, Greece [3]Department of Physics and Astronomy, Manchester University, Manchester, U.K. [4]Aix Marseille Univ, CNRS, LP3, Marseille, France [5] Department of Physics, University of Crete, Heraklion, Greece	**Unraveling the mechanisms of complexation and thermal stabilization of a model protein/polyelectrolyte system** Sisem Ektirici [1*], Vagelis Harmandaris[1,2,3] and Anastassia N. Rissanou[4*] [1]Computation-Based Science and Technology Research Center, The Cyprus Institute, Cyprus [2]Department of Mathematics and Applied Mathematics, University of Crete, Heraklion, Greece [3]Institute of Applied and Computational Mathematics, Foundation for Research and Technology Hellas, IACM/FORTH, Heraklion, Greece [4]Theoretical & Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece
12:20-12:35	**Laser printing of luminescent YAG:Ce 3D microstructures** A. Harnik[1], R. Virkėtis[2], D. Dapšys[1], D. Ladika[1], G. Merkininkaitė[2], S. Šakirzanovas[2], M. Malinauskas[1]	

	[1]Laser Research Center, Faculty of Physics, Vilnius University, Vilnius, Lithuania [2]Institute of Chemistry, Faculty of Chemistry and Geosciences, Vilnius University, Vilnius, Lithuania	
	Plenary Session III- Chair: E. Stratakis & E. Kymakis - Room: Minos West Moderators: E. Katsipoulaki & M. Kefalogianni	
12:40-13:20	**(Plenary V)** **Human Nanomedicine: Eliminating Implant Failure in Over 30,000 Patients and Still Counting….** Thomas J. Webster[1-4*] [1]School of Health Sciences and Biomedical Engineering, Hebei University of Technology, Tianjin, China [2]Division of Pre-College and Undergraduate Studies, Brown University, Providence, RI USA [3]School of Engineering, Saveetha University, Chennai, India [4]CSO and co-founder, 12 start-up companies, Mansfield Bioincubator, Mansfield, MA, USA	
13:20-14:00	**(Plenary VI)** **Automated Atomic Scale Data Analysis and Modelling for (Scanning) Transmission Electron Microscopy** Jordi Arbiol[1,2] [1]Catalan Institute of Nanoscience and Nanotechnology (ICN2), Barcelona, Catalonia, Spain [2]ICREA, Barcelona, Catalonia, Spain	
14:00-15:00	**LUNCH BREAK**	
	Bio-nanomaterials III, Chair: G. Fiori, Moderator: E. Kanakousaki *Room: Minos East*	
15:00-15:25	(**Invited)** **Engineering neuromorphic biomaterials for neuroelectronic applications** Francesca Santoro Institute of Biological Information Processing – Bioelectronics, Forschungszentrum Jülich, Germany, Neuroelectronic Interfaces, RWTH Aachen University, Germany	
15:25-15:40	**Living Electrical Wires: Investigating the Highly Conductive Structures of Cable Bacteria at the Nanoscale** Cosimo Tommasi[1*], Silvia Hidalgo Martinez[2], Filip Meysman[2] and Herre van der Zant[1]	

	[1]Dept of Quantum Nanoscience, Kavli Institute of Nanoscience, Delft Uni of Technology, Delft, The Netherlands [2]Department of Biology, University of Antwerp; Antwerp, Belgium
All day	**Project Meeting SOLARUP** *Room: Pasiphae East*
	END OF DAY 4 OF NANOBIO2025

TIME	**Friday 12th September**
	DYNASTY Workshop and Summer School in 2D Materials, Chair: G. Kioseoglou, Moderator: E. Katsipoulaki *Room: Minos West*
09:00-09:40	**(Invited Tutorial Lecture)** **Exciton Formation in 2D Semiconductors** K. Mourzidis[1], V. Jindal[1], M. Glazov[2], A. Balocchi[1], L. Lombez[1], D. Lagarde[1], P. Renucci[1], C. Robert[1], T. Taniguchi[3], K. Watanabe[4], S. Francoeur[5] and X. Marie[1,6] [1]Université de Toulouse, INSA-CNRS-UPS, LPCNO, Toulouse, France [2]Ioffe Institute, 26 Polytechnicheskaya, Saint Petersburg, Russia [3]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba 305-00044, Japan [4]Research Center for Functional Materials, National Institute for Materials Science, Tsukuba, Japan [5]RQMP and Département de génie physique, Polytechnique Montréal, Montréal, Québec, Canada [6]Institut Universitaire de France, Paris, France
09:40-10:05	**(Invited)** **Elastic Screening of Pseudogauge Fields in Graphene** Cristophe De Beule[1,2], Robin Smeyers[2], Wilson Nieto, Eugene Mele[1], and Lucian Covaci[2*] [1]Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, Pennsylvania, USA [2]Department of Physics and NANOlight Center of Excellence, University of Antwerp, Antwerp, Belgium

10:05 -10:30	(**Invited**) **Topochemical reactions from monoelemental Xenes to MXenes** Zdenek Sofer Dept. of Inorganic Chemistry, University of Chemistry and Technology Prague, Prague, Czech Republic
10:30-10:55	(**Invited**) **Alloy-Driven Tuning of Bandgap, Spin-Orbit Splitting and Phonon Energy in 2D Mo-Based TMDs** Panayiotis Spiliotakis[1,2], Eirini Katsipoulaki[1,3], Danae Katrisioti[1,2], Konstantinos Mourzidis[4], Takashi Taniguchi[5], Kenji Watanabe[6], Georgios Kopidakis[1,2], Emmanuel Stratakis[1,3], Xavier Marie[4,7], George Kioseoglou[1,2] and Ioannis Paradisanos[1*] [1] Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Greece [2] Department of Materials Science and Engineering, University of Crete, Heraklion, Greece [3] Department of Physics, University of Crete, Heraklion, Greece [4] Universite de Toulouse, INSA-CNRS-UPS, LPCNO, Toulouse, France [5] Research Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan [6] Research Center for Electronic and Optical Materials, National Institute for Materials Science, Tsukuba, Japan [7] Institut Universitaire de France, Paris, France
10:55-11:25	**COFFEE BREAK**
	DYNASTY Workshop and Summer School in 2D Materials, Chair: I. Paradisanos, Moderator: D. Katrisioti *Room: Minos West*
11:25-12:05	**(Invited Tutorial Lecture)** **Tuning the optoelectronic properties of 2D-TMDs via dielectric engineering** George Kioseoglou Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Greece and Department of Materials Science and Engineering, University of Crete, Heraklion, Greece
12:05-12:45	**(Invited Tutorial Lecture)** **Low dose electron microscopy imaging, one electron at a time** Johan Verbeeck[1,2*] [1]EMAT, University of Antwerp, Antwerp, Belgium

	[2]Nanolight Center of Excellence, University of Antwerp, Antwerp, Belgium
12:45-13:10	**(Invited)** **Twist-angle tuned second harmonic generation in 2D transition metal dichalcogenide homo- and heterobilayers** Sotiris Psilodimitrakopoulos*, Leonidas Mouchliadis and Emmanuel Stratakis Foundation for Research and Technology (FORTH), Heraklion, Crete, Greece
13:10-13:35	**(Invited)** **Exploring 2D materials with theory and simulation** Georgios Kopidakis Department of Materials Science and Engineering, University of Crete Institute for Electronic Structure and Laser, Foundation for Research and Technology - Hellas
13:35-13:50	**Silicon nanoantennas for tailoring the optical properties of MoS_2 monolayers** Danae Katrisioti[1,2*], Peter R. Wiecha[3], Aurélien Cuche[4], Sotiris Psilodimitrakopoulos[1], Guilhem Larrieu[3], Jonas Müller[3], Vincent Larrey[5], Bernhard Urbaszek[6], Xavier Marie[7,8], Emmanuel Stratakis[1], George Kioseoglou[1,2], Vincent Paillard[4], Jean-Marie Poumirol[4], and Ioannis Paradisanos[1] 1 Institute of Electronic Structure and Laser, Foundation for Research and Technology - Hellas, Heraklion, Crete, Greece 2 Department of Materials Science and Engineering, University of Crete, Heraklion, Crete, Greece 3 LAAS-CNRS, Université de Toulouse, Toulouse, France 4 CEMES-CNRS, Université de Toulouse, Toulouse, France 5 CEA-LETI, Université Grenoble-Alpes, Grenoble, France 6 Institute of Condensed Matter Physics, Technische Universität Darmstadt, Darmstadt, Germany 7 Université de Toulouse, INSA-CNRS-UPS, LPCNO, Toulouse, France
14:00-15:00	**LUNCH BREAK**
	DYNASTY Workshop and Summer School in 2D Materials, Chair: S. Psilodimitrakopoulos, Moderator: D. Katrisioti *Room: Minos West*
15:00-15:25	**(Invited)** **Atomic-Scale Imaging of Moiré Superlattices in Twisted Transition Metal Oxide Membranes** N. Gauquelin[1*], W. S. Hansen[2], A. De Backer[1], E. Dollekamp[2], J. M. G. Lastra[2], J.M. Mangeri[2], T. Chennit[1], A. Annys[1], J. Hidding[2], S. van Aert[1], J. Verbeeck[1], N. Pryds[2] [1]EMAT and Nanolight Center of Excellence, Department of Physics, University of Antwerpen, Antwerpen, Belgium

	[2]Department of Energy Conversion and Storage, Technical University of Denmark, Kongens, Lyngby, Denmark
15:25-15:40	**Engineering carrier density and exciton polarization in WSe2 monolayers via photochlorination** Eirini Katsipoulaki[1,2*], George Vailakis[1,3], I. Demeridou[1], D. Karfaridis[4], P. Patsalas[4], K. Watanabe[5], T. Taniguchi[6], D. Lagarde[7], V. Vindal[7], K. Mourtzidis[7], X. Marie[7], M. Glazov[9], I. Paradisanos[1], G. Kopidakis[1,3], G. Kioseoglou[1,3], and E. Stratakis[1,2] [1]Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Heraklion, Greece [2]Department of Physics, University of Crete, Heraklion, Greece [3]Department of Materials Science and Technology, University of Crete, Heraklion, Greece [4]Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece [5] Research Center for Electronic and Optical Materials, National Institute for Materials Science, Tsukuba, Japan [6] Research Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan [7] Universite de Toulouze, INSA-CNRS-UPS, LPCNO, Toulouze, France [8]Institut Universitaire de France, Paris, France [9] Ioffe Institute, Saint Petersburg, Russia
All day	**Progress Meeting 3GPV-4INDUSTRY** *Room: Pasiphae East*
15:40 -16:10	**CONFERENCE CLOSING CEREMONY** **(STUDENT AWARDS & CLOSING REMARKS)** *Room: Minos West*

POSTER PRESENTATION PROGRAM

POSTER SESSION will take place on DAY 3 of the Conference (16:00-18:00)
(as shown on the main NANOBIO2025 Program)

SESSION – BIO-NANOMATERIALS

P1	**Surface modification approaches for obtaining multifunctional surfaces in dentistry applications** Valentina Dinca*, Anca Bonciu, Luminita-Nicoleta Dumitrescu and Laurentiu Rusen National Institute for Lasers, Plasma and Radiation Physics Magurele, Romania
P2	**miR-1-3p Enhances VEGF Secretion and Fibroblast Function in Diabetic Wound Healing** Maria Zaatreh[1*], Caroline Faour[2], Hiba Yaseen[2], Liron Eldor[2] and Morir Khamaisi[2] [1]Technion – Israel Institute of Technology, Haifa, Israel [2]Rambam Health Care Campus, Haifa, Israel
P3	**Transient absorption spectroscopy of the Fucoxanthin-Chlorophyll *a/c* (FCPs) Proteins of the Marine Diatoms *Fragilariopsis sp* and *P. tricornutum*** P.A. Loukakos[1*], C. Andreou[2] and C. Varotsis[2] [1]Foundation for Research and Technology - Hellas, Heraklion, Greece [2]Cyprus University of Technology, Limassol, Cyprus
P4	**Tumoral cell identification by label-free machine learning spectroscopy** P. H. R. Amaral[1], M. I. N. da Silva[1], L. M. de Andrade[2] and J. C. González[1,*] [1]Department of Physics, Institute of Exact Sciences, Federal University of Minas Gerais, Belo Horizonte, Brazil [2]Laboratory of Cellular Biology, Department of Morphology, Federal University of Minas Gerais, Belo Horizonte, Brazil
P5	**Non-specific optical sensing for label-free diagnosis of the effects of COVID-19 in semen** V. Baliza[1], M. H. Furtado[2,3,4], T. O. Farias[4], J. C. B. Sepulveda[1], V. H. S de Paiva[1], M. I. N. da Silva[1,*], P. H. R. Amaral[1], L. M. de Andrade[4], S. M. S. N. Lacerda[4], G. M. J. Costa[4] and J. C. González[1] [1]Department of Physics, Institute of Exact Sciences, Federal University of Minas Gerais, Belo Horizonte, Brazil [2]MF Male Fertility Clinic, Belo Horizonte, Brazil [3]Hospital Mater Dei, Urology and Human Reproduction Department, Belo Horizonte, Brazil [4]Laboratory of Cellular Biology, Department of Morphology, Federal University of Minas Gerais, Belo Horizonte, Brazil
P6	**Silver Nanostructures for Antimicrobial and Light-Activated Therapies** Lucie Suchánková[1*], Lucie Válková2, Renata Večeřová[3], Libor Kvítek[1] and Aleš Panáček[1] [1]Palacky University, Faculty of Science, Department of Physical Chemistry, Olomouc, Czech Republic [2]Palacky University, Faculty of Medicine and Dentistry, Department of Biophysics, Olomouc, Czech Republic [3]Palacky University, Faculty of Medicine and Dentistry, Department of Microbiology, Olomouc, Czech Republic

P7	**In vitro cytotoxicity of thin-film neural probes based on reduced graphene oxide** Sarka Hradilova[1*], Miquel Madrid Gimeno[2], Tomas Malina[1], Tana Zavodna[1], Katerina Polakova[1] [1] Palacky Univ Olomouc, Czech Adv Technol & Res Inst CATRIN, Reg Ctr Adv Technol & Mat RCPTM, Olomouc, Czech Republic [2] Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, Campus UAB, Bellaterra, Spain
P8	**Dual Optimization of Geometry and Bioactivity in Melt Electrowritten Scaffolds for Cardiac Tissue Engineering** M. Amini [1*], J. Valdes-Fernandez [2], F. Prósper [2], M.M. Mazo [2*], and A. Bittner [1*] [1] Self-assembly group, CIC Nanogune, San Sebastián, 20018, Spain [2] Clinic department of the university of nanvara, Pamplona, 31008, Spain
P9	**Investigating Surfactant–Alginate Interactions: Towards the Design of Nanostructured Bio-Based Hydrogels** Khuram shehzad Khan[1*], Carlo Carandente Coscia[2], Matilde Tancredi [2], Gerardino D'Errico [2], Luigi Paduano [2] [1] Department of Molecular Sciences for Earth and Space (MOSES), Scuola Superiore Meridionale, Italy [2] Department of Chemical Sciences, University of Naples Federico II, Complesso Universitario Monte Sant'Angelo, Naples, Italy
P10	**Dose-dependent effects of ZnO nanoparticles on freshwater microalgae under salinity stress** Alexander Gusev[1,2*], Olga Zakharova[1,2] and Inna Vasyukova[1] [1] Derzhavin Tambov State University, Tambov, Russia [2] National University of Science and Technology «MISIS», Moscow, Russia
P11	**A smart drug delivery against drug resistant cancer cells using super-functionalized carbon nanotubes** Prachi Ghoderao[a,b*], Angelika Mielcarek[b], Sanjay Sahare[c], Hanna Dams-Kozlowska[a,b] [a] Department of Cancer Immunology, Poznan University of Medical Sciences, Poznan, Poland [b] Department of Diagnostics and Cancer Immunology, Greater Poland Cancer Centre, Poznan, Poland [c] Faculty of Chemistry,Adam Mickiewicz University in Poznań, Poznań, Poland [d] Faculty of Physics and Astronomy, Adam Mickiewicz University in Poznań, Poznań, Poland
P12	**Fibroblast, macrophage modulation and bacteria hindering through surface modification strategies** Andreea Mariana Negrescu [a], Simona Nistorescu [a,b], Anca Bonciu [b], Laurentiu Rusen [b], Nicoleta Dumitrescu [b], Anisoara Cimpean and Valentina Dinca [b*] [a] Faculty of Biology, University of Bucharest, Splaiul Independenței 91-95, 050095 Bucharest, Romania [b] National Institute for Lasers, Plasma, and Radiation Physics
P13	**Electrospun Nanofiber Oral Films of Buckwheat Rutin: Overcoming Solubility Limitations and Enhancing Biological Performance** Anna Stasiłowicz-Krzemień[1*], Milica Radan[2], Natalia Rosiak[1], Katarina Šavikin[2], Judyta Cielecka-Piontek[1,3] [1] Department of Pharmacognosy and Biomaterials, Poznan University of Medical Sciences, Poznań, Poland [2] Institute for Medicinal Plants Research "Dr. Josif Pančić", Belgrade, Serbia

	[3] Department of Pharmacology and Phytochemistry, Institute of Natural Fibres and Medicinal Plants, Poznan, Poland
P14	**Magnetic Nanoclusters for Alzheimer's Disease Theranostics** Argiris Kolokithas Ntoukas[1*], Jiri Drab[1,2], Ondrej Soukup[3], Jan Korabecny[3], Sarka Hradilova[1], and Katerina Polakova[1] [1] Czech Advanced Technology and Research Institute (CATRIN), Regional Centre of Advanced Technologies and Materials, Palacký University Olomouc, Olomouc, Czech Republic [2] Department of Medical Biophysics, Faculty of Medicine, Palacký University Olomouc, Olomouc, Czech Republic [3] Biomedical Research Centre, University Hospital Hradec Kralove, Hradec Kralove, Czech Republic
P15	**Myricetin-Loaded Electrospun Nanofibers: Amorphization Strategy to Enhance Antioxidant Properties** Natalia Rosiak[1], Wojciech Rydyger[1], Andrzej Miklaszewski, Judyta Cielecka-Piontek[1*] [1] Department of Pharmacognosy and Biomaterials, Poznan University of Medical Sciences, Poznań, Poland [2] Faculty of Materials Engineering and Technical Physics, Inst. of Materials Science and Engineering, Poznan University of Technology, Poznan, Poland
P16	Auxetic Scaffolds via Multiphoton Lithography for Neuroregeneration Andreas Parlanis[1,2,*], Elena Oikonomou[1,2], Maria Farsari[1], Anthi Ranella[1] [1] Foundation for Research and Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL), Heraklion, Greece [2] Department of Biology, University of Crete, Heraklion, Greece
P17	**Iron Carbide Nanoparticles for Enhancing CAR-T Cell Therapy in Metastatic Melanoma: Dual Hyperthermia and Surface Engineering** Chiara Puccinelli*, Lorenzo Riccio, Laura Maggini and Davide Bonifazi University of Vienna, Faculty of Chemistry, Vienna, Austria
P18	**Bridging Synthetic Biology and Bioelectronics via Chemical Reactions** Nour Zoaby, Noa Aflalo, Emanuel Ber, Eilam Yalon, & Ramez Daniel Technion, Israel Institute of Technology, Haifa, Israel

SESSION - NANOMATERIALS

P19	**Hybrid Energy Harvesting System: Integrating Teng and Solar for Electricity Generation** Duarte Rafael Salgado de Almeida TEMA – Centre for Mechanical Technology and Automation, Dept. of Mechanical Engineering, University of Aveiro, Campus de Santiago, Aveiro, Portugal
P20	**Precision Micromachining with Tailored Laser Beams in Amplitude and Phase** Maria Pervolaraki[1], George Tsibidis[1], Martin Osbild[2], Simon Goldmann[2], Paul Buske[3], Benjamin Lauer[4] and Emmanuel Stratakis[1] [1]Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology (FORTH), Heraklion, Greece [2]Fraunhofer Institute for Laser Technology ILT, Aachen, Germany [3]Chair for Technology of Optical Systems (TOS) – RWTH Aachen University, Aachen, Germany [4]Thyssenkrupp Steel Europe AG (TKSE), Duisburg Germany
P21	**Precision Laser-Engineered Aesthetic Photo-Rechargeable Storage Cell** Maria Pervolaraki[1], Styliani Maragkaki[1], George Tsibidis[1], Marinos Tountas[2], Dimitrios Tsikritzis[2], Emmanuel Kymakis[2], Emmanuel Stratakis[1] [1]Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology (FORTH), Heraklion, Greece [2]Department of Electrical & Computer Engineering, Hellenic Mediterranean University, Estavromenos, Heraklion, Greece
P22	**Aesthetically Patterned Semitransparent Perovskite Photovoltaics for Ambient Applications** M. Tountas[1], E. D. Koutsouroubi[1*], D. Tsikritzis[1], S. Maragkaki[2], E. Stratakis[2] and E. Kymakis[1] [1]Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion, Greece [2]Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece
P23	**Electronic transport in Te nanorolls** E. R. Viana[1], N. Cifuentes[2], M. I. N. da Silva[2] and J. C. González[2,*] [1]Department of Physics, Technological Federal University of Parana, Curitiba, Brazil [2]Department of Physics, Federal University of Minas Gerais, Belo Horizonte, Brazil
P24	**Additive with Beneficial Solvent and Solid Types for Efficient and Stable Organic Solar Cells** Changduk Yang School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), 50 UNIST-gil, Ulju-gun, Ulsan, South Korea
P25	**Reverse Pilloti-Inspired Evaporator for Enhanced Interfacial Evaporation and Salt Rejection in Sustainable Water Purification** Dong geon Lee[1*] and Won san Choi[2] [1] Hanbat National University, Daejeon, Republic of Korea [2] Hanbat National University, Daejeon, Republic of Korea

P26	**Laser Synthesis of Nanostructures for Electrochemical Analytical Systems** Elena Schlein[1*], Yuriy Zholudov[2], Volodymyr Vasylkovskyi[3], Mykola Slipchenko[4], Boris Chichkov[1] and Andrey Evlyukhin[1] [1]Leibniz University Hannover, Hannover, Germany [2]Kharkiv National University of Radio Electronics, Kharkiv, Ukraine [3]Julius Maximilian University of Würzburg [4]National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine
P27	**Self-Cleaning Underwater Anti-Oil-Fouling Filters with Partially Dissoluble Surfaces for Enhanced Interfacial Oil/Water Separation** Eun Jin Kim [1*], Won San Choi [2] [1] Hanbat National University, Daejeon, Republic of Korea [2] Hanbat National University, Daejeon, Republic of Korea
P28	**Precisely Engineered Alginate Capsules via a Facile Strategy for Advanced Multifunctional Applications** Seung Hee Han[1*], Won San Choi[2] [1]Hanbat National University, 125, Daejeon, Republic of Korea [2]Hanbat National University, 125, Daejeon, Republic of Korea
P29	**Surface Modification of Polydopamine Particles with Polyethyleneimine Brushes for Enhanced Stability and Reduced Fragmentation** Eun Jin Kim and Won San Choi* Dept of Chemical and Biological Engineering, Hanbat National University, 125 Dongseodaero, Yuseong-gu, Daejeon, Republic of Korea
P30	**Structural, thermal, and conductive properties of sol-gel derived lanthanide-based ormolytes for electrochromic devices** A. Martins[1], A. R. Queijo[1*], V. Graça[1], R. F. P. Pereira[2], S. C. Nunes[3], S. Bruno[4], L. Fu[5], R. A. S. Ferreira[5], R. Rego[6] and V. de Zea Bermudez[6] *[1]INESC-TEC - Uni. Invest. Externa, University of Trás-os-Montes e Alto Douro, Quinta de Prados, 5000-801 Vila Real, Portugal* *[2]Chemistry Department and Centre of Chemistry, University of Minho, 4710-057 Braga, Portugal* *[3]Department of Chemistry and CICS - Health Sciences Research Centre, University of Beira Interior, 6201-001 Covilhã, Portugal* *[4]Department of Chemistry and CICECO - Aveiro Institute of Materials, University of Aveiro, 3810-193 Aveiro, Portugal* *[5]Department of Physics and CICECO - Aveiro Institute of Materials, University of Aveiro, 3810-193 Aveiro, Portugal* *[6]Chemistry Department and CQ-VR, University of Trás-os-Montes e Alto Douro, Quinta de Prados, 5000-801 Vila Real, Portugal*

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