

## PROGRAM

Tuesday 6th July 2021

10:30-11:00	Welcome and Opening Remarks Prof. S. Logothetidis, NN21 Chairman		
11:00-11:30 KEYNOTE (NN-Session) & L (Crystal)	Drug and gene delivery through the blood-brain barrier for the treatment of neurodegenerative disease and cancer E. E. Konofagou <sup>1,2</sup> , M. E. Karakatsani <sup>1</sup> , A. Pouliopoulos <sup>1</sup> , S. Wang <sup>1</sup> , R. Ji <sup>1</sup> , T. Kugelmann <sup>1</sup> , S.-Y. Wu <sup>1</sup> , M. Burgess <sup>1</sup> and H. Kamimura <sup>1</sup> <sup>1</sup> Dept.s of Biomedical Engineering and <sup>2</sup> Radiology (Physics), USA		
11:00-13:00 ( NN-NN1) & L (Crystal)	WS3 Nanomedicine in Cancer Chair: C. Gravalidis	11:00-13:00 (NN-NN2)	WS2 Polymers Chair: E. Pavlopoulou
11:30-12:00 INVITED	Nanotechnologies in orthopaedic oncology N. Baldini U. of Bologna and Istituto Ortopedico Rizzoli, Italy	11:30-12:00 INVITED	Micro-/Nano-surfaces texturing answering the challenges of Circular Economy: developing mono-material 3D plastic parts with functional surfaces S. Lebigre, L. Tenchine, B. Marcilly IPC (Centre Technique Industriel de la Plasturgie et des Composites), FRANCE
12:00-12:30 INVITED	Head and Neck Squamous Cell Carcinoma: clonality, microenvironment, cell-cell communication and potential treatments T. Mitsiadis, In. of Oral Biology, UZH, Switzerland	12:00-12:15	The effect of CNT's on the crosslinking process and properties of peroxide vulcanized EPDM P. Ketikis <sup>1</sup> , I. Ketikis <sup>1</sup> , P. Klonos <sup>2</sup> , A. Kyritsis <sup>2</sup> , P.A. Tarantili <sup>1</sup> <sup>1</sup> School of Chemical Engineering, <sup>2</sup> School of Applied Mathematical and Physical Sciences, National Technical Univ. of Athens, Greece
		12:15-12:30	Cellulosic materials in adhesive systems for wood-based panels E. Karagiannidis, E. Athanassiadou, D. Moutousidis, E. Psochia, A. Margellou, K. Triantafyllidis CHIMAR HELLAS S.A., Themi, Greece Dept. of Chemistry, Aristotle U. of Thessaloniki, Greece
12:30-13:00 INVITED	How can I help? Nanoinformatics for nanotoxicology and nanomedicine T. Puzyn <sup>1,2</sup> 1 Faculty of Chemistry, U. of Gdansk, Poland 2 OSAR Lab Ltd., Poland	12:30-12:45	Self-healing coatings for corrosion inhibition I. C. Vladu <sup>1</sup> , E. Ahmed <sup>1,2</sup> , A. Seitner <sup>2</sup> , R. Ebenbauer <sup>2</sup> , J. M. Chin <sup>2</sup> <sup>1</sup> CEST, Centre of Electrochemical Surface Technology, Austria <sup>2</sup> U. of Vienna, Faculty of Chemistry, In. of Physical Chemistry, Austria
		12:45-13:00	Innovative eco-sustainable photocontrolable and reversibly photoswitchable fluorescent bio-inks J. Oliveira <sup>1</sup> , V. Bouça <sup>1</sup> , A. Barros <sup>1</sup> , D. Ramada <sup>1</sup> , A.I. Freitas <sup>2</sup> , L. Domingues <sup>2</sup> , T.Q. Aguiar <sup>2</sup> <sup>1</sup> CeNTI - Portugal <sup>2</sup> CEB - Centre of Biological Engineering, U. of Minho, Portugal

13:00-14:00

Lunch Break

NN21 Posters

Exhibition

Networking





14:00-16:00 ( NN-NN1) & L (Crystal)	WS1 Plasmonics-Photonics Chair: D. Koutsogeorgis	14:00-16:00 (NN-NN2)	WS2 Polymers 2 Chair: S. Lebigre
14:00-14:30 INVITED	High throughput fabrication of plasmonic nitride nanostructures P. Patsalas Aristotle U. of Thessaloniki, Greece	14:00-14:30 INVITED	Novel Conducting Trimers for In Vivo Electronic Functionalization of Tissues E. Pavlopoulou <sup>1,2</sup> <sup>1</sup> In. for Electronic Structure and Laser, FORTH, Greece <sup>2</sup> Laboratoire de Chimie des Polymères Organiques (LCPO-UMR 5629), U. Bordeaux, France
14:30-15:00 INVITED	How, Why and When Spectroscopic Ellipsometry works best: a case to determine the the optical constants and carrier transport properties of low carrier concentration materials. N. Kalfagiannis, Nottingham Trent U., UK	14:30-15:00 INVITED	Polymer adhesion and friction: nanoscale mechanisms J. McClements, V. Koutsos In. for Materials and Processes, School of Engineering, The U. of Edinburgh, UK
15:00-15:30 INVITED	SiN based Photonic Integrated Circuits for Datacom applications and Optical Phased Arrays K. Vyrsoinos <sup>1,2</sup> , D. Chatzitheocharis <sup>1,2</sup> , T. Chrisostomidis <sup>1,2</sup> , I. Roumpos <sup>1,2</sup> , G. Patsamanis <sup>1,2</sup> , D. Ketzaki <sup>2,3</sup> , T. Alexoudi <sup>2,3</sup> , S. Pitris <sup>2,3</sup> , D. Spasopoulos <sup>1,2</sup> <sup>1</sup> Dept. of Physics, Aristotle U. of Thessaloniki, Greece <sup>2</sup> Center for Interdisciplinary Research, Greece, <sup>3</sup> Computer Science Dept., Aristotle U. of Thessaloniki, Greece	15:00-15:30 INVITED	All-polymer Nanostructured Materials for Energy Storage E. Glynos Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Greece

15:30-15:45	<b>Silver nanoplates paved PMMA cuvettes as a cheap and re-usable plasmonic sensing device.</b> M. Condorelli <sup>1</sup> , L. Litti <sup>2</sup> , M. Pulvirenti <sup>1</sup> , V. Scardaci <sup>1</sup> , M. Meneghetti <sup>2</sup> , G. Compagnini <sup>1</sup> . <sup>1</sup> Dept. of Chemistry, U. of Catania, Italy, <sup>2</sup> Dept. of Chemistry, U. of Padova, Italy	15:30-15:45	<b>Altering the Wetting Behavior of Polymer Surfaces Utilizing Polymer Nanocomposites</b> K. Chrissopoulou <sup>1</sup> , F. Krasanakis <sup>1</sup> , Th.-M. Chatzaki <sup>1,2</sup> and S. H. Anastasiadis <sup>1,2</sup> <sup>1</sup> In. of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Greece <sup>2</sup> Dept. of Chemistry, U. of Crete, Greece
15:45-16:00 EU PROJECT	<b>Coherent femtosecond x-ray multi-spectral microscopy system: The XMMaS project</b> S. Petrakis <sup>1,2</sup> , E. P. Benis <sup>1,2</sup> , A. Skoulakis <sup>1</sup> , Y. Orphanos <sup>1,3</sup> , V. Dimitriou <sup>1,3</sup> , M. Bakarezos <sup>1,3</sup> , M. Tatarakis <sup>2,4</sup> , N. Kortsalioudakis <sup>5</sup> , A. Tsapras <sup>5</sup> , P. Tsopelas <sup>5</sup> , C. Balas <sup>5</sup> , D. Zouridis <sup>6</sup> , E. Pachos <sup>6</sup> , and N. A. Papadogiannis <sup>2,3</sup> <sup>1</sup> In. of Plasma Physics and Lasers, Hellenic Mediterranean U. Research Centre, Greece <sup>2</sup> Dept. of Physics, U. of Ioannina, Greece, <sup>3</sup> Dept. of Music Technology and Acoustics, Hellenic Mediterranean U., Greece, <sup>4</sup> Dept. of Electronic Engineering, Hellenic Mediterranean U., Greece, <sup>5</sup> School of Electrical & Computer Engineering, Technical U. of Crete, Greece, <sup>6</sup> IKNOWHOW (IKH), Greece	15:45-16:00	<b>Solvatochromic Red-Emitting Carbon Dot based Fluorescent Nanoprobes</b> Melis Özge Alaş, Rükan Genç <sup>1,2*</sup> <sup>1</sup> Mersin U., Dept. of Chemical Engineering, Turkey <sup>2</sup> SUNUM Nanotechnology Research and Application Centre, Sabanci U., Turkey

16:00-16:30	Coffee Break	NN21 Posters	Exhibition	Networking
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16:30-18:00 (NN-NN1)		16:30-18:00 (NN-NN2) & L (Crystal)		16:30-18:00 (MODEL-Session)	
WS1 Nanoelectronics Chair: F. Cappeluti		WS2 Thin Films Chair: K. Sarakinos		Computational 1 Chair: L. Tsetseris	
16:30-17:00 INVITED	<b>Novel broadband and efficient THz radiation sources based on spintronic structures</b> E. Papaioannou In. of Physics, Martin-Luther U., Germany	16:30-17:00 INVITED	<b>Cellulose Thin Film Technology</b> S. Spirk In. of Bioproducts and Paper Technology, Austria	16:30-17:00 INVITED	<b>Disentangling and Tailoring the Properties of Nanoparticles by Large Scale Computation</b> J. Kioseoglou Dept. of Physics, Aristotle U. of Thessaloniki GR-54124, Thessaloniki, Greece
17:00-17:30 INVITED	<b>Impact of Point Defects on the Electronic Properties of Transition Metal Dichalcogenides (TMDs)</b> K. Zhussupbekov <sup>1,2</sup> , L. Ansari <sup>3</sup> , J. B. Mc Manus <sup>2,4</sup> , A. Zhussupbekova <sup>1,2</sup> , I. V. Shvets <sup>1,2</sup> , G. S. Duesberg <sup>4,5</sup> , P. K. Hurley <sup>2,3</sup> , C. Ó Coileáin <sup>2,4</sup> , N. McEvoy <sup>2,4</sup> , and F. Gity <sup>3</sup> <sup>1</sup> School of Physics, Trinity College Dublin, Ireland <sup>2</sup> AMBER Centre, CRANN In., Trinity College Dublin, Ireland <sup>3</sup> Nanoelectronics Materials and Devices, Tyndall National In., U. College Cork, Ireland <sup>4</sup> School of Chemistry, Trinity College Dublin, Ireland <sup>5</sup> In. of Physics, EIT 2, Faculty of Electrical Engineering and Information Technology, Universität der Bundeswehr, Germany	17:00-17:15	<b>Aluminum oxide nanolayers obtained via a novel exfoliation technique from the liquid phase</b> A. Dobosz, A. Wójcik, T. Gancarz In. of Metallurgy and Materials Science of the Polish Academy of Sciences, Poland	17:00-17:30 INVITED	<b>Investigation the solidification of polymers by the phase-field method</b> M. Selzer, S. Farzaneh Kalourazi, H. Zhang, F. Wang, B. Nestler Karlsruhe Institut of Technology, IAM, University, Germany
		17:15-17:30	<b>Moderate-temperature chemical vapor deposition of SiOxNy films for corrosion barriers: structure-properties relations based on level of nitrogen incorporation</b> K. C. Topka <sup>1</sup> , B. Diallo <sup>2</sup> , M. Puyo <sup>1</sup> , C. Genevois <sup>2</sup> , Y. Tison <sup>3</sup> , P. Papavasileiou <sup>4</sup> , D. Samelot <sup>4</sup> , R. Laloo <sup>1</sup> , D. Sadowski <sup>4</sup> , F. Senocq <sup>4</sup> , T. Sauvage <sup>2</sup> , H. Vergnes <sup>5</sup> , M.-J. Menu <sup>1</sup> , H. Martinez <sup>3</sup> , B. Caussat <sup>5</sup> , V. Turq <sup>1</sup> , N. Pellerin <sup>2</sup> , C. Vahlas <sup>1</sup> <sup>1</sup> CIRIMAT, Université de Toulouse, CNRS, Université, France <sup>2</sup> CNRS, CEMHTI UPR3079, Université d'Orléans, France <sup>3</sup> CNRS, Université de Pau et des Pays de l'Adour, France <sup>4</sup> CIRIMAT, Université de Toulouse, CNRS, France <sup>5</sup> LGC, Université de Toulouse INPT, CNRS, France	17:30-17:45	<b>Quantum mechanical calculations of high-Tc Fe-superconductors</b> R. Columbié-Leyva <sup>1</sup> , U. Miranda <sup>2</sup> , Alberto López-Vivas <sup>1</sup> , Ilya G. Kaplan <sup>1*</sup> <sup>1</sup> IIM, UNAM, México. <sup>2</sup> IAPS, University of Latvia, Latvia.
17:30-17:45 EU-PROJECT	<b>INTERSECT – Interoperable materials-to-device simulation box for disruptive electronics</b> A. Calzolari CNR-NANO Istituto Nanoscienze, IT	17:30-17:45	<b>Atomic and electronic structure specificity studies of tin oxide nanolayers formed by magnetron sputtering and MOCVD approaches</b> S.Yu. Turishchev <sup>1</sup> , O.A. Chuvenkova <sup>1</sup> , S.V. Ryabtsev <sup>1</sup> , S.I. Kurganski <sup>1</sup> , M.D. Manyakin <sup>1</sup> , D.A. Koyuda <sup>1</sup> , E.V. Parinova <sup>1</sup> , A.K. Pisljaruk <sup>1</sup> , R.G. Chumakov <sup>2</sup> , A.M. Lebedev <sup>2</sup> , A. Makarova <sup>3</sup> , D. Smirnov <sup>3</sup> , R. Ovsyannikov <sup>3</sup> , V. Sivakov <sup>4</sup> <sup>1</sup> Voronezh State U., Russia, <sup>2</sup> National Research Center "Kurchatov In.", Russia <sup>3</sup> Helmholtz Zentrum Berlin, Germany, <sup>4</sup> Leibniz In. of Photonic Technologies, Germany		
17:45-18:00	<b>Can we measure nanostructure roughness when SEM pixel size is much larger than rms value: Mathematics says yes!</b> G. Papaveros <sup>1,2,3</sup> , V. Constantoudis <sup>1,2</sup> , E. Gogolides <sup>1,2</sup> <sup>1</sup> INN, N.C.S.R. Demokritos, Greece, <sup>2</sup> Nanometrisis p.c., Greece, <sup>3</sup> Physics Dept., Aristotle U. of Thessaloniki, Greece		17:45-18:00	<b>Synthesis and Investigation of Copper oxides-based thin films and Nanostructures</b> S. Pashayan <sup>1</sup> , R. Avetisyan <sup>2</sup> <sup>1</sup> In. for Physical Research of NAS of Armenia, Armenia <sup>2</sup> In. of Radiophysics & Electronics, NAS of Armenia, Armenia	

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

18:30-19:00		Introduction by Prof. S. Logothetidis, ISFOE21 & NN21 Chairman
19:00-19:30		<b>Evolution of materials in future vehicles: a new paradigm for the automotive components</b> Dr. Nello Li Pira Global Materials R&I and Roadmaps Manager, Fiat Research Centre, Italy
19:30-20:00		<b>From molecules to nanocolloids to suprananocolloids</b> Prof. Eugenia Kumacheva Distinguished Professor of Chemistry, U. of Toronto, Canada
20:00-20:30		<b>Electronics on the Brain</b> Prof. George Malliaras Prince Philip Professor of Technology, University of Cambridge, UK

## Wednesday 7 July 2021

10:30-11:00 KEYNOTE ( NN-NN1) & L (Timber 2) Chair: S. Kassavetis		Multiscale materials design via selective surfactant deployment K. Sarakinos Nanoscale Engineering Division, Dept. of Physics, Chemistry and Biology, Linköping U., Sweden													
11:00-13:00 ( NN-NN1)		WS2 Nanomagnetism 1 Chair: S. Kassavetis		11:00-13:00 ( NN-NN2)		WS1 Nanoenergy 1 Chair: P. Boulanger		11:00-13:00 ( 13D-Session)		13D 1 3D Bioprinting Chair: I. Zergioti		11:00-13:00 (MODEL-Session) & L (Timber 2)		Computational 2 Chair: J. Kioseoglou	
11:00-11:30 INVITED	Nanomagnetism: A powerful tool in modern applications M. Angelakeris <sup>1</sup> School of Physics, Aristotle U. of Thessaloniki, Greece			11:00-11:30 INVITED	Modeling of thin-film III-V solar cells including nanostructures and photon management F. Cappelluti <sup>1</sup> , A. Tibaldi <sup>1,2</sup> <sup>1</sup> Politecnico di Torino, Italy <sup>2</sup> IEIT-CNR, Italy			11:00-11:30 KEYNOTE	Criteria, Challenges, and Recent Advances in Translational Bioinks Yawei Gu, Aurelien Forget, V. Prasad Shastri Institute for Macromolecular Chemistry, University of Freiburg, Germany			11:00-11:30 KEYNOTE	Basics of topological band classification in low-dimensional crystals M. Damnjanović, S. Dmitrović, B. Nikolić, Z. Popović, N. Lazić, T. Vuković, I. Milošević Faculty of Physics, Uni Belgrade Dept., U., Serbia		
11:30-12:00 INVITED	Defect-tailored nanoscale magnetic functionalities A. Lappas <sup>1</sup> , G. Antonopoulos <sup>1,2</sup> , M. Vasilakaki <sup>3</sup> , K.N. Trohidou <sup>3</sup> , V. Iannotti <sup>4</sup> , G. Ausanio <sup>4</sup> , M. Abeykoon <sup>5</sup> , I.K. Robinson <sup>6</sup> and E.S. Bozin <sup>6</sup> <sup>1</sup> IESL, FORTH, Greece, <sup>2</sup> Dept. of Chemistry, U. of Crete, Greece, <sup>3</sup> INN, NCSR Demokritos, Greece, <sup>4</sup> CNR-SPIN and Dept. of Physics "E. Pancini", U. of Naples Federico II, Italy, <sup>5</sup> Photon Sciences Division, National Synchrotron Light Source II, Brookhaven National Lab., USA, <sup>6</sup> Brookhaven National Lab., USA			11:30-11:45 INVITED	Micro-capacitors based on Si nanopillars for on-chip energy storage E. Hourdakis, A. G. Nassiopoulou INN, NCSR Demokritos, Greece			11:30-12:00 INVITED	Engineering spinal cord organoids with neural co-cultures in alginate fibers O. M. Fannon, A. Bithell <sup>2</sup> , E. Delivopoulos <sup>1</sup> <sup>1</sup> School of Biological Sciences, U. of Reading, UK <sup>2</sup> School of Pharmacy, U. of Reading, UK			11:30-12:00 INVITED	Band Inversion and Band Topology in 1T'-MoS <sub>2</sub> I. Milosevic Faculty of Physics, U. of Belgrade, Serbia		
	Photoluminescence Emission of undoped as well as PbO- and Br-doped CsPbBr <sub>3</sub> Perovskite Single Crystals under Variable Temperature D. Gerakinis <sup>1</sup> , S. Vovla <sup>1</sup> , W. Lin <sup>2</sup> , S. Gardelis <sup>3</sup> , Y.S. Raptis <sup>1</sup> , M. Kanatzidis <sup>2</sup> , A.G. Kontos <sup>1</sup> <sup>1</sup> NTUA, Greece, <sup>2</sup> Northwestern University, USA, <sup>3</sup> NKUA, Greece			11:45-12:00 INVITED	Hierarchically structured 3D bioprinting for tissue engineering Sendemir A. <sup>1,2</sup> <sup>1</sup> Dept. of Bioengineering, Ege U., Turkey <sup>2</sup> Dept. of Biomedical Technologies, Ege U., Turkey			12:00-12:30 INVITED	Computational modelling of the synthesis, processing and properties of two-dimensional materials. L. Tsetseris Dept. of Physics, National Technical U. of Athens, Greece						
12:00-12:15	Multifunctional cotton fabric modified with silver nanowires A. Nejman <sup>1,2</sup> , A. Baranowska-Korczyk <sup>1</sup> , I. Jasińska <sup>1</sup> , P. Swaczyna <sup>1</sup> , G. Celichowski <sup>2</sup> , M. Cieślak <sup>1</sup> <sup>1</sup> ŁUKASIEWICZ Research Network – Textile Research In., Poland <sup>2</sup> U. of Lodz, Dept. of Materials Technology and Chemistry, Poland			12:00-12:15	Mesoporous Carbon@Silica Nanocomposite for Her2 Positive Breast Cancer Targeted Chemo-Photothermal Therapy A. Tunçel, F. Yurt Dept. of Nuclear Applications, In. of Nuclear Science, Ege U., Turkey			12:30-13:00 INVITED	Prototyping of Bespoke Bioelectronic Interfaces that are Soft and Multi-modal I. R. Minev Dept. of Automatic Control and Systems Engineering, U. of Sheffield, UK			12:30-13:00 INVITED	Charge migration in carbon nanotubes induced by mechanical deformations Z. Popović, M. Damnjanović, S. Dmitrović, T. Vuković, I. Milošević NanoLab, Faculty of Physics, U. of Belgrade, Serbia		
12:15-12:30	Giant Faraday rotation in a conductive polymer doped with Fe <sub>2</sub> O <sub>3</sub> nanoparticles S. Piotrowska <sup>1</sup> , K. Łempicka <sup>1</sup> , A. Wosztal <sup>2</sup> , K. Pietrusińska <sup>1</sup> , A. Pietranik <sup>1</sup> , P. W. Majewski <sup>3</sup> , B. Piętko <sup>1</sup> , J. Szczytko <sup>1</sup> <sup>1</sup> Faculty of Physics, University of Warsaw, Poland <sup>2</sup> Interfaculty Individual Studies in Mathematics and Natural Sciences, University of Warsaw, Poland <sup>3</sup> Faculty of Chemistry, University of Warsaw, Poland			12:15-12:30	Nanostructured Electro Catalysts for Membrane Electron Assemblies Used in Urea Fuel Cells for IoT Applications E. Mamut <sup>1</sup> , I. M. S. Niculae <sup>2</sup> , C. Sofroniei <sup>1</sup> <sup>1</sup> In. for Nanotechnologies and Alternative Energy Sources, "Ovidius" U. of Constanta, Romania <sup>2</sup> Eltres R&D Ltd. Romania, Romania			12:30-12:45	Thermoelectric performance of Bi <sub>2</sub> Sb <sub>2-x</sub> Te <sub>3</sub> – ABS composites, prepared by mechanical mixing Z. Viskadourakis <sup>1</sup> , A. Drymiskianaki <sup>2</sup> , V. M. Papadakis <sup>1</sup> , I. Ioannou <sup>3</sup> , Th. Kyratsi <sup>3</sup> and G. Kenanakis <sup>1</sup> <sup>1</sup> IESL, FORTH, Greece <sup>2</sup> University of Crete, Greece <sup>3</sup> University of Cyprus, Cyprus						

12:30-12:45 EU-PROJECT	<p><b>From thermal treatment to laser structuring: a possible strategy for semiconductor quantum dots patterning</b> F. Limosani, R. Carcione, F. Antolini ENEA C. R. Frascati, Fusion and Technologies for Nuclear Safety and Security, Dept., Physical Technologies for Safety and Health Division, Photonics Micro and Nanostructures Lab., Italy</p>	12:45-13:00	<p><b>Development of lead-free piezoelectric fibres.</b> A. Melo<sup>1</sup>; N. Azoia<sup>1</sup>; B. Peliteiro<sup>1</sup>, D. Esteves<sup>1</sup>, N. Durães<sup>1</sup>; <sup>1</sup>Centro de Nanotecnologia e Materiais Técnicos, Funcionais e Inteligentes (CeNTI), Portugal.</p>
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13:00-14:00

Lunch Break

NN21 Posters

Exhibition

Networking

								14:00-16:00 ( MODEL-Session)	Computational 3 Chair: V. Constantoudis	
14:00-14:30 KEYNOTE ( I3D-Session) Chair: V. Prasad Shastri	3D Printing for the Future of Healthcare: Applications via multi-materials, bio- and electronics printing Yeong Wai Yee School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore Centre for 3D Printing, HP-NTU Digital Manufacturing Corp Lab, Singapore									
14:30-16:00 ( NN-NN1)	WS2 Nanocharacterization 1 Chair: C. Gravalidis	14:30-16:00 ( NN-NN2)	WS3 Nanobiomaterials 1 Chair: M. ChatziniKolaidou	14:30-16:00 V (I3D-Session) & L (Timber 2)	I3D 2 Chair: V. Prasad Shastri	14:00-14:30 INVITED	Computational modeling of polymer-based nanostructured materials: A synergy between simulations and data-driven algorithms V. Harmandaris Computation-based Science and Technology Research Center, Cyprus In., Cyprus, & Dept. of Mathematics and U. of Crete, Greece			
14:30-15:00 INVITED	Casimir forces between complex materials towards actuation dynamics G. Palasantzas Zernike In. for Advanced Materials, U. of Groningen, The Netherlands	14:30-14:45	Interactions at bio-nano interfaces: fundamentals for materials design and preparation for biomedical applications W. Pajerski <sup>1</sup> , P. Chytrosz <sup>1</sup> , W. Reczynski <sup>2</sup> , M. Pawlyta <sup>3</sup> , M. Goida-Cepa <sup>1</sup> , D. Ochonska <sup>4</sup> , M. Brzychczy-Wloch <sup>4</sup> , A. Kotarba <sup>1</sup> <sup>1</sup> Faculty of Chemistry, Jagiellonian U., Poland <sup>2</sup> AGH U. of Science and Technology, Poland <sup>3</sup> Silesian U. of Technology, Poland <sup>4</sup> F. Medicine, Jagiellonian U. Medical College, Poland	14:30-15:00 INVITED	Laser precise printing for biomedical applications Ioanna Zergioti School of Applied Mathematics and Physical Sciences, National Technical U. of Athens, Greece	14:30-14:45	Atomistic studies on the detection of atmospheric radicals by functionalized silicon nanowires D. Kaltsas and L. Tsetseris Dept. of Physics, National Technical U. of Athens, Greece			
15:00-15:30 INVITED V	The Application of Mueller Matrix Spectroscopic Ellipsometry based Scatterometry and CD- Small Angle X-ray Scattering to determination of the feature shape and dimensions of integrated circuit structures A.C. Diebold SUNY Polytechnic In., USA	14:45-15:00	Sonochemical approach for the synthesis of functional NPs/polymer hybrid systems P. Chytrosz <sup>1</sup> , M. Goida-Cepa <sup>1</sup> , L. Cwilklik <sup>2</sup> , W. Kulig <sup>3</sup> , A. Kotarba <sup>1</sup> <sup>1</sup> Faculty of Chemistry Jagiellonian U., Poland <sup>2</sup> J. Heyrovský In. of Physical Chemistry, Czech Academy of Sciences, Czech Republic <sup>3</sup> Dept. of Physics, U. of Helsinki, Finland	15:00-15:15 EU PROJECT	3D Printable Conducting Polymers for Bioelectronics David Mecerreyes, Antonio Dominguez Alfaro, Nuria Allegret, Gisela Luque, Naroa Lopez, Miryam Criado POLYMAT U. of the Basque Country (UPV/EHU), Spain	14:45-15:00	Inter-diffusion and microstructure of Ti-Nb alloys T. Leontiou <sup>1</sup> , L. Papadakis <sup>1</sup> , A. Evangelou <sup>2</sup> , T. Kyratsi <sup>2</sup> , R. Stylianou <sup>2</sup> and D. Photiou <sup>3</sup> <sup>1</sup> Frederick U., Cyprus, <sup>2</sup> U. of Cyprus, Cyprus <sup>3</sup> Simlead, Cyprus			
15:30-15:45	On a new interpretation of Vickers indentation A.K. Kampouris <sup>1</sup> , K.-I. Lappas <sup>1</sup> , A.A. Konstantinidis <sup>1</sup> and E.C. Aifantis <sup>1,2</sup> <sup>1</sup> Aristotle U. of Thessaloniki, Greece <sup>2</sup> Michigan Technological U., USA	15:00-15:15	Surface conjugated CS based nanoparticles for targeting miRNA towards human melanoma cells C. Palocci <sup>1</sup> , L. Chronopoulou <sup>1</sup> , N. Felli <sup>2</sup> , B. Arasi <sup>2</sup> , F. Felicetti <sup>2</sup> <sup>1</sup> Dept. of Chemistry, U. of Rome La Sapienza, Italy <sup>2</sup> Istituto Superiore di Sanità, Dept. Of Oncology and Molecular Medicine, Italy	15:15-15:30	Laser-induced printing of stem cells: a powerful tool for biological applications Adrien Casanova <sup>1</sup> , Jérôme D Robin <sup>2</sup> , Frédérique Magdinier <sup>2</sup> , Philippe Delaporte <sup>1</sup> , Patricia Alloncle <sup>1</sup> , <sup>1</sup> Aix-Marseille U., CNRS, LP3, France ; <sup>2</sup> Aix-Marseille U., INSERM, MMG, France	15:00-15:15 EU PROJECT	Spatial distribution analysis of nanomechanical properties of heterogeneous materials by applying Machine Learning algorithms through nanoindentation P. Varytis Innovation in Research & Engineering Solutions (IRES), Belgium			
15:45-16:00 EU-PROJECT	Synthesis and Characterization of Silver Nanoparticles with Antiparasitic Properties A. Kaldeli-Kerou <sup>1</sup> , T. Karamanidou <sup>1</sup> , A. Vlachou <sup>1</sup> , A. Tsouknidas <sup>1,2</sup> <sup>1</sup> PLiN Nanotechnology SA, <sup>2</sup> U. of Western Macedonia, Greece	15:15-15:30	Development of $\beta$ -arbutin Doped Nanofiber Webs with Potentials of Reducing Skin Blemishes D. Karaagac <sup>1</sup> , E.J. Sisman <sup>1</sup> , G.D.Tetik <sup>2</sup> , A.E.Tayyar <sup>3</sup> , <sup>1</sup> Usak U., Turkey	15:30-15:45	Atomic Layer 3D printing I. Kundatra <sup>1</sup> , M. Plakhotnyuk <sup>1</sup> , J. Bachmann <sup>1,2</sup> , M. Barr <sup>2</sup> , P. Brüner <sup>3</sup> <sup>1</sup> . ATLANT 3D Nanosystems, Denmark <sup>2</sup> . Friedrich-Alexander Universität Erlangen, Germany <sup>3</sup> . IONTOF GmbH, Münster, Germany	15:15-15:30 EU PROJECT	NanoSolveIT H2020 Project: Nanoinformatics tools for the in silico assessment and the safe by design of nanomaterials A. Afantitis NovaMechanics Ltd, Cyprus			

All times displayed in Greece local time (UTC/GMT+3)

	15:30-15:45	<b>Biothermal Imaging and Thermometry in Microcellular Aqueous Environments</b> F. Pedroza-Montero, D. Soto-Puebla, B. Castaneda, K. Santacruz-Gómez, O. Álvarez-Bajo, M. Pedroza-Montero Dept Physics Research, University of Sonora, México	15:45-16:00	<b>Design and manufacturing of thermal actuators using 3D and screen printing</b> K.M.B. Jansen, Julius Hofman, Yu Song Faculty of Industrial Design Engineering, Delft U. of Technology	15:30-15:45	<b>Curved Core-Shell nanowires: Comparison an Experiment and Finite Element Method Simulation</b> S. Kryvyi, S. Kret In. of Physics Polish Academy of Sciences, al. Lotnikow 32/46, 02-668 Warsaw, Poland
	15:45-16:00	<b>Antiviral action of metal nanoparticles: dependence on their size, stabilizer and concentration</b> N. Rusinchuk <sup>1</sup> , V. Lozovski <sup>1</sup> , V. Lysenko <sup>2</sup> , Iu. Mukha <sup>3</sup> , N. Vityuk <sup>3</sup> , L. Bilyavska <sup>4</sup> , K. Naumenko <sup>4</sup> , S. Zahorodnia <sup>4</sup> <sup>1</sup> Taras Shevchenko National U. of Kyiv, Kyiv, Ukraine <sup>2,3,4</sup> National Academy of Sciences of Ukraine, Ukraine				

16:00-16:30	Coffee Break	NN21 Posters	Exhibition	Networking
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16:30-18:30 ( NN-NN1)		16:30-18:15 (NN-NN2) & L (Timber 2)		16:30-18:30 ( MODEL-Session)		16:30-18:30 ( I3D-Session)	
WS2 Nanoparticles Chair: S. Kassavetis		WS3 Nanomedicine in Drug Delivery: Chair: Y. Missirlis		Computational 4 Chair: I. Milosevic		I3D 3 Chair: E. Delivopoulos	
16:30-17:00 INVITED	Nanoporous and foam materials of functional materials M. R. Koblischka <sup>1</sup> , A. Koblischka-Veneva <sup>1</sup> , D. Gokhfeld <sup>2</sup> <sup>1</sup> Saarland U., Experimental Physics, Germany, <sup>2</sup> Kirensky In. of Physics, Federal Research Center KSC SB RAS, Russia	16:30-17:00 INVITED	Achieving the practical clinical utility on the roadmaps of precision medicine to tackle heterogeneity of multifactorial diseases within the healthcare system I. S. Vizirianakis Aristotle U. of Thessaloniki, Greece; and U. of Nicosia, CY-1700 Nicosia, Cyprus	16:30-17:00 INVITED	Classification of Quasi-one-dimensional Topological Crystalline Phases S. Dmitrović, Z. Popović, T. Vuković, I. Milošević, M. Damnjanović NanoLab, Faculty of Physics, U. Belgrade Belgrade, Serbia	16:30-17:00 INVITED	INVITED(V) Two-Photon Grayscale Lithography Basics and applications A. Legant, M. Thiel, Y. Tanguy, N. Lindenmann, A. Tungal, R. Reiner, M. Blaicher, J. Hoffmann, T. Sauter, F. Niesler, T. Gissibl, A. Radke Nanoscribe GmbH & Co. KG, Germany
17:00-17:15	Topological Crystalline Insulator SnTe Nanowires – Physical Vapour Deposition Growth and Electronic Properties J. Polaczyński <sup>1</sup> , A. Kazakov <sup>1</sup> , J. Korczak <sup>1,2</sup> , D. Janaszko <sup>2</sup> , A. Kaleta <sup>2</sup> , S. Kret <sup>2</sup> , T. Wojciechowski <sup>1</sup> and T. Wojtowicz <sup>1</sup> <sup>1</sup> Polish Academy of Sciences, Poland <sup>2</sup> Polish Academy of Sciences, Poland	17:00-17:15	Synthesis and photophysics of the Tetrahydroxysubstituted Zinc Phthalocyanine Derivative Assembled with Carnitine T. Potlog <sup>1</sup> , I. Lungu <sup>1</sup> , A. Popusoi <sup>1</sup> , G. Dragalina <sup>1</sup> , A. Barba <sup>1</sup> , H. Mimura <sup>2</sup> <sup>1</sup> Research & Innovation In., Moldova State U., Moldova <sup>2</sup> Research In. of Electronics, Shizuoka U., Japan	17:00-17:30 INVITED	Mathematical and Computational Nanometrology: From error propagation to machine learning techniques. V. Constantoudis <sup>1,2</sup> , G. Papavieros <sup>1,2,3</sup> , E. Gogolides <sup>1,2</sup> <sup>1</sup> INN, N.C.S.R. Demokritos, Greece) <sup>2</sup> Nanometris p.c., Agia Paraskevi, Greece <sup>3</sup> , Aristotle U. of Thessaloniki, Greece	17:00-17:30 INVITED	3D printed nanocomposite materials and (meta)materials for energy applications Z. Viskadourakis, A. Tasolamprou, O. Tsilipakos, and G. Kenanakis In. of Electronic Structure and Laser, Foundation for Research and Technology-Hellas, Greece
17:15-17:30	Hierarchical surfaces with reversible photoinduced and heat-induced wettability: ZnO nanorods on laser-microstructured silicon M. Kanidi <sup>1</sup> , A. Bardakas <sup>2</sup> , A. Kerasidou <sup>2</sup> , A. Anastasopoulos <sup>1</sup> , C. Tsamis <sup>2</sup> , M. Kandyla <sup>1</sup> <sup>1</sup> Theoretical and Physical Chemistry In., National Hellenic Research Foundation, Greece <sup>2</sup> INN, NCSR ‘Demokritos’, 15310 Athens, Greece	17:15-17:30 YRA Candidate	A gold-based nano-formulation of the CRISPR/Cas9 ribonucleoprotein for efficient delivery and genome editing S. Konstantinidou <sup>1</sup> , T. Schmidt <sup>1</sup> , E. Landi <sup>1</sup> , A. De Carli <sup>1</sup> , G. Maltinti <sup>1</sup> , D. Witt <sup>2</sup> , A. Dziadosz <sup>2</sup> , A. Lindstaedt <sup>2</sup> , M. Lai <sup>3</sup> , M. Pistello <sup>3</sup> , V. Cappello <sup>4</sup> , L. Dente <sup>1</sup> , C. Gabellini <sup>1</sup> , P. Barski <sup>2</sup> , V. Raffa <sup>1</sup> <sup>1</sup> Dept. of Biology, U. of Pisa, Italy, <sup>2</sup> ProChimia Surfaces, Poland, <sup>3</sup> Dept. of Medicine, U. of Pisa, Italy, <sup>4</sup> Istituto Italiano di Tecnologia, Italy	17:30-17:45	Hole Transfer in Open Carbyne Chains C. Simserides, A. Morphis, K. Lambropoulos, National and Kapodistrian U. of Athens, Dept. of Physics, Greece		
17:30-17:45 EU PROJECT	SMARTFAN: Smart by Design and Intelligent by Architecture for turbine blade fan and structural components systems T. Kosanovic, S. Termine, D. Semitekolos, A.F. Trompeta, C.A. Charitidis Research Lab of Advanced, Composite, Nano-Materials and Nanotechnology (R-NanoLab), Dept. of Materials Science and Engineering, NTUA, Greece	17:30-17:45	Development of novel functional additives fabricated by ultrafast laser process for potential applications in biomedicine and tissue engineering Ahmed Al-Kattan Aix Marseille U., CNRS, LP3 UMR 7341, France	17:45-18:00 YRA Candidate	How structural dynamics affect hole transfer in B-DNA: A Combination of MD, RT-TDDFT and TB M. Mantela <sup>1</sup> , A. Morphis <sup>1</sup> , K. Lambropoulos <sup>1</sup> , C. Simserides <sup>1</sup> , R. Di Felice <sup>2</sup> <sup>1</sup> National and Kapodistrian U. of Athens, Dept. of Physics, Greece <sup>2</sup> Dept. of Physics and Astronomy and Dept. of Quantitative and Computational Biology, U. of Southern California, USA		

17:45-18:00	<p><b>Modification of the junction parameters via Al doping on Ag/CdS:Al thin-film Schottky diodes for microwave sensors</b>  <b>A. Fernández-Pérez, C. Navarrete-Medina, R. Muñoz-Pantoja</b>          Dept Física, Universidad del Bio-Bio, Chile.</p>	<p><b>17:45-18:00</b></p> <p><b>On the Optimal Design of Controlled Drug Release from a Size-distributed Population of PLGA Drug-Carriers</b>  <b>A. Vasileiadou<sup>1,2</sup> and C. Kiparissides<sup>1,2</sup></b>  <sup>1</sup>Dept. of Chemical Engineering, Aristotle U. of Thessaloniki, Greece  <sup>2</sup>Chemical Process &amp; Energy Resources In., Centre for Research and Technology Hellas, Greece</p>	
18:00-18:15	<p><b>Self-cleaning functional surfaces using laser microstructuring and R2R NIL for PV cell applications</b>  <b>K. Tourlouki<sup>1</sup>, S. Maragkaki<sup>2</sup>, E. Svinterikos<sup>1</sup>, T. Tachtsidis<sup>1</sup>, A. Karagiannaki<sup>2</sup>, E. Stratakis<sup>2</sup>, N. Kehagias<sup>1,3</sup></b>  <sup>1</sup>. Nanotypos (Company), Greece  <sup>2</sup>. IESL, FORTH and U. Of Crete, , Greece  <sup>3</sup>. INN, NCSR "Demokritos", Greece</p>		
18:15-18:30	<p><b>Sustainable nanostructured food packaging based on a biodegradable polyester</b>  <b>E. Svinterikos<sup>1</sup>, K. Tourlouki<sup>1</sup>, T. Tachtsidis<sup>1</sup>, N. Kehagias<sup>1,2</sup></b>  <sup>1</sup>. Nanotypos (Company), Technopoli ICT Business Park Thessaloniki, Greece  <sup>2</sup>. NCSR "Demokritos", In. of Nanoscience &amp; Nanotechnology, Greece</p>		



### Thursday 8 July 2021

		10:30-13:00 (2D MAT-Session) & L (Timber 1)		WS5 Graphene 1 Chair: A. Di Bartolomeo
10:30-11:00 KEYNOTE ( NN-NN1) & L (Timber 2) Chair: C. Gravalidis	Self-assembling dendrimer nanosystems for biomedical applications Peng Dr. Ling Peng, CNRS, Aix-Marseille University, France Centre Interdisciplinaire de Nanoscience de Marseille, France			10:30-11:00 KEYNOTE Twistronics: Electron localization in stacked layers of 2D materials Efthimios Kaxiras Harvard U., USA
11:00-13:00 ( NN-NN2) & L (Timber 2)	WS3-Covid Chair: C. Gravalidis	11:00-13:00 ( BIO-Session)	WS4 Bioelectronics 1 Chair: Yoeri van de Burgt	
11:00-11:30 INVITED	Nanotechnology law and Nanoregulation saving the world from Covid-19 Ilise Feitshans, European Scientific In., France & Executive Director The Work Health & Survival Project, EU/USA	11:00-11:30 INVITED	Organic neuromorphic electronics: bio-inspired functions and local training in robotics P. Gkoupidenis Max Planck In. for Polymer Research, Dept. of Molecular Electronics, Germany	11:00-11:30 INVITED Infrared light detection with graphene E. Lidorikis University of Ioannna, Greece
11:30-11:45 EU PROJECT	impURE: Injection Moulding Repurposing for Medical Supplies enabled by Additive Manufacturing A.F. Trompeta, M. Karamitrou, A. Alexandratou, C.A. Charitidis, Research Lab of Advanced, Composite, Nano-Materials and Nanotechnology (R-NanoLab), Dept. of Materials Science and Engineering, School of Chemical Engineering, National Technical U. of Athens, Greece	11:30-12:00 INVITED	Organic Neuromorphic Biosensors F. Biscarini <sup>1,2</sup> , M. Giordani <sup>3</sup> , G. Calandra Sebastianella <sup>1,3</sup> , A. De Salvo <sup>1,4</sup> , S. Drakopoulou <sup>2</sup> , A. Lunghi <sup>1</sup> , M. Sensi <sup>2</sup> , M. Berto <sup>2</sup> , P. Greco <sup>2</sup> , M. Di Lauro <sup>1</sup> , S. Carli <sup>1</sup> , M. Murgia <sup>1</sup> , M. Bianchi <sup>1</sup> , M. Zoli <sup>3</sup> , C. A. Bortolotti <sup>2</sup> , L. Fadiga <sup>1,4</sup> <sup>1</sup> C. for Translational Neurophysiology - Istituto Italiano di Tecnologia, Italy, <sup>2</sup> D. di Scienze della Vita - Università di Modena e Reggio Emilia, Italy, <sup>3</sup> D. di Scienze Biomediche, Metaboliche e Neuroscienze- Università di Modena e Reggio Emilia, Italy, <sup>4</sup> D. di Scienze Biomediche e Chirurgiche Specialistiche, Sezione di Fisiologia, Università di Ferrara, Italy	11:30-12:00 INVITED Topological edge/end states in atomically precise graphene nanoribbons: their known and unknown properties and origin Aristides D. Zdetsis Dept. of Physics, U. of Patras, Greece
11:45-12:00 EU PROJECT	INNO4COV-19 - Boosting Innovation for COVID-19 Diagnostic, Prevention and Surveillance F. Mariana INL – International Iberian Nanotechnology Lab. Portugal			12:00-12:30 INVITED
12:00-12:15	Fabrication and characterization of nanofiber filters and their application in 3D printed face masks A. Orfanos <sup>1</sup> , K. Tsimenidis <sup>1</sup> , A. Galatsopoulos <sup>2</sup> , Ch. Kapnopoulos <sup>3</sup> , V. Karagkiozaki <sup>1,3</sup> , S. Logothetidis <sup>3</sup> <sup>1</sup> BL Nanobiomed P.C., Thessaloniki, Greece, <sup>2</sup> Organic Electronic Technologies P.C., Thessaloniki, Greece <sup>3</sup> Nanotechnology Lab LTFN, Aristotle University Thessaloniki, Greece	12:00-12:30 INVITED	Current-Driven Organic Electrochemical Transistor for the Assessment of Biological Barriers K. Lieberth <sup>a</sup> , M. Brückner <sup>a,b</sup> , F. Torricelli <sup>c</sup> , V. Mailänder <sup>a,b</sup> , P. Gkoupidenis <sup>a</sup> and P. W. M. Blom <sup>a*</sup> <sup>a</sup> Max Planck Institute for Polymer Research, Germany <sup>b</sup> Dermatology Clinic, University Medical Center of the Johannes Gutenberg-University Mainz, Germany <sup>c</sup> Department of Information Engineering, University of Brescia, Italy	12:30-12:45 EU-PROJECT Thin Wide-Band Composite Films for Electromagnetic Shielding. V. Barsukov, I. Senyk, Ya. Kuryptia, O. Butenko, V. Khomenko Dept. of Electrochemical Power Engineering and Chemistry, Kyiv National U. of Technologies and Design, Ukraine
		12:30-12:45		
12:15-12:30 EU PROJECT	Outcomes and conclusions from clinical performance evaluation of using VOCIDTM for the detection of COVID-19 in exhaled breath M. Lichtenstein <sup>1</sup> , O. Barash <sup>1</sup> , E. Gaiely <sup>1</sup> , R. Sholomovitz <sup>1</sup> , S. Amit <sup>2</sup> , M. Mendelboim <sup>3</sup> , and G. Regev-Yochay <sup>4</sup> . <sup>1</sup> NanoScent Labs Ltd., Israel. <sup>2</sup> Sheba Medical Center, Ramat Gan, Israel <sup>3</sup> Sheba Medical Center, Ramat-Gan, Israel. Dept. of Epidemiology and Preventive Medicine, School of Public Health, Sackler Faculty of Medicine, Tel Aviv U., Israel.	12:45-13:00	Gating PEDOT:PSS Organic Electrochemical Transistors with in-plane gate electrodes. The effect of the gate capacitance on the device performance D. A. Koutsouras <sup>1</sup> , F. Torricelli <sup>2</sup> , Paschalis Gkoupidenis <sup>1</sup> , Paul W.M. Blom <sup>1</sup> <sup>1</sup> Max Planck In. for Polymer Research, Germany <sup>2</sup> Dept. of Information Engineering, U. of Brescia, Italy	12:45-13:00 In-situ decoration of laser-scribed graphene with TiO2 nanoparticles for energy storage applications D. Pontiroli <sup>1</sup> , L. Fornasini <sup>1,2</sup> , G. Magnani <sup>1</sup> , S. Scaravonati <sup>1</sup> , M. Sidoli <sup>1</sup> , D. Bersani <sup>1</sup> , G. Bertoni <sup>3</sup> , L. Aversa <sup>4</sup> , R. Verucchi <sup>4</sup> , M. Riccò <sup>1</sup> <sup>1</sup> U. of Parma, Parma, Italy <sup>2</sup> CNR-ICCOM In., Pisa, Italy <sup>3</sup> CNR, In. of Nanoscience, Modena, Italy <sup>4</sup> IMEM-CNR, Povo (TN), Italy
12:30-12:45	Upscaling of microfluidic biosensors manufacturing using R2R processes and their application in the multiplexed detection of SARS-CoV-2 and Influenza A with a LoC molecular diagnostics device			



	Z. Chakim <sup>1</sup> , D.G. Karadimas <sup>1</sup> , A.R. Protopapadaki <sup>1</sup> , N. Kalaos <sup>1</sup> , J. Graunitz <sup>2</sup> , J. Nestler <sup>2</sup> , C. Leiner <sup>3</sup> , M. Smolka <sup>3</sup> , A. Haase <sup>3</sup> , J. Hesse <sup>3</sup> , R. Benauer <sup>4</sup> , A. Flanschger <sup>4</sup> , A. Mader <sup>5</sup> , W. Weigel <sup>5</sup> , N. Okulova <sup>6</sup> , J. Kafka <sup>6</sup> , C. O'Sullivan <sup>6</sup> , M. Lohse <sup>7</sup> , J. Brommert <sup>8</sup> , C. Stöver <sup>8</sup> , G. Bijelic <sup>9</sup> , G. Tsekenis <sup>1</sup> 1Biomedical Research Foundation of the Academy of Athens, Greece 2BiFlow Systems GmbH, Germany, 3 JOR Forschungsgesellschaft mbH, Austria4bionic surface technologies GmbH, Austria, 5SCIENION AG, Germany, 6INMOLD A/S, Denmark, 7micro resist technology GmbH, Germany, 8temicon GmbH, Germany, 9TECNALIA Research & Innovation, Spain
12:45-13:00 EU-PROJECT	Portable Device for COVID-19 detection at the Point-of-Care; a Global Diagnostics Approach G. Papadakis <sup>1</sup> , A.K. Pantazis <sup>1</sup> , N. Fikas <sup>1,2</sup> , S. Chatziioannidou <sup>1,2</sup> , V. Tsiakalou <sup>1</sup> , M. Megariti <sup>1</sup> , M.Vardaki <sup>1</sup> , E. Gizeli <sup>1,2</sup> <sup>1</sup> IMBB, FORTH, Greece <sup>2</sup> Department of Biology, University of Crete, Greece

13:00-14:00

Lunch Break

NN21 Posters

Exhibition

Networking

14:00-16:00 (NN-NN1) & L (Timber 1)	WS2 Nanochacterization 2 Chair: C. Gravalidis	14:00-16:00 ( NN-NN2) & L (Timber 2)	WS3 Nanomedicine 1 Chair: S. Avnet	14:00-16:00 ( BIO-Session)	WS4 Bioelectronics 2 Chair: F. Biscarini	14:00-16:00 ( 2D MAT- Session)	WS5 Graphene 2 Chair: M. Zacharias
14:00-14:30 INVITED	Depth dependent characterisation of structured nanoparticles using X-ray photoelectron spectroscopy A. Regoutz Dept. of Chemistry, U. College London, UK	14:00-14:30 INVITED	The 3D osteocytic network in a microfluidic platform with hydroxyapatite nanoparticles to study metastatic prostate cancer behavior S. Avnet <sup>1,2</sup> , M.V. Lipreri <sup>1</sup> , G. Di Pompo <sup>2</sup> , G. Graziani <sup>2</sup> , E. Boanini <sup>3</sup> , A. Bigi <sup>3</sup> , N. Baldini <sup>1,2</sup> <sup>1</sup> Dept. of Biomedical and Neuromotor Sciences, U. of Bologna, Bologna, Italy <sup>2</sup> Lab. for Biomedical Science and Technologies, IRCCS Istituto Ortopedico Rizzoli, Italy <sup>3</sup> Chemistry Dept. "G. Ciamician", U. of Bologna, Italy	14:00-14:30 INVITED	Multiscale bioelectronics with nanostructured carbide MXenes F. Vitale Dept.s of Neurology, Bioengineering, Physical Medicine and Rehabilitation U. of Pennsylvania, USA of America	14:00-14:30 INVITED	1D and 2D Carbon and Related Nanomaterials – Local Structural and Spectroscopic Studies R. Arena <sup>1,2,3</sup> <sup>1</sup> - (INMA), CSIC-U.Spain <sup>2</sup> - Laboratorio Microscopias Avanzadas, U. Zaragoza, Spain <sup>3</sup> - Fundacion ARAID, 50018 Zaragoza – Spain
14:30-15:00 INVITED	Synchrotron X-rays for the nanoworld: the rise of the Extremely Brilliant Sources E.Capria European Synchrotron (ESRF), France	14:30-15:00 INVITED	Antimicrobial and bioactive silver-based nanocoatings G. Graziani <sup>1</sup> , J. Rau <sup>2,3</sup> , D. Ghezzi <sup>1</sup> , E. Sassoni <sup>4</sup> , M. Boi <sup>1</sup> , K. Barbaro <sup>5</sup> , I. V. Fadeeva <sup>6</sup> , M. Fosca <sup>2</sup> , M. Cappelletti <sup>7</sup> , F. Valle <sup>8</sup> , G. Vadalà <sup>9</sup> , Nicola Baldini <sup>1,10,11</sup> <sup>1</sup> IRCCS Istituto Ortopedico Rizzoli, Lab. of NanoBiotechnology, Italy <sup>2</sup> ISM-CNR, Italy <sup>3</sup> Sechenov First Moscow State Medical U., Russia <sup>4</sup> U. of Bologna, Dept. of Civil, Chemical, Environmental and Materials Engineering, Italy <sup>5</sup> Istituto Zooprofilattico Sperimentale Lazio e Toscana "M. Aleandri", Italy <sup>6</sup> A.A. Baikov In. of Metallurgy and Materials Science, Russia <sup>7</sup> U. of Bologna, Dept. of Pharmacy and Biotechnology, Italy <sup>8</sup> ISMN-CNR, Italy <sup>9</sup> Università Campus Bio-Medico di Roma, Italy <sup>10</sup> IRCCS Istituto Ortopedico Rizzoli, Italy <sup>11</sup> U. of Bologna, Italy	14:30-15:00 INVITED	Dynamic Devices for Neural Interfacing C. M. Proctor U. of Cambridge, UK	14:30-15:00 INVITED	Two-dimensional transition metal dichalcogenides in field-effect devices A. Di Bartolomeo <sup>1,2</sup> , E. Faella <sup>1,2</sup> , F. Giubileo <sup>2</sup> , A. Grillo <sup>1,2</sup> , A. Pelella <sup>1,2</sup> <sup>1</sup> Physics Dept. "E.R. Caianaiello", U. of Salerno, Salerno, Italy <sup>2</sup> CNR-Spin, Salerno, Italy
15:00-15:15 EU PROJECT	Physicochemical properties, transformation and degradation assessment of MCNMs and HARNs with spectroscopic techniques G. A. Voyiatzis <sup>1</sup> , Z. G. Lada <sup>1</sup> , G. N. Mathioudakis <sup>1</sup> , K. S. Andrikopoulos <sup>1,2</sup> , A. Soto Beobide <sup>1</sup> <sup>1</sup> FORTH/ICE-HT, Greece <sup>2</sup> Dept. of Physics, U. of Patras, Greece	14:30-15:00 INVITED	Smart Integration of Organic Light-Emitting Transistors with Organic Photodiodes for Ultra-Compact Plasmonic Sensors M. Prosa <sup>1</sup> , E. Benvenuti <sup>1</sup> , D. Kallweit <sup>2</sup> , P. Pellacani <sup>3</sup> , M. Törker <sup>4</sup> , M. Bolognesi <sup>1</sup> , L. Lopez-Sanchez <sup>3</sup> , F. Marabelli <sup>5</sup> , S. Toffanin <sup>1</sup> <sup>1</sup> In. of Nanostructured Materials (ISMN), CNR, Italy, <sup>2</sup> CSEM, Basel, Switzerland, <sup>3</sup> Plasmore s.r.l., Italy, <sup>4</sup> Fraunhofer FEP, Germany, <sup>5</sup> Physics Dept., U. Pavia, Italy	15:00-15:15	15:00-15:30 INVITED	Low-dimensional Phase-Change Chalcogenides Materials as a Novel Opportunity in Reconfigurable Photonics M. Losurdo <sup>1</sup> , Y. Gutierrez <sup>1</sup> , F. Moreno <sup>2</sup> , M. Modreanu <sup>3</sup> , M. Georghe <sup>4</sup> , C. Cobianu <sup>4</sup> , C. Cobet <sup>5</sup> , G. Gary <sup>6</sup> , J. Soler <sup>7</sup> and W. Pernice <sup>8</sup> 1. CNR_NANOTEC, Bari, Italy, 2. University of Cantabria, Spain 3. Tyndall National Institute, Ireland, 4. NANOM MEMS srl, Romania, 5. Johannes Kepler University, Austria, 6. TEOX, Paris-Saclay, France., 7. VLC Photonics, Valencia, Spain 8. Physics Institute / CeNTech, Munster University, Germany	

15:15-15:30	Antistatic Coatings Based on Nanofluids for Protection of Solar-Thermal Panels Against the Deposition of Dirt and Dust E. Mamut <sup>1</sup> , G. Prodan <sup>1</sup> , G. Voinea <sup>2</sup> 1 "Ovidius" U. of Constanta, Romania 2Solarom Ltd. Romania,	15:00-15:30 INVITED	Therapeutic applications of cutting-edge biofunctionalized nanoparticles. M. Colombo NanoBioLab, Dept. of Biotechnology and Bioscience U. of Milano-Bicocca, Milan, Italy	15:15-15:30	Non-enzymatic Glucose Sensor Development Using Dip-Pen Nanolithography Based on Ni(OH) <sub>2</sub> Meta-chemical Surface Electrode C.J Dobos <sup>1</sup> , D. Saban <sup>1</sup> , D. Shamir <sup>2</sup> , A. Burg <sup>1</sup> , M. Zohar <sup>3</sup> <sup>1</sup> Dept. of Chemical Engineering, Shamoon College of Engineering, Beer-Sheva, Israel <sup>2</sup> Nuclear Research Center, Beer-Sheva, Israel <sup>3</sup> Dept. of Electrical and Electronics Engineering, Shamoon College of Engineering, Beer-Sheva, Israel	15:30-16:00 INVITED	Towards Transition Metal Dichalcogenide electronics G. Deligeorgis <sup>1,2</sup> , F. Iacovella <sup>1</sup> , G. Fanourakis <sup>1,3</sup> , N. Armaou <sup>2</sup> <sup>1</sup> FORTH, IESL, Greece <sup>2</sup> University of Crete, Physics Department, Greece <sup>3</sup> University of Crete, Material science and Technology Department, Greece
15:30-15:45	Nanostructured Materials Dedicated to Fast Reactive Catalytic Filters for Gas Clean-up in Pellet Boilers Using Waste Biomass E. Mamut, "Ovidius" U. of Constanta, Romania	15:30-15:45	Novel paper-based sensing platform using photoluminescent gold nanoclusters for easy, sensitive and selective naked-eye detection of Cu <sup>2+</sup> A.-M. Hada <sup>a,b</sup> , M. Zetesa <sup>b</sup> , M. Focsan <sup>a</sup> , T. Nagy-Simon <sup>a</sup> , S. Astilean <sup>a,b</sup> , A.-M. Craciun <sup>a</sup> <sup>a</sup> Interdisciplinary Research Institute in Bio-Nano-Sciences Romania, <sup>b</sup> Faculty of Physics, Romania		15:30-15:45	Poly acrylic acid-based hydrogel actuator fabricated via Digital Light Projection Y. Wang <sup>1,2</sup> , N. Alizadeh <sup>1,2</sup> , M. Barde <sup>1,2</sup> , B. Beckingham <sup>1,2</sup> , M. L. Auad <sup>1,2</sup> <sup>1</sup> Center for Polymers and Advanced Composites, Auburn U., Auburn, AL. <sup>2</sup> Dept. of Chemical Engineering, Auburn U., Auburn, AL.	
15:45-16:00		15:45:16:15 INVITED	H-Ferritin: a theranostic drug delivery nanosystem for advanced therapy and imaging of solid tumors D. Proserpi Dept. of Biotechnology and Bioscience, U. of Milano-Bicocca, Italy		15:45-16:00	Printed sensors for automation and improvement of biotechnological processes and healthcare devices M. Campos <sup>1</sup> , R. Carvalho <sup>1</sup> , A. Poças <sup>1</sup> , V. Miranda <sup>1</sup> , F. Afonso <sup>1</sup> , A. Leite <sup>1</sup> , J. Matos <sup>1</sup> , P. Henriques <sup>1</sup> , D. Baş <sup>2</sup> , O. Canberic <sup>3</sup> , J. Redol <sup>4,5</sup> , M. Ribeiro <sup>4,5</sup> <sup>1</sup> (CeNTI), Portugal, <sup>2</sup> Turgut İlaçları A.Ş. – Turkey, <sup>3</sup> Robotek Otomasyon Teknolojileri Ltd., Turkey, <sup>4</sup> Neutroplast S.A., Portugal, <sup>5</sup> Beyonddevices S.A., Portugal	

16:00-16:30 Coffee Break NN21 Posters Exhibition Networking

16:30-18:15 (NN-NN1) & L (Timber 1)	WS2 Nanoengineering Chair: S. Kassavetis	16:30-18:00 (BIO-Session)	WS4 Bioelectronics 3 Chair: F. Vitale	16:30-18:00 (2D MAT-Session)	WS5 Graphene 3 Chair: M. Losurdo	16:30-18:30 (I3D-Session)	I3D 4 Chair: C. Gravaldis
16:30-16:45 EU PROJECT	ZnO nanotetrapods for multifunctional application M. Ilickas <sup>1</sup> , R. Mardosaitė <sup>1</sup> , A. Sulciute <sup>1,2</sup> , S. Rackauskas <sup>1,3</sup> <sup>1</sup> In. of Materials Science, Kaunas U. of Technology, Lithuania; <sup>2</sup> Dept. of Physical and Inorganic Chemistry, Kaunas U. of Technology, Lithuania; <sup>3</sup> Dept. of Physics, Kaunas U. of Technology, Lithuania.	16:30-17:00 INVITED	Peripheral nerve interfaces: Optimizing wireless optoelectronic stimulation Mary J. Donahue Linköping University, Sweden	16:30-16:45	The True Amphipathic Nature of Pristine Graphene Flakes A.W. Kuziel <sup>1,2</sup> , K.Z. Milowska <sup>3</sup> , P.-L. Chau <sup>4</sup> , S. Boncel <sup>2</sup> , K.K. Koziol <sup>1</sup> , M.C. Payne <sup>3</sup> <sup>1</sup> Enhanced Composites and Structures Center, Cranfield U., Bedfordshire, UK <sup>2</sup> Faculty of Chemistry, Silesian U. of Technology, Poland <sup>3</sup> TCM Group, U. Cambridge, UK <sup>4</sup> Bioinformatique Structurale, Institut Pasteur, France	16:30-17:00 INVITED	Printed Sensors and Biosensors Current and future trends for point-of-need applications Alejandra Ben Aissa <sup>1</sup> , Luciano Sappia <sup>1</sup> , Ana Moya <sup>2</sup> , Claudia Delgado Simao <sup>1</sup> <sup>1</sup> Functional Printing & Embedded Devices Department, Eurecat Technological Centre, Avinguda Ernest Lluch 36, 08302 Mataró, Spain
		17:00-17:30 INVITED	Mobile Health Virus Detection Using Nanoparticles, Smartphones, And Machine Learning Hadi Shafiee <sup>1</sup> Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA				

16:45-17:00	Complex formation in a liquid-liquid extraction system containing vanadium(IV/V), 2,3-dihydroxynaphthalene and Thiazolyl Blue G.Toncheva <sup>1</sup> , Kiril Gavazov <sup>2</sup> , Vassil Delchev <sup>1</sup> , ..., <sup>1</sup> Plovdiv U. Paisii Hilendarski, Bulgaria, <sup>2</sup> Medical U. of Plovdiv, Plovdiv, Bulgaria	17:30-17:45	Role of nanotechnology in sensor-based applications K. Tsimenidis <sup>1</sup> , A. Orfanos <sup>1</sup> , S. Dermenoudis <sup>2</sup> V. Karagkiozaki <sup>1,2</sup> , S. Logotheidis <sup>2</sup> <sup>1</sup> BL Nanobiomed P.C., Greece <sup>2</sup> Nanotechnology Lab LTFN Aristotle University of Thessaloniki, Greece	16:45-17:00	Synthesis of 2D Boron Nitride Nanosheets from Ammonia Borane in Inductively Coupled Plasma A. Alrebh, J.-L. Meunier Dept. of Chemical Engineering, McGill U., Canada	17:00-17:15	3D Printing of Light Concentrators Applied for Organic Photovoltaics C. T. Chen, H. H. Yang National Kaohsiung U. of Science and Technology, R.O.C.
				17:00-17:15	Ab initio studies on the synthesis of functionalized 2D silicon sheets through the topochemical reaction of CaSi <sub>2</sub> with iodine and acetonitrile. D. Kaltsas, P. Pappas and L. Tsetseris Dept. of Physics, National Technical U. of Athens, Greece	17:15-17:30	Design and Manufacturing of PVB/Graphene Composite Filaments Applied for Fused Deposition Modeling C. T. Chen, P. S. Liao National Kaohsiung U. of Science and Technology, Taiwan, R.O.C.
17:00-17:15	Highly conductive and thermally stable self-assembled monolayers on silver substrate – the impact of the bonding group M. Wróbel <sup>1</sup> , T. Żaba <sup>1</sup> , E. Sauter <sup>2</sup> , M. Krawiec <sup>3</sup> , J. Sobczuk <sup>1</sup> , A. Terfort <sup>4</sup> , M. Zharnikov <sup>2</sup> , P. Cyganik <sup>1</sup> <sup>1</sup> Smoluchowski In. of Physics, Jagiellonian U. Poland <sup>2</sup> Angewandte Physikalische Chemie, Universität Germany <sup>3</sup> In. of Physics, Maria Curie-Skłodowska U., Poland <sup>4</sup> Institut für Anorganische und Analytische Chemie, Universität Frankfurt, Germany	17:45-18:00	Spatially selective biomolecules immobilization for biosensing applications through contact printing onto chemical micropattern: characterization by TOF-SIMS imaging A. Budkowski <sup>1</sup> , K. Gajos <sup>1</sup> , P. Petrou <sup>2</sup> , K. Misiakos <sup>3</sup> , I. Raptis <sup>3</sup> , K. Awsiuk <sup>1</sup> , J. Rysz <sup>1</sup> , S. Kakabakos <sup>2</sup> <sup>1</sup> Inst. of Physics, Jagiellonian U., Poland <sup>2</sup> INRaSTES, 3INN, National Center for Sci. Research "Demokritos", Greece	17:15-17:30	Visible Light Emission in Graphene Field Effect Transistors A. Beltaos <sup>1,2,5</sup> , A. J. Bergren <sup>1</sup> , K. Bosnick <sup>1</sup> , N. Pekas <sup>1</sup> , S. Lane <sup>2</sup> , K. Cui <sup>1</sup> , A. Matkovic <sup>3,4</sup> , A. Meldrum <sup>2</sup> <sup>1</sup> National In. for Nanotechnology, Canada <sup>2</sup> U. of Alberta, Edmonton, Canada <sup>3</sup> U. of Belgrade, Serbia	17:30-17:45	A novel method for 3D printing at submicron scale and fast speed using electrostatic jet deflection A. Ramon <sup>1</sup> , I. Liashenko <sup>1</sup> , J. Rosell-Llompart <sup>2,3</sup> , A. Cabot <sup>1,3</sup> <sup>1</sup> IREC. (España), <sup>2</sup> URV. (España), <sup>3</sup> Institució Catalana de Recerca i Estudis Avançats (España)
17:15-17:30	A new synthesis method for rodlike CdS nanoparticles and obtaining helical assemblies of anisotropic nanocrystals. Z.Lawera, S.Parzyszek, W.Lewandowski, ... Faculty of Chemistry University of Warsaw, Poland			17:30-17:45	Photosensitive Nano-Graphene-Oxide doped HAPTIC 3D Textile Coatings T.W. Schmidt; Xun You Fujian Huafeng New Materials Co., Ltd. Dongfang Blvd., Dongqiao Industrial Zone, Xiuyu District, Putian City, Fujian Province, China	17:45-18:00	Fabrication of a crystalline nanocellulose embedded agarose substrate for 3D culture of mast cells L.Karamchand2, A. Wagner2, S. B. Alam2, M. Kulka1,2 <sup>1</sup> Dept. of Medical Microbiology and Immunology, U. of Alberta <sup>2</sup> Nanotechnology Research Center, National Research Council Canada, Canada
				17:45-18:00	Two dimensional organic materials for energy and the environment A. Bakandritsos <sup>1,2</sup> , J. Kolarik <sup>1</sup> , I. Obratsov <sup>1</sup> , M. Otyepka <sup>1</sup> , R. Zbořil <sup>1,2</sup> <sup>1</sup> Regional Centre of Advanced Technologies and Materials, CATRIN, Palacký U., Olomouc, Czech Republic; <sup>2</sup> Nanotechnology Centre, Centre of Energy and Environmental Technologies, VSB–Technical U. of Ostrava, Czech Republic	18:00-18:15	Nano Particle Jetting , a new direct material jetting AM technology from Xjet H. LeviP Manufacturing and Defense Industries, Xjet Ltd. Rehovot, Israel

Friday 9 July 2021

11:00-11:30 ( NN-NN2) & L (Crystal)		WS2 Nanocharacterization 2 Chair: M. Gioti		11:00-11:30 ( NN-NN3) & L (Crystal) KEYNOTE Chair: A. Asiminas		Towards Throughput Analysis of the Universal Biological Pico-, Nano and Exosome (EX) Micro vesicles from Biofluids Seppo Vainio, Faculty of Biochemistry & Molecular Medicine, Kvantum Institute, Oulu University, Finland			
11:00-11:30 INVITED		Transmission Electron Microscopy of Nanomaterials P. Kominou, Aristotle U. of Thessaloniki, Greece		11:30-12:00 INVITED		Vertically Aligned Carbon Nanotubes based fast electrode for electricity storage From promises to industrial applications P. Boulanger NAWATechnologies Technopole de l'Arbois, France			
11:30-12:00 INVITED		Microscopy of strain-composition coupling at the atomic monolayer scale: The case of InN/GaN digital alloys G.P. Dimitrakopoulos <sup>1</sup> , I.G. Vasileiadis <sup>1</sup> , A. Gkotinakos <sup>1</sup> , V. Devulapalli <sup>2</sup> , L. Lymperakis <sup>2</sup> , Ch.H. Liebscher <sup>2</sup> , E. Dimakis <sup>3</sup> , A. Adikimenakis <sup>4</sup> , A. Georgakilas <sup>4,5</sup> , Th. Karakostas <sup>1</sup> , Ph. Komninou <sup>1</sup> <sup>1</sup> Dept. of Physics, Aristotle U. of Thessaloniki, Thessaloniki, Greece <sup>2</sup> Max-Planck Institut für Eisenforschung GmbH, Düsseldorf, Germany <sup>3</sup> In. of Ion Beam Physics & Materials Research, Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany, <sup>4</sup> Microelectronics Research Group (MRG), IESL, FORTH, Heraklion, Greece, <sup>5</sup> Dept. of Physics, U. of Crete, Heraklion, Greece		12:00-12:30 INVITED		12:00-12:15		EBSD analysis of grain orientation of human, bovine tooth enamel on the nanoscale and comparison with artificial hydroxyapatite A. Koblichka-Veneva, M. R. Koblichka Saarland U., P.O.Box 151150, 66041 Saarbrücken, Germany	
12:00-12:30 INVITED		Chemical tuning and pressure induced valence transitions of lanthanide ions in rare-earth fullerenes J. Arvanitidis <sup>1</sup> , K. Prassides <sup>2</sup> <sup>1</sup> Physics Dept., Aristotle U. of Thessaloniki, Greece <sup>2</sup> Dept. of Materials Science, Graduate School of Engineering, Osaka Prefecture U., Japan		12:30-12:45		Dispersion force modulation by irradiation in semiconductors:The long road from early quantum vacuum microphones to thermodynamical nanoengines in future spacecraft F. Pinto Dept. of Aerospace Engineering, Faculty of Engineering, Izmir U. of Economics, Turkey			
12:30-13:00 INVITED		Chemically modified carbon nanomaterials for sustainable technologies B. Vigolo <sup>1</sup> , P. Estellé <sup>2</sup> , I. Chevalot <sup>3</sup> , Y. Guivarc'h <sup>3</sup> , C. Bourkaib <sup>3</sup> <sup>1</sup> Université de Lorraine, CNRS, IJL, F-54000 Nancy, France <sup>2</sup> Université de Rennes, LGCGM, F-35000 Rennes, France <sup>3</sup> Université de Lorraine, CNRS, LRGF, F-54000 Nancy, France		12:45-13:00		12:15-12:30		Nano-structured surfaces and mechanical tension promote contractile phenotype in smooth muscle cells M. Sahinler <sup>1</sup> , A. Sendemir <sup>1,2</sup> <sup>1</sup> Dept. of Bioengineering, Ege U., Turkey <sup>2</sup> Dept. of Biomedical Technologies, Ege U., Turkey	
						12:30-12:45		An insight into the binding thermodynamics of hydroxyapatite-drug complexes A.P. Serban <sup>1</sup> , F. Maxim <sup>1,2</sup> , F. Teodorescu <sup>1</sup> , A. Sofronia <sup>1</sup> , I. Atkinson <sup>1</sup> , S. Tanasescu <sup>1</sup> <sup>1</sup> "Ilie Murgulescu" In. Physical Chemistry, Bucharest, Romania <sup>2</sup> Paul Scherrer In., Villigen PSI, Switzerland	
						12:30-12:45		Safe-by-Design (SbD) Nanoenabled Metal Hip Joints for Whole Life In Vivo. A Generic Model for Product, Manufacturing, Standardisation to Regulatory Approval. T. Wilkins <sup>1</sup> , S. Lal <sup>2</sup> , R. Hall <sup>2</sup> , A. Neville <sup>2</sup> , J. Tipper <sup>3</sup> <sup>1</sup> School of Chemical & Process Engin., U. of Leeds, UK <sup>2</sup> Sch. Mechanical Engineering, U. of Leeds, UK <sup>3</sup> Sch. Biomedical Engineering, U. Techn. Sydney, Australia	
						12:45-13:00		Development of electro-activated self-assembled monolayer (SAM) responsive surfaces to tackle bacterial infections on-demand S. Auditto <sup>1</sup> , S. Carrara <sup>1</sup> , F. Rouvier <sup>2</sup> , F. Brunel <sup>1</sup> , C. Janneau <sup>3</sup> , M. Camplo <sup>1</sup> , M. Sergent <sup>4</sup> , I. About <sup>3</sup> , J.-M. Bolla <sup>2</sup> , J.-M. Raimundo <sup>1*</sup> Aix-Marseille Univ, France	

13:00-14:00

Lunch Break

NN21 Posters

Exhibition

Networking

14:00-14:30 KEYNOTE ( NN-NN1) & L (Crystal)		Publish or Perish: How to stay afloat in Scholarly Publishing Lou Balogh Editor-in-Chief, Precision Nanomedicine, Andover House, Inc., USA	
14:30-16:00 ( NN-NN1) & L (Crystal)		WS2 Nanomagnetism 2 Chair: M. Angelakeris	
14:30-15:00 INVITED		14:30-15:00 INVITED	
Ferromagnetism in Eu doped Ce <sub>0.9-x</sub> Eu <sub>x</sub> Gd <sub>0.1</sub> O <sub>2</sub> (0.001<x<0.02) nanocrystals Z. V. Popović <sup>1,2</sup> , Z. Konstantinović <sup>1</sup> , A. Pomar <sup>3</sup> , N. Lazarević <sup>1</sup> , J. Zagorac <sup>4</sup> and B. Matović <sup>4</sup> <sup>1</sup> Center for Solid State Physics and New Materials, In. of Physics Belgrade, U. of Belgrade Belgrade, Serbia <sup>2</sup> Serbian Academy of Sciences and Arts, Serbia <sup>3</sup> Institut de Ciencia de Materials de Barcelona, ICMAB-CSIC, Campus UAB, Spain <sup>4</sup> U. of Belgrade, Serbia		Biological evaluation of strontium-substituted nano-hydroxyapatite for bone regeneration M. Chatz Nikolaidou <sup>1,2</sup> , G.-I. Kontogianni <sup>1</sup> , A. Azevedo <sup>3</sup> , P. Quadros <sup>3</sup> , S. Fiorilli <sup>4</sup> , C. Vitale Brovarone <sup>4</sup> <sup>1</sup> Department of Materials Science and Technology, University of Crete, Greece <sup>2</sup> IESL-FORTH, Greece <sup>3</sup> FLUIDINOVA, S.A., Maia, Portugal <sup>4</sup> Department of Applied Science and Technology, Politecnico di Torino, Turin, Italy	

15:00-15:15	<b>Analysis of high index dielectric nanodisk on substrate for refractometric sensing</b> O. Kochanowska, M. Bancerek, K. M. Czajkowski, T. J. Antosiewicz Faculty of Physics, University of Warsaw, Poland	15:00-15:30 INVITED	<b>Electron and radical cation of sulfur-substituted thymine derivatives produced near photoionization threshold can alter and distort double-helix DNA structure</b> G. A. Papadantonakis, Maria V. Yermolina University of Illinois at Chicago, Department of Chemistry, USA
15:15-15:30	<b>Functionalized superparamagnetic iron oxide nanoparticles synthesis</b> S. Fleutot, P. Venturini, T. Girardet, F. Cleymand IJL - UMR CNRS 7198, Université de Lorraine, France		
15:30-15:45	<b>Development of functionalized magnetic nanoparticles microwave synthesis</b> T. Girardet, F. Cleymand, S. Fleutot IJL - UMR CNRS 7198, Université de Lorraine, Nancy, France	15:30-16:00 INVITED	<b>How Osha Hazmat revisions to conform with treaties are a gamechanger for Nanomedicine</b> I. Feitshans, European Scientific In., France & Executive Director The Work Health & Survival Project, EU/USA
15:45-16:00			

16:00-16:30	Coffee Break	NN21 Posters	Exhibition	Networking
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16:30-19:30 ( NN-NN1) & L (Crystal)	WS3 Nanomedicine 3 Chair: C. Gravalidis
16:30-17:00 INVITED	<b>Spatiotemporal aspects of intra and inter cellular communication</b> Y. F. Missirlis University of Patras, Greece
17:00-17:30 INVITED	<b>A novel method to monitor drug-induced changes in the brain: combined Raman spectroscopy and phase imaging</b> A. Khmaladze Physics Department, SUNY University at Albany, USA
17:30-18:00 INVITED	<b>Modelling neurodevelopmental disorders in rats: a top-down approach</b> Asiminas, A. <sup>1,2,3</sup> ; Jackson A.D. Till, S.M. <sup>1,2,3</sup> ; Osterweil E.K. <sup>1,2,3,6</sup> ; Bear M.F. <sup>6</sup> ; Chattarji, S. <sup>4,5</sup> ; Wyllie, D.J.A. <sup>1,2,3,4</sup> ; Kind, P.C. <sup>1,2,3,4</sup> ; Wood, E.R. <sup>1,2,3,4</sup> 1Centre for Discovery Brain Sciences, U. of Edinburgh, U.K., 2Simons Initiative for Developing Brain, U. of Edinburgh, UK., 3Patrick Wild Centre, U. of Edinburgh, UK., 4Centre for Brain Development and Repair, India. 5National Centre for Biological Sciences, India. 6Dept. of Brain and Cognitive Sciences, Howard Hughes Medical In., Picower In. for Learning and Memory, Massachusetts In. of Technology, , USA
18:00-18:15	<b>"Computational Modeling of Nose-to-Brain Drug Delivery Systems"</b> S. K. Serpetsi <sup>2</sup> and C. Kiparissides <sup>1,2</sup> <sup>1</sup> Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece <sup>2</sup> Chemical Process & Energy Resources Institute, Centre for Research and Technology Hellas, P.O. Box 60361, 57001, Thessaloniki, Greece
18:15-19:00	<b>Closing Remarks and Discussion</b> <b>End of NN21</b>

## POSTER\*

\* The posters will be presented from Tuesday to Friday during Lunch break

WS1	<b>POSTER AREA III</b> <b>Tuesday 6 July (13:00-14:00, 16:00-16:30): Poster Display &amp; Presentations</b> <b>Wednesday 7 July, Thursday 8 July, Friday 9 July: Poster Display</b>
P1-1L	<b>Atomic-deficient nanostructurization in rare-earth doped glassy chalcogenides probed by annihilating positrons</b> <b>Y. Shpotyuk<sup>1,2*</sup>, B. Mahlovanyi<sup>1</sup>, J. Cebulski<sup>1</sup>, O. Shpotyuk<sup>3,4</sup>, A. Ingram<sup>5</sup></b> <sup>1</sup> Institute of Physics, University of Rzeszow Poland <sup>2</sup> Ivan Franko National University of Lviv Ukraine <sup>3</sup> Faculty of Science and Technology, Jan Dlugosz University in CzestochowaPoland <sup>4</sup> Vlokh Institute of Physical Optics, Ukraine <sup>5</sup> Opole University of Technology Poland
P1-2L	<b>DOE (Design of Experiment) for TiO2 nanotubes for VOCs applications</b> <b>C. Parvulescu, N. Varachiu, R. Tomescu, V. Anastasoae, D. Cristea</b> National Institute for Research and Development in Microtechnology – IMT Bucharest, 126A, romania
P1-3L	<b>Free-Standing Composite Films Based on Thiol-Ene and PEDOT: PSS Layers for Optoelectronic Applications</b> <b>B. Abakevičienė<sup>1, 2</sup>, A. Guobienė<sup>1</sup>, D. Jucius<sup>1</sup>, A. Lazauskas<sup>1</sup> and S. Račkauskas<sup>1</sup></b> <sup>1</sup> Institute of Materials Science, Kaunas University of Technology, Lithuania <sup>2</sup> Department of Physics, Kaunas University of Technology, Lithuania
P1-4L	<b>Fabrication of plasmonic transition metal nitride nanoparticles by ultrashort pulsed laser ablation in liquids</b> <b>A. Koutsogianni<sup>1</sup>, E. Fekas<sup>1</sup>, M. Nousi<sup>1</sup>, S. Kassavetis<sup>1</sup>, Ch. Kapnopoulos<sup>1</sup>, Ch. Papoulia<sup>2</sup>, E. Pavlidou<sup>2</sup>, D. Tselekidou<sup>1</sup>, S. Kassavetis<sup>1</sup>, P. Patsalas<sup>1</sup></b> <sup>1</sup> Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece <sup>2</sup> Laboratory of Advanced Materials and Devices (AMDeLab), Physics Department, Aristotle University of Thessaloniki, Greece
P1-5L	<b>Surface and Wetting properties of Laser patterned Transition Metal Nitrides</b> <b>M. Nousi, A. Koutsogianni, D. Tselekidou, S. Kassavetis, P. Patsalas, S. Logothetidis</b> Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece
P1-6L	<b>Novel Alkali-doped Composite Ion-solvating Polybenzimidazole/ZIF-8 Membranes</b> <b>H. Penchev<sup>1</sup>, D. Budurova<sup>1</sup>, M. Staneva<sup>1</sup>, F. Ublekov<sup>1</sup>, G. Borisov<sup>2</sup>, E. Slavcheva<sup>2</sup></b> <sup>1</sup> Bulgarian Academy of Science; Bulgaria <sup>2</sup> Institute of Electrochemistry and Energy Systems, Bulgarian Academy of Sciences, Bulgaria
P1-1V	<b>Temperature dependence of Vibrational and Emission characteristics in the 0D vacancy ordered Cs<sub>2</sub>SnI<sub>6</sub> double perovskite</b> <b>G. Belessiotis<sup>1,2,3</sup>, M. Arfanis<sup>1,2</sup>, A. Kaltzoglou<sup>2,4</sup>, V. Likodimos<sup>5</sup>, Y.S. Raptis<sup>1</sup>, P. Falaras<sup>2</sup>, A.G. Kontos<sup>1,2</sup></b> <sup>1</sup> Department of Physics, National Technical University of Athens, Athens, Greece <sup>2</sup> Institute of Nanoscience and Nanotechnology, NCSR “Demokritos”, Greece <sup>3</sup> School of Chemical Engineering, NTUA, Greece <sup>4</sup> Theoretical and Physical Chemistry Institute, NHRF, Greece <sup>5</sup> Department of Condensed Matter Physics, National & Kapodistrian University of Athens, , Greece
P1-2V	<b>CO<sub>2</sub> gas sensing with dielectric metasurface</b> <b>G. Kelp, L. Britala</b> Institute of Physics, University of Tartu, Estonia
WS2	<b>POSTER AREA IV</b> <b>Tuesday 6 July (13:00-14:00, 16:00-16:30): Poster Display &amp; Presentations</b> <b>Wednesday 7 July, Thursday 8 July, Friday 9 July: Poster Display</b>
P2-1L YRA Candidate	<b>Fabrication of hybrid nanostructures by laser technique for removal of toxic organic compounds</b> <b>R. Ivan<sup>1,2</sup>, E. Gyorgy<sup>1,3</sup>, S. Antohe<sup>2</sup>, C. Popescu<sup>1</sup>, A.P. del Pino<sup>3</sup>, C. Logofatu<sup>4</sup></b> <sup>1</sup> National Institute for Lasers, Plasma and Radiation Physics, Romania <sup>2</sup> Faculty of Physics, University of Bucharest, Romania <sup>3</sup> ICMAB-CSIC, Spain <sup>4</sup> National Institute for Materials Physics, Romania



P2-2L	<b>Comparative study on the behavior of different polyurethane nanostructures</b> Borcan F.*, Albulescu R.C., Chirita-Emandi A., Andreescu N. "Victor Babes" University of Medicine and Pharmacy, Romania
P2-3L	<b>Compatible with roll-to-roll method of electrodeposition for large scale organic solar cells fabrication</b> J. Wilgocki-Slezak <sup>1</sup> , M.M. Marzec <sup>2</sup> , J.Rysz <sup>1</sup> <sup>1</sup> Jagiellonian University, Poland <sup>2</sup> AGH University of Science and Technology, Poland
P2-4L	<b>Efficiency Improvement of Dye-Sensitized Solar Cells by UV-Ozone Treatment of TiO<sub>2</sub> Mesoporous Layer</b> D. Augustowski <sup>1,2</sup> , M. Gala <sup>1</sup> , J. Rysz <sup>1</sup> , P. Kwaśnicki <sup>2</sup> <sup>1</sup> Jagiellonian University, Poland <sup>2</sup> ML System S.A., Poland
P2-5L	<b>Memory effects in Organic Field Effect Transistors (OFETs): from OFETs to memristive devices</b> A. Pawłowska <sup>1</sup> , P. Dąbczyński <sup>1</sup> , J. Rysz <sup>1</sup> <sup>1</sup> Jagiellonian University in Kraków, Poland
P2-6L	<b>Degradation of fullerenes and their derivatives</b> M. Gala <sup>1</sup> , J.Rysz <sup>1</sup> <sup>1</sup> Jagiellonian University, Poland
P2-7L	<b>Physical mechanisms of the magnetic field effects on the dielectric function of hybrid magnetorheological suspensions</b> G. E. Iacobescu <sup>1</sup> , L. M. E. Chirigiu <sup>2</sup> , I. Bica <sup>3</sup> <sup>1</sup> University of Craiova, Str. A. I. Cuza, nr.13, Craiova, Romania <sup>2</sup> University of Medicine and Pharmacy Craiova, Str. Petru Rareș, nr.2, 200349-Craiova, Romania <sup>3</sup> West University of Timisoara, Bd. V. Parvan, nr.4, 300223-Timisoara, Romania
P2-8L	<b>Nano-QSAR Toolbox – an online tool for prediction of physicochemical properties, (eco)toxicity of TiO<sub>2</sub> NPs in the context of risk assessment required for registration</b> M.Gromelski <sup>1</sup> , E.Wyrzykowska <sup>1</sup> , T.Puzyn <sup>1</sup> QSAR Lab Ltd., Poland
P2-9L	<b>Secured holographic labels fabricated with low-cost technology</b> C. Parvulescu, R. Tomescu, B. Comanescu, D. Cristea National Institute for Research and Development in Microtechnology – IMT Bucharest, Romania
P2-10L	<b>Undoped and Al-doped ZnO nanoparticles for photocatalytic application</b> Alessandra Piras <sup>1,2</sup> , Ken Elen <sup>2</sup> , Luca Fusaro <sup>1</sup> , Peter Adriaensens <sup>2</sup> , An Hardy <sup>2</sup> , Carmela Aprile <sup>1</sup> , Marlies Van Bael <sup>2</sup> <sup>1</sup> Namur University, Belgium <sup>2</sup> Hasselt University, Belgium
P2-11L	<b>Improving ranking for protein-protein docking simulations using Dipole Moment, Rg and pKa</b> G. M. Kefala <sup>1</sup> , N. Frangis <sup>1</sup> , G. E. Papadopoulos <sup>2</sup> <sup>1</sup> Aristotle University of Thessaloniki, Greece <sup>2</sup> University of Thessaly, Greece
P2-12L	<b>Structural features of Al/AIOx multilayers on GaAs(100) by MBE</b> I. M. Oikonomou <sup>1</sup> , N. Florini <sup>1</sup> , A. Adikimenakis <sup>2</sup> , G. Konstantinidis <sup>2</sup> , T. Kehagias <sup>1</sup> and P. Komninou <sup>1</sup> <sup>1</sup> Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece <sup>2</sup> Microelectronics Research Group (MRG), IESL, FOTH, 70013 Heraklion, Greece
P2-13L	<b>A study of halide perovskite structures combining Hirshfeld analysis with theoretical considerations.</b> V. Raptis <sup>1</sup> , A. Kaltzoglou <sup>1</sup> , P. Falaras <sup>2</sup> <sup>1</sup> Theoretical & Physical Chemistry Institute, National Hellenic Research Foundation, Greece. <sup>2</sup> Institute of Nanoscience & Nanotechnology, National Centre for Scientific Research "Demokritos", Greece.
P2-14L	<b>Few Layered Oxidized h-BN as Nanofiller of Cellulose-Based Paper with Superior Antibacterial Response and Enhanced Mechanical/Thermal Performance</b> M. Onyszko <sup>1,*</sup> , A. Markowska-Szczupak <sup>2</sup> , R. Rakoczy <sup>2</sup> , O. Paszkiewicz <sup>2</sup> , J. Janusz <sup>3</sup> , A. Gorgon-Kuza <sup>3</sup> , K. Wenelska <sup>1,*</sup> and E. Mijowska <sup>1</sup> <sup>1</sup> Faculty of Chemical Technology and Engineering, Department of Nanomaterials Physicochemistry, West Pomeranian University of Technology, Szczecin, Piastow Ave. 42, 71-065 Szczecin, Poland; Ewa.Borowiak-Palen@zut.edu.pl <sup>2</sup> Faculty of Chemical Technology and Engineering, Department of Chemical and Process Engineering, West Pomeranian University of Technology, Szczecin, Piastow Ave. 42, 71-065 Szczecin, Poland; Agata.Markowska@zut.edu.pl (A.M.-S.); <sup>3</sup> Arctic Paper Kostrzyn SA, ul. Fabryczna 1, 66-470 Kostrzyn nad Odra, Poland;
P2-15L	<b>How to appropriately include nanostructure aspects in nanoinformatics – recommendations for reliable Nano-(Q)SAR/(Q)SPR modeling</b> E. Wyrzykowska <sup>1</sup> , A. Mikolajczyk <sup>1,2</sup> , M. Gromelski <sup>1</sup> , T. Puzyn <sup>1,2</sup> <sup>1</sup> QSAR Lab Ltd. Trzy Lipy 3, 80-172 Gdańsk, Poland <sup>2</sup> Group of Environmental Chemometrics, Faculty of Chemistry, University of Gdańsk Wita Stwosza 63, 80-308 Gdańsk, Poland

P2-16L	<b>Photoelectric properties of hydrogen reduced TiO<sub>2</sub></b> P. Rychtowski <sup>1</sup> , B. Tryba <sup>1</sup> , D. Baranowska <sup>1</sup> , B. Zielińska <sup>1</sup> , H. Nishiguchi <sup>2</sup> and M. Toyoda <sup>2</sup> 1Dept. of Chemical Technology and Engineering, West Pomeranian University of Technology Piastow Ave. 42, 71-065 Szczecin, Poland 2Applied Chemistry, Faculty of Engineering, Oita University 700 Dannoharu, Oita-Shi, 870-1192, Japan
P2-17L	<b>Effect of rotating magnetic field on photocatalytic water purification process using modified titanium photocatalysts.</b> O. Paszkiewicz <sup>1*</sup> , A. Markowska-Szczupak <sup>1</sup> 1Department of Chemical and Process Engineering, West Pomeranian University of Technology Piastow Ave. 42, 71-065 Szczecin, Poland
P2-1V	<b>Comparison between 2 Methods of Synthesis of Gadolinium-Iron Garnet</b> M. Stan <sup>1</sup> , R. Lach <sup>1</sup> , Ł. Łańcucki <sup>1</sup> AGH University of Science and Technology, Poland
P2-2V	<b>Three-Dimensional Ordered Porous Carbon/Sulfur composites for Lithium-Sulfur Batteries</b> M. Baikousi, A. Spirou, M.A. Karakassides Department of Materials Science and Engineering, University of Ioannina, Greece
P2-3V	<b>Template-free synthesis of hierarchical porous carbon structures: promising sulfur host matrices for battery cathodes</b> M. Baikousi, A. Spirou, M.A. Karakassides Department of Materials Science and Engineering, University of Ioannina, Greece
P2-4V	<b>Biomass-derived carbon/Sulfur composites for energy storage applications</b> M. Baikousi, A. Spirou, M.A. Karakassides Department of Materials Science and Engineering, University of Ioannina, Greece
P2-5V	<b>Metal carbide/porous carbon hybrid structures</b> M. Baikousi, A. Spirou, M.A. Karakassides Department of Materials Science and Engineering, University of Ioannina, Greece
P2-6V	<b>Nanocomposite polypropylene drawn fibers with high tensile strength</b> K. Leontiadis, C. Tsiptsias, E. Tzimpilis, K. Karatasos, I. Tsvintzels Aristotle University of Thessaloniki, Greece
P2-7V	<b>Tailored Ag doping of hydroxyapatite coatings by HiPIMS: synthesis and characterization</b> M. Braic <sup>1</sup> , A. Vladescu <sup>1</sup> , V. Braic <sup>1</sup> , N.C., Zoita <sup>1</sup> , I. Pana <sup>1</sup> , A.C. Parau <sup>1</sup> , M. Fini <sup>2</sup> <sup>1</sup> National Institute for research and Development for Optoelectronics, Romania, <sup>2</sup> Instituto Ortopedico Rizzoli, Italy
P2-8V	<b>In situ monitoring by DSC and modelling of EPDM vulcanization: the effect of peroxide and co-agent content</b> P. Ketikis, I. Ketikis, P.A. Tarantili National Technical Univ. of Athens, Greece
P2-9V	<b>Actuating Kinetic Envelopes: Evaluating Energy Efficient Kinetic Envelopes and Exploring the Integration of Shape Memory Alloys as Envelope Actuators</b> M. Nathan <sup>1</sup> , M. Garrison <sup>2</sup> University of Texas at Austin, USA
P2-10V	<b>Investigation of humidity-induced self-assembly Phe-Phe in solid-state organic film</b> S. Vasilev <sup>1</sup> , D. Vasileva <sup>2</sup> , D. Chezganov <sup>3</sup> , V. Lebedev <sup>4</sup> , A.L. Kholkin <sup>5</sup> , E. O'Reilly <sup>1</sup> <sup>1</sup> Department of Chemical Science, University of Limerick, Ireland <sup>2</sup> Department of Physics, University of Limerick, Ireland <sup>3</sup> School of Natural Sciences and Mathematics, Ural Federal University, EkaterinburgRussia <sup>4</sup> Bernal Institute, University of Limerick, Ireland <sup>5</sup> Physics Department & CICECO – Materials Institute of Aveiro, Portugal
P2-11V	<b>Metal nanoparticle deposition on lithographically masked Silicon.</b> Salemi <sup>1</sup> , M. Condorelli <sup>1</sup> , L. D'Urso <sup>1</sup> , G. D'Arrigo <sup>2</sup> , Mario Scuderi <sup>2</sup> , G. Compagnini <sup>1</sup> <sup>1</sup> Department of chemistry, university of Catania, Italy <sup>2</sup> CNR IMM-HQ Catania, Italy
P2-12V	<b>Tuning the formation of silicon oxynitride-based nanopowders made by spray pyrolysis</b> H. Osip, P. Szymczak, J.F. Janik, C. Czosnek AGH University of Science and Technology, Poland
P2-13V	<b>Structural characterization of TiO<sub>2</sub> aerogel vs precursor type and gel aging</b> J. Doneliene <sup>1,2</sup> , V. Ulbikaite <sup>1</sup> , E. Urboniene <sup>2,3</sup> , S. Pakalka <sup>1</sup> , J. Ulbikas <sup>1,2</sup> <sup>1</sup> Applied Research Institute for Prospective Technologies Lithuania <sup>2</sup> JSC Modern E-Technologies Lithuania <sup>3</sup> Kaunas University of Technology Lithuania

P2-14V	<p><b>Activity and durability of PtM (M = Ir or Pd) electrocatalysts for H<sub>2</sub>-PEMFC application</b>  <b>K. Molochas</b><sup>1</sup>, G. Balkourani<sup>1</sup>, A. Brouzgou<sup>1,2</sup>, P. Tsiakaras<sup>1,3,4</sup>  <sup>1</sup> Department of Mechanical Engineering, University of Thessaly, Greece.  <sup>2</sup> Department of Energy Systems, University of Thessaly, Greece.  <sup>3</sup> Ural Federal University, Russian Federation.  <sup>4</sup> Institute of High Temperature Electrochemistry (RAS), Russian Federation.</p>
P2-15V	<p><b>Protein self-assembly through rational design: Construction and characterization of phi class GST supramolecular structures</b>  <b>E Ioannou</b> and N. E. Labrou*  Agricultural University of Athens, Greece</p>
P2-16V	<p><b>Artificial intelligence, machine learning and data-enabled multiscale simulation workflows for the design and development of molecular materials</b>  <b>F. Le Piante</b><sup>1</sup>, M. Baldoni<sup>2</sup>, F. Mercuri<sup>3</sup>,  DAIMON Team, CNR-ISMN Italy</p>
P2-17V	<p><b>Development of nanostructured microwave-absorbing fillers for 3D printing of electromagnetic absorbing composites</b>  <b>V. Buzko</b><sup>2</sup>, S. Udodov<sup>1</sup>, I. Shutkin<sup>1</sup>, I. Shamray<sup>2</sup>, E. Rotai<sup>2</sup>, S. Ivanin<sup>2</sup>  <sup>1</sup>Kuban State Technological University, Russia  <sup>2</sup>Kuban State University, Russia</p>
P2-18V	<p><b>Physicochemical and mechanical properties of dental nanocomposite resins reinforced with novel organomodified silica nanoparticles</b>  <b>A. Nikolaidis</b><sup>1</sup>, E. Koulaouzidou<sup>1</sup>, C. Gogos<sup>1</sup>, D. Achilias<sup>2</sup>  <sup>1</sup> School of Dentistry, Aristotle University of Thessaloniki, Greece  <sup>2</sup> Department of Chemistry, Aristotle University of Thessaloniki, Greece</p>
P2-19V	<p><b>Convenient two-step analysis of adventitious surface-bound and bulk oxygen contents in the metal and sulfide precursors to semiconductor kesterite Cu<sub>2</sub>ZnSnS<sub>4</sub></b>  <b>H. Osip</b>, K. Lejda, M. Drygaś, J.F. Janik  AGH University of Science and Technology, Poland</p>
P2-20V	<p><b>Hollow CuO microparticles for efficient degradation of a model pollutant dye under the solar light illumination</b>  <b>S. Sarsenov</b>, A. Molkenova, T.S. Atabaev  Department of Chemistry, Nazarbayev University, Kazakhstan</p>
P2-21V	<p><b>Fabrication of mesoporous silica nanoparticles doped with Eu (III) ions using a soaking method</b>  <b>A. Molkenova</b>, Z. Oteulina, T.S. Atabaev  Department of Chemistry, Nazarbayev University, Kazakhstan</p>
P2-22V	<p><b>Ba, Tb co-doped mesoporous SiO<sub>2</sub> nanoparticles as a promising multifunctional nanoprobe for potential theranostic applications</b>  <b>K. Zhumanova</b>, N. Akhmetzhanov, A. Molkenova, T.S. Atabaev  Department of Chemistry, Nazarbayev University, Kazakhstan</p>
P2-23V	<p><b>Theoretical investigation of the plasmonic properties of SmCo<sub>5</sub> nanomagnets</b>  <b>E. Antoniou</b><sup>1</sup>, <b>J. Kioussoglou</b><sup>1</sup>, H.M. Polatoglou<sup>1</sup>  Department of Physics, Aristotle University of Thessaloniki Greece.</p>
P2-24V YRA Candidate	<p><b>Synthesis of functionalized magnetic nanoparticles for the continuous capture and separation of target compounds</b>  <b>B. García-Merino</b>, E. Bringas, I. Ortiz  University of Cantabria, Spain</p>
P2-25V	<p><b>Morphological, structural and electrical characterization of Cerium Oxide thin films</b>  <b>G. Papadimitropoulos</b><sup>1,2</sup>, A. Balliou<sup>1</sup>, K. Giannakopoulos<sup>1</sup>  <sup>1</sup> INN, NCSR "Demokritos", Greece  <sup>2</sup> University of West Attica, Greece</p>
P2-26V	<p><b>Push-pull chromophores as electron injection layers for efficient organic light emitting diodes</b>  <b>A. Soulati</b><sup>1,3</sup>, G. Papadimitropoulos<sup>1,3</sup>, A. Verykios<sup>1,2</sup>, S. Kaminaris<sup>3</sup>, K. Tourlouki<sup>1</sup>, P. Argitis<sup>1</sup>, M. Vasilopoulou<sup>1</sup>  <sup>1</sup> INN, NCSR "Demokritos", Greece  <sup>2</sup> Department of Physics, University of Patras, Greece  <sup>3</sup> University of West Attica, Greece</p>
P2-27V	<p><b>Silicon nanowires matrices filled with Dps protein by microscopy and spectroscopy studies</b>  <b>E.V. Parinova</b><sup>1</sup>, S.Yu. Turishchev<sup>1</sup>, V. Sivakov<sup>2</sup>, E.A. Belikov<sup>1</sup>, N.V. Praslova<sup>1</sup>, E.V. Preobrazhenskaya<sup>3</sup>, R.G. Chumakov<sup>4</sup>, A.M. Lebedev<sup>4</sup>, I.S. Kakulilia<sup>1</sup>, D.A. Koyuda<sup>1</sup>, O.A. Chuvenkova<sup>1</sup>, S.S. Antipov<sup>1,5</sup>  <sup>1</sup> Voronezh State University, Russia  <sup>2</sup> Leibniz Institute of Photonic Technology, Germany  <sup>3</sup> Institute of cell biophysics of Russian Academy of science, Russia  <sup>4</sup> National Research Center "Kurchatov Institute", Russia  <sup>5</sup> Immanuel Kant Baltic Federal University, Russia</p>

P2-28V	<p><b>Synthesis and characterization of magnetic biomedical systems</b>  <b>T. Odutola<sup>1</sup></b>, E. Myrovali<sup>2</sup>, D. Tselekidou<sup>1</sup>, K. Simeonidis<sup>2</sup>, I. Tsiaoussis<sup>2</sup>, H. Sarafidis<sup>2</sup>, V. Karagkiozaki<sup>1,3</sup>, M. Angelakeris<sup>2</sup>, M. Gioti<sup>1</sup>  <sup>1</sup> Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Greece  <sup>2</sup> Physics Department, Aristotle University of Thessaloniki, Greece  <sup>3</sup>BL Nanobiomed P.C., Greece</p>
P2-29V	<p><b>In vitro Cytotoxicity of Multi-color Carbon Dot Integrated Transparent and Luminescent Polyvinyl Alcohol Films</b>  <b>Gamze Doğan<sup>3</sup></b>, Melis Özge Alaş<sup>1</sup>, Rükan Genç<sup>1,2*</sup>  <sup>1</sup>Mersin University, Department of Chemical Engineering, Turkey  <sup>2</sup> SUNUM Nanotechnology Research and Application Centre, Turkey  <sup>3</sup>Izmir Institute of Technology, Turkey</p>
P2-30V	<p><b>Screening of organic semiconductors library for photovoltaic applications by density functional theory</b>  <b>M. Ottonelli, M. Alloisio</b>      Università degli Studi di Genova, Italia</p>
P2-31V	<p><b>Carbon-Graphene-Polymer Nanostructured Paints for Electromagnetic Interference Shielding</b>  <b>Barsukov<sup>1</sup></b>, V. Khomenko<sup>1</sup>, I.V. Tudose<sup>2</sup>, <sup>3,4</sup> K. Muratis<sup>2</sup>, O.N.Ionescu<sup>5</sup>, O. Butenko<sup>1</sup>, O. Chernysh<sup>1</sup>, V. Tverdokhlebl<sup>1</sup>, M. Suche<sup>2,5</sup> and E. Koudoumas<sup>2</sup>  <sup>1</sup>Department for Electrochemical Power Engineering and Chemistry, Kyiv National University of Technologies and Design, Ukraine  <sup>2</sup>Center of Materials Technology and Photonics, School of Engineering, Hellenic Mediterranean University Greece  <sup>3</sup>Chemistry Department, University of Crete, Heraklion, Greece  <sup>4</sup>Institute of Electronic Structure and Laser, Foundation for Research &amp; Technology-Hellas, Heraklion, Crete, Greece  <sup>5</sup>National Institute for Research and Development in Microtechnologies-IMT Bucharest, Romania, Romania</p>
P2-32V	<p><b>Finite Difference Time Domain calculation of optical performance of conductive transition metal nitrides nanostructures</b>  <b>S. Dellis<sup>1</sup></b>, I. Fekas<sup>1</sup>, N. Kalfagiannis<sup>2</sup>, S. Kassavetis<sup>1</sup>, P. Patsalas<sup>1</sup>  <sup>1</sup>Physics Department, Aristotle University of Thessaloniki, Thessaloniki, Greece  <sup>2</sup>School of Science and Technology, Nottingham Trent University, Nottingham, United Kingdom</p>
P2-33V	<p><b>Synthesis and physicochemical characterization of the selected weakly coordinating salts of Mg</b>  <b>W. Dolebska<sup>1</sup></b>, T. Jaroń<sup>2</sup>,  <sup>1</sup>. Faculty of Physics, University of Warsaw; Poland  <sup>2</sup>. Centre of New Technologies, University of Warsaw; Poland</p>
P2-34V	<p><b>ZnO and TiO<sub>2</sub> nanotubes produced by using polymer nanofibers obtained by electrospinning</b>  <b>M. Enculescu, A. Costas, A. Evanghelidis, I. Enculescu</b>      Laboratory of Multifunctional Materials and Structures, National Institute of Materials Physics, Atomistilor, 405 A, RO-077125 Magurele, Romania</p>
P2-35V	<p><b>First principle calculations of hybrid GaN/WS<sub>2</sub> and GaN/MoS<sub>2</sub> nanowires for photocatalytic water splitting</b>  <b>S. Piskunov, A. Gopejenko, D. Bocharov, E. Butanovs, B. Polyakov</b>      Institute of Solid State Physics, University of Latvia, 8 Kengaraga str., Riga LV-1063, Latvia</p>
WS3	<p><b>POSTER AREA III</b>  <b>Tuesday 6 July (13:00-14:00, 16:00-16:30): Poster Display &amp; Presentations</b>  <b>Wednesday 7 July, Thursday 8 July, Friday 9 July: Poster Display</b></p>
P3-1L	<p><b>Towards the development and clinical validation of physiologically-based pharmacokinetic models for different doxorubicin formulations: Pharmacological correlation and clinical utility</b>      George A. Mystridis<sup>1</sup>, George Batzias<sup>2</sup>, Ioannis S. Vizirianakis<sup>1</sup>      Aristotle University of Thessaloniki, Greece</p>
P3-2L	<p><b>Hybrid nanocomposites based on magnetic nanoparticles embedded in polymer brushes as stimuli-responsive substrate for cell culture</b>  <b>Weronika Górka-Kumika<sup>a,b</sup></b>, Paula Garbacz, Paweł Dąbczyńska, Michał Szuwarzyński, Szczepan Zapotocznyb      a: Jagiellonian University, Poland      b: Jagiellonian University, Poland;      c: AGH University of Science and Technology, Poland</p>
P3-3L	<p><b>GaINAc-GD1 is a biomarker of cerebrospinal fluid as revealed by nanoESI ion mobility mass spectrometry</b>  <b>M. Sarbu<sup>1,2</sup></b>, D.E. Clemmer<sup>3</sup>, A.D. Zamfir<sup>1,4</sup>  <sup>1</sup> National Institute for Research and Development in Electrochemistry and Condensed Matter, Romania; <sup>2</sup> West University of Timisoara, Romania; <sup>3</sup> Indiana University, USA; <sup>4</sup> "Aurel Vlaicu" University of Arad, Romania</p>
P3-4L	<p><b>Development of microfluidics-mass spectrometry for structural analysis of chondroitin/dermatan sulfate oligosaccharides</b>  <b>A.D. Zamfir<sup>1,2</sup></b>, M. Sarbu<sup>1</sup>, R. Ica<sup>1,3</sup>, D.G.Seidler<sup>4</sup>  <sup>1</sup> National Institute for Research and Development in Electrochemistry and Condensed Matter, Romania; <sup>2</sup> "Aurel Vlaicu" University of Arad, Romania; <sup>3</sup> West University of Timisoara, Romania; <sup>4</sup> SYNLAB Holding, Germany</p>

P3-5L	<p><b>Nanoelectrospray ionization high resolution mass spectrometry of glycolipids expressed in human cortex</b>  <b>R. Ica</b><sup>1,2</sup>, <b>Ž. Vukelić</b><sup>3</sup>, <b>A. D. Zamfir</b><sup>1,4</sup>  1 National Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, Romania; 2 Faculty of Physics, West University of Timisoara, Romania; 3 Department of Chemistry and Biochemistry, University of Zagreb Medical School, Zagreb, Croatia; 4 "Aurel Vlaicu" University of Arad, Arad, Romania;</p>
P3-6L	<p><b>Drug loaded cationic liposomes for synergistic therapy</b>  <b>A. N. Cadinoiu</b><sup>1</sup>, <b>D. M. Rață</b><sup>1</sup>, <b>A.I. Atanase</b><sup>1</sup>, <b>D.L. Ichim</b><sup>1</sup>, <b>Bo Nyström</b><sup>2</sup>, <b>M. Popa</b><sup>1,3</sup>  1 Department of Biomaterials, Faculty of Medical Dentistry, "Apollonia" University of Iasi, Pacurari Street, No. 11, 700511, Iasi, Romania  2 Department of Chemistry, University of Oslo, Po.Box 1032 Blindern, Oslo, Norway  3 Academy of Romanian Scientists, Splaiul Independentei Street, No 54, 050094 Bucharest, Romania</p>
P3-7L	<p><b>Oligochitosan-based nanocapsules as drug delivery systems for biomedical applications</b>  <b>D.M. Rata</b><sup>1</sup>, <b>A.N. Cadinoiu</b><sup>1</sup>, <b>L.I. Atanase</b><sup>1</sup>, <b>G. Calin</b><sup>1</sup>, <b>S.A. Sande</b><sup>2</sup>, <b>O. Chiscan</b><sup>3</sup>, <b>M. Popa</b><sup>1,4</sup>  1 "Apollonia" University of Iasi, Romania  2 University of Oslo, Norway  3 Alexandru Ioan Cuza University, Romania  4 Academy of Romanian Scientists, Romania</p>
P3-8L	<p><b>X-ray Fluorescent Nanoparticles for in vivo Bioimaging</b>  <b>G. M. Saladino</b>, <b>C. Vogt</b>, <b>Y. Li</b>, <b>K. Shaker</b>, <b>B. Brodin</b>, <b>M. Svenda</b>, <b>H. M. Hertz</b>, <b>M. S. Toprak</b>  Department of Applied Physics, KTH Royal Institute of Technology, Sweden</p>
P3-9L	<p><b>Resveratrol-therapeutic agent delivered and localized via fluorescent polyelectrolyte microsystems inside living cells</b>  <b>Stoia D.1</b>, <b>Popan R.2</b>, <b>Nistor M.2</b>, <b>Borlan R.1</b>, <b>Rugina D.2</b>, <b>Focsan M.1</b>  1 Babes-Bolyai University, Romania  2 University of Agricultural Sciences and Veterinary Medicine, Romania</p>
P3-10L	<p><b>Nanoparticulate Systems for Delivery of Tumor Inhibitors: New Strategies for Individualized Treatment of Leukemias</b>  <b>A.S. Tatar</b><sup>1</sup>, <b>A.B. Tigu</b><sup>2</sup>, <b>A. Jurj</b><sup>1,3</sup>, <b>A. Florea</b><sup>4</sup>, <b>T. Nagy-Simon</b><sup>1</sup>, <b>I. Berindan-Neagoe</b><sup>3</sup>, <b>S. Astilean</b><sup>1</sup>, <b>C. Tomuleasa</b><sup>1,2</sup>, <b>S. Boca</b><sup>1</sup>  1 Babes-Bolyai University, Romania  2 Medfuture Research Center for Advanced Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, Romania  3 Research Center for Functional Genomics, Biomedicine and Translational Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, Romania  4 Department of Cell and Molecular Biology, Iuliu Hatieganu University of Medicine and Pharmacy, Romania</p>
P3-11L	<p><b>Emissive PLGA and HSA Nanoparticles loaded with Polymethine dyes</b>  <b>D.M. Dereje</b><sup>1</sup>, <b>C. Pontremoli</b><sup>1</sup>, <b>C. Butnarusu</b><sup>2</sup>, <b>M.J. Morán Plata</b><sup>1</sup>, <b>C. Barolo</b><sup>1</sup>, <b>S. Visentin</b><sup>2</sup>, <b>N. Barbero</b><sup>1</sup>  1 Department of Chemistry, NIS Interdepartmental and INSTM Reference Centre, University of Torino, Italy  2 Department of Molecular Biotechnology and Health Sciences, University of Torino, Italy</p>
P3-12L	<p><b>NanoMuG: a novel protein based drug delivery system</b>  <b>C. Butnarusu</b><sup>1</sup>, <b>G. Guagliano</b><sup>2</sup>, <b>F. Bracotti</b><sup>1</sup>, <b>P. Petrini</b><sup>2</sup>, <b>L. Visai</b> and <b>S. Visentin</b><sup>1</sup>  1 Department of Molecular Biotechnology and Health Sciences, University of Torino, Torino, Italy  2 Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Italy</p>
P3-13L	<p><b>Carbon nanodots as nanocarrier for Squaraines: an in vitro evaluation of their Photodynamic activity</b>  <b>C. Butnarusu</b><sup>1</sup>, <b>C. Pontremoli</b><sup>2</sup>, <b>M.J. Morán Plata</b><sup>2</sup>, <b>E. Sansone</b><sup>3</sup>, <b>G. Chinigo</b><sup>3</sup>, <b>A. Fiorio Pla</b><sup>3</sup>, <b>N. Barbero</b><sup>2</sup>, and <b>S. Visentin</b><sup>1</sup>  1 Department of Molecular Biotechnology and Health Sciences, University of Torino, Italy  2 Department of Chemistry, NIS Interdepartmental and INSTM Reference Centre, University of Torino, Italy  3 Department of Life Sciences and Systems Biology, University of Torino, Italy</p>
P3-14L	<p><b>Green synthesis of <math>\alpha</math>-Fe<sub>2</sub>O<sub>3</sub> nanoparticles using Artemisia absinthium L. aqueous leaf and stems extracts and their biological assessment on healthy and melanoma cell lines</b>  <b>E.A. Moacă</b><sup>1,2</sup>, <b>C.G. Watz</b><sup>2,3</sup>, <b>L. Barbu-Tudoran</b><sup>4,5</sup>, <b>R. Racoviceanu</b><sup>3,6</sup>, <b>G.A. Drăghici</b><sup>1,2</sup>, <b>Daniel Pop</b><sup>7</sup>, <b>C.A. Dehelean</b><sup>1,2</sup>  1 Department of Toxicology and Drug Industry, Faculty of Pharmacy, "Victor Babeș" University of Medicine and Pharmacy Timisoara, Romania;  2 Research Centre for Pharmaco-Toxicological Evaluation, "Victor Babeș" University of Medicine and Pharmacy, Romania;  3 Department of Pharmaceutical Physics, Faculty of Pharmacy, "Victor Babeș" University of Medicine and Pharmacy Timisoara, Romania  4 Electron Microscopy Laboratory "Prof. C. Craciun", Faculty of Biology &amp; Geology, "Babes-Bolyai" University, Romania;  5 Electron Microscopy Integrated Laboratory, National Institute for R&amp;D of Isotopic and Molecular Technologies, Romania  6 Department of Pharmaceutical Chemistry, Faculty of Pharmacy, "Victor Babeș" University of Medicine and Pharmacy Timisoara, Romania;  7 Department of Prosthodontics, Faculty of Dental Medicine, University of Medicine and Pharmacy "Victor Babeș", Romania</p>

P3-15L YRA Candidate	<b>A gold-based nano-formulation of the CRISPR/Cas9 ribonucleoprotein for efficient delivery and genome editing</b> <b>S. Konstantinidou<sup>1</sup>, T. Schmid<sup>1</sup>, E. Landi<sup>1</sup>, A. De Carli<sup>1</sup>, G. Maltinti<sup>1</sup>, D. Witt<sup>2</sup>, A. Dziadosz<sup>2</sup>, A. Lindstaedt<sup>2</sup>, M. Lai<sup>3</sup>, M. Pistello<sup>3</sup>, V. Cappello<sup>4</sup>, L. Dente<sup>1</sup>, C. Gabellini<sup>1</sup>, P. Barski<sup>2</sup>, V. Raffa<sup>1</sup></b> 1Department of Biology, University of Pisa, Italy 2ProChimia Surfaces, Poland 3Department of Medicine, University of Pisa, Italy 4Istituto Italiano di Tecnologia, Italy
P3-16L	<b>Structure and morphology of core-shell ZnO nanoparticles for biomedical applications</b> <b>Ilias M. Oikonomou<sup>1</sup>, Maria-Eleni Karageorgou<sup>2</sup>, Kleoniki Giannousi<sup>2</sup>, Catherine Dendrinou-Samara<sup>2</sup> and Philomela Komninou<sup>1</sup></b> 1 Department of Physics, Aristotle University of Thessaloniki, Greece 2 Laboratory of Inorganic Chemistry, Department of Chemistry, Aristotle University of Thessaloniki, Greece
P3-17L	<b>Iron Oxide Nanoparticles: An Advanced Screening Employing Three-Dimensional (3D) Reconstructed Human Epidermal Model</b> <b>Claudia Geanina Watz<sup>1</sup>, Elena-Alina Moacă<sup>2</sup>, Ioana Zinuca Pavel<sup>3</sup>, Lenuța Maria Șuta<sup>4</sup>, Mirela Nicolov<sup>1</sup>, Felicia Loghin<sup>5</sup>, Cristina Adriana Dehelean<sup>2</sup></b> 1"Victor Babeș" University of Medicine and Pharmacy of Timișoara, Faculty of Pharmacy, Department of Pharmaceutical Physics, RO-300041, Timișoara, România 2"Victor Babeș" University of Medicine and Pharmacy of Timișoara, Faculty of Pharmacy, Department of Pharmacognosy, RO-300041, Timișoara, România 3 "Victor Babeș" University of Medicine and Pharmacy of Timișoara, Faculty of Pharmacy, Department of Toxicology, RO-300041, Timișoara, România 4 "Victor Babeș" University of Medicine and Pharmacy of Timișoara, Faculty of Pharmacy, Department of Pharmaceutical Technology, Timișoara, Romania 5 "Iuliu Hațieganu" University of Medicine and Pharmacy, Faculty of Pharmacy, Department of Toxicology, RO-400012, Cluj-Napoca, România
P3-18L	<b>Assessment of the Antiangiogenic and Cytotoxic Properties of a Maslinic Acid Derivative Nanoemulsion on HaCaT Keratinocytes and A375 Melanoma Cell Lines</b> <b>I.Z. Pavel<sup>1,2</sup>, E.A. Moacă<sup>2,3</sup>, S. Aam<sup>1,2</sup>, C. Danciu<sup>1,2</sup>, V.G. Ciobotaru<sup>4</sup>, R. Csuk<sup>5</sup>, D.M. Muntean<sup>6,7</sup>, C.A. Dehelean<sup>2,3</sup></b> 1 Department of Pharmacognosy, "Victor Babeș" University of Medicine and Pharmacy, România. 2Research Center for Pharmaco-Toxicological Evaluation, "Victor Babeș" University of Medicine and Pharmacy Timișoara, Romania, Romania 3Department of Toxicology and Drug Industry, "Victor Babeș" University of Medicine and Pharmacy, România 4Department V - Internal Medicine I, "Victor Babeș" University of Medicine and Pharmacy, Romania. 5Department of Organic Chemistry, Martin-Luther University Halle-Wittenberg, Germany. 6Department of Functional Sciences - Pathophysiology, Faculty of Medicine, "Victor Babeș" University of Medicine and Pharmacy, România. 7Center for Translational Research and Systems Medicine, "Victor Babeș" University of Medicine and Pharmacy, România
P3-19L	<b>Porous silicon microparticles for immune adjuvant delivery</b> <b>A. Sambugaro<sup>1</sup>, E. Chisté<sup>1</sup>, M. Donini<sup>2</sup>, M. Scarpa<sup>3</sup>, S. Dusi<sup>2</sup>, N. Daldosso<sup>1</sup></b> 1Department of Computer Science, Fluorescence Laboratory, University of Verona, Ca' Vignal 2, Strada le Grazie 15 - 37134 Verona, Italy 2Department of Medicine, Division of General Pathology, University of Verona, Strada Le Grazie 8 - 37134 Verona, Italy 3Department of Physics, Laboratory of Nanoscience, University of Trento, st. Sommarive 14 - 38123 Povo (TN), Italy
P3-20L YRA Candidate	<b>Chitosan-coated Iron Oxide Nanoparticles as Promising Nanocarriers For Gallic Acid Targeted Delivery</b> <b>M. Anghelache<sup>1</sup>, F. Saiciuc<sup>1</sup>, G. Voicu<sup>1</sup>, M. Turtoi<sup>1</sup>, C. Ilie<sup>2</sup>, A. Fici<sup>2</sup>, M. Calin<sup>1</sup></b> 1 Institute of Cellular Biology and Pathology "N. Simionescu" B.P. Hasdeu 8, Bucharest, Romania 2 Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Gheorghe Polizu 1-7, Bucharest, Romania
P3-21L YRA Candidate	<b>Preparation and Physico-Chemical Characterization of specialized pro-resolving lipid mediators (SPMs)-Loaded Nanoemulsions as Nanocarriers for Inflammation Resolution</b> <b>M. Anghelache<sup>1</sup>, M. Deleanu<sup>1</sup>, M. Turtoi<sup>1</sup>, G. Voicu<sup>1</sup>, M. Calin<sup>1</sup></b> 1 Institute of Cellular Biology and Pathology "N. Simionescu" B.P. Hasdeu 8, Bucharest, Romania
P3-22L	<b>Designing of New Biocompatible Coordinating Compounds of Oxidovanadium(V) As Insulin Mimetics</b> <b>M. Turtoi<sup>1</sup>, M. Anghelache<sup>1</sup>, A.A. Patrascu<sup>2</sup>, C. Maxim<sup>2</sup>, D-L. Popescu<sup>2</sup>, I. Manduteanu<sup>1</sup>, M. Calin<sup>1</sup></b> 1Biopathology and Therapy of Inflammation, Institute of Cellular Biology and Pathology "Nicolae Simionescu" of the Romanian Academy, 8 B.P. Hașdeu, 050568-Bucharest, Romania, 2Department of Inorganic Chemistry, University of Bucharest, 23 Dumbrava Rosie, 020464-Bucharest, Romania.
P3-23L YRA Candidate	<b>A three-dimensional hyaluronic acid-based scaffold seeded with human cancer cells functions as a suitable platform for antitumoral drug screening</b> <b>G. Voicu<sup>1</sup>, M. Turtoi<sup>1</sup>, M. Anghelache<sup>1</sup>, S.-M. Bucatariu<sup>2</sup>, M. Deleanu<sup>1</sup>, F. Saiciuc<sup>1</sup>, I. Manduteanu<sup>1</sup>, G. Fundueanu<sup>2</sup>, M. Simionescu<sup>1</sup>, M. Calin<sup>1</sup></b> 1 "Medical and Pharmaceutical Bionanotechnologies" Laboratory, Institute of Cellular Biology and Pathology "Nicolae Simionescu" of the Romanian Academy, 050568 Bucharest, Romania 2Department of Natural Polymers, Bioactive and Biocompatible Materials, "Petru Poni" Institute of Macromolecular Chemistry, 700487, Iassy, Romania
P3-24L	<b>Biofunctionilization of inorganic nanoparticles for sensory applications</b> <b>I. Chatziioannou<sup>1</sup>, S. Dermenoudis<sup>1</sup>, K. Tsimenidis<sup>2</sup>, A. Orfanos<sup>2</sup>, V. Karagiozaki<sup>1,2</sup>, S. Logothetidis<sup>1</sup></b> 1Nanotechnology Lab LTFN (Lab for Thin Films - Nanobiomaterials - Nanosystems - Nanometrology) Aristotle University of Thessaloniki, Thessaloniki, Greece 2BL Nanobiomed P.C. Thessaloniki, Greece
P3-1V	<b>Application of nonREM sleep waves simulation</b> <b>T.A. Vdovenkova</b> T.V.A. Canada,



P3-2V	<b>Novel thiolated chitosan used in nanoencapsulation of carbon nanoforms for galantamine delivery used in Alzheimer's disease therapy treatment</b> S.G. Nanaki <sup>1</sup> , K. Spyrou <sup>2</sup> , C. Bekiari <sup>3</sup> , P.Venetis <sup>1</sup> , N.Karouta <sup>2</sup> , I. Grivas <sup>3</sup> , G.C. Papadopoulos <sup>3</sup> , D. Gournis <sup>2</sup> , D. Bikiaris <sup>1</sup> 1Department of Chemistry, Aristotle University of Thessaloniki, Greece, 2Department of Materials Science and Engineering, University of Ioannina, Greece, 3Department of Anatomy, Histology & Embryology, Faculty of Health Sciences, AUTH, Greece
P3-3V	<b>Thermodynamic characteristics of the protein interaction with sphingomyelin nanoemulsions</b> D. Gheorghe <sup>1</sup> , A. Serban <sup>1</sup> , F. Teodorescu <sup>1</sup> , A. Neacsu <sup>1</sup> , D. A. Botea-Petcu <sup>1</sup> , S. Diez Villares <sup>2</sup> , M. de la Fuente Freire <sup>2</sup> , S. Tanasescu <sup>1</sup> 1Institute of Physical Chemistry "Ilie Murgulescu" of the Romanian Academy, Romania 2Nano-Oncology and Translational Therapeutics Unit, Health Research Institute of Santiago de Compostela (IDIS), CIBERONC, Santiago de Compostela, Spain
P3-4V	<b>Bis-MPA nanocarriers with Zn(II)-morin load with anticancer potential</b> E. Halevas <sup>1</sup> , M. Kaplanis <sup>1</sup> , B. Mavroidi <sup>1</sup> , A. Hatzidimitriou <sup>3</sup> , G. Litsardakis <sup>2</sup> , M. Pelecanou <sup>1</sup> 1 Institute of Biosciences & Applications, National Centre for Scientific Research "Demokritos", Greece, 2 Electrical & Computer Engineering, Polytechnic School, Aristotle University of Thessaloniki, Greece 3 Department of Chemistry, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece
P3-5V	<b>Development of magnetic nanoparticles based on biotinylated N-palmitoyl chitosan loaded with Doxorubicin</b> V. Balan <sup>1</sup> , V.C. Ursachi <sup>1,2</sup> , G. Dodi <sup>2</sup> , F.D. Cojocar <sup>2</sup> , B.E. Cretu <sup>1,2</sup> , C.T. Mihai <sup>2,3</sup> , L. Verestiuc <sup>1</sup> 1 Faculty of Medical Bioengineering, Grigore T. Popa University of Medicine and Pharmacy of Iasi, Romania, 2Advanced Centre for Research-Development in Experimental Medicine, Grigore T. Popa University of Medicine and Pharmacy of Iasi, Romania; 3 Department of Experimental and Applied Biology, NIRDBS - Institute of Biological Research Iasi, Romania
P3-6V	<b>SPIOs - biopolymers - calcium phosphates composites as magnetically stimulated scaffolds for bone tissue regeneration</b> F.D. Cojocar <sup>1,2</sup> , V. Balan <sup>1</sup> , A.S. Mihai <sup>1</sup> , M.Butnar <sup>1</sup> , A.M. Serban <sup>1,3</sup> , L. Verestiuc <sup>1</sup> 1Faculty of Medical Bioengineering, Grigore T. Popa University of Medicine and Pharmacy of Iasi, Romania 2Advanced Centre for Research-Development in Experimental Medicine, Grigore T. Popa University of Medicine and Pharmacy of Iasi Romania;3Petru Poni Institute of Macromolecular Chemistry, Romania.
P3-7V	<b>Leflunomide-loaded Sulfobetaine-Modified Chitosan Nanoparticles Embedded in Biodegradable Polyesters Films for Sustained Skin Delivery</b> S.G. Nanaki <sup>1</sup> , E. Christodoulou <sup>1</sup> , N.D. Bikiaris <sup>1</sup> , Panagiotis Barmplexis <sup>2</sup> , A. Kapourani <sup>2</sup> , K.N. Kontogiannopoulos <sup>2</sup> , S. Vergkizi-Nikolakaki <sup>3</sup> , 1Laboratory of Polymer Chemistry and Technology, Department of Chemistry, AUTH, Greece, 2Department of Pharmaceutical Technology, School of Pharmacy, AUTH, Greece, 3Department of Microbiology, School of Medicine, Faculty of Health Sciences, AUTH, Thessaloniki, Greece
P3-8V	<b>Nanoencapsulation of Leflunomide in Chitosan nanoparticles via ionic gelation incorporated in PLLA and PLGA patches for transdermal delivery of the drug</b> S.G. Nanaki <sup>1</sup> , S. Andrianidou <sup>1</sup> , P. Barmplexis <sup>2</sup> , E. Christodoulou <sup>1</sup> , D. N. Bikiaris <sup>1</sup> 1Laboratory of Polymer Chemistry and Technology, Department of Chemistry, AUTH, Thessaloniki, Greece 2Department of Pharmaceutical Technology, School of Pharmacy, AUTH, Thessaloniki, Greece
P3-9V	<b>Radio-opaque biomaterials based on bismuth-doped hydroxyapatite</b> G. Ciobanu, M. Harja Faculty of Chemical Engineering and Environmental Protection, „Gheorghe Asachi” Technical University of Iasi, Romania
P3-10V	<b>Synchrotron XANES and XPS studies of silicon nanoparticles transformation at integration with 3T3 NIH cells culture</b> S.S. Titova <sup>1</sup> , L.A. Osminkina <sup>2,3</sup> , D.A. Koyuda <sup>1</sup> , I.S. Kakulii <sup>1</sup> , U.A. Tsurikova <sup>2</sup> , O.A. Chuvenkova <sup>1</sup> , E.V. Parinova <sup>1</sup> , R.G. Chumakov <sup>4</sup> , A.M. Lebedev <sup>4</sup> , S.Yu. Turishchev <sup>1</sup> 1 Voronezh State University, Russia, 2 Lomonosov Moscow State University, Russia, 3 Institute for Biological Instrumentation of Russian Academy of Sciences, Russia, 4 National Research Center "Kurchatov Institute", Russia
P3-11V	<b><math>\beta</math>-Cyclodextrin-Based Smart Nanocarriers for Targeted Delivery of Oleandrin to Pancreatic Cancer Cells</b> Pinar Karacabey <sup>1</sup> , Gamze Doğan <sup>2</sup> , Erdal Bedir <sup>2</sup> , Rukan Genç <sup>1*</sup> 1Mersin University, Department of Chemical Engineering, Turkey, 2Izmir Institute of Technology, Department of Bioengineering, Turkey
P3-12V	<b>In vitro evaluation of antiviral activity of nanostructured antimicrobial coatings for high-touch surfaces</b> I. Marchesi <sup>1</sup> , S. Paduano <sup>1</sup> , C. Cermelli <sup>2</sup> , A. Sala <sup>1</sup> , R. Bianchi <sup>2</sup> , A. Bargellini <sup>1</sup> , G. Frezza <sup>1</sup> , S. Turchi <sup>1</sup> , A. Mansi <sup>3</sup> , G. Buonocore <sup>4</sup> , M. Stanzione <sup>4</sup> , P. Borella <sup>1</sup> 1Department of Biomedical, Metabolic and Neural Sciences, Section of Public Health, University of Modena and Reggio Emilia, Via Campi 287, 41125 Modena, Italy 2Dental Department of Morphological Sciences Related to Transplant, Oncology and Regenerative Medicine, University of Modena and Reggio Emilia, Via Campi 287, 41125 Modena, Italy 3INAIL Research Area, Department of Occupational and Environmental Medicine, Epidemiology and Hygiene, Via Fontana Candida 1, 00078 Monte Porzio Catone, Rome, Italy. 4Institute of Polymers, Composites and Biomaterials, National Research Council, P. le Fermi 1, 80055 Portici, Naples, Italy.
P3-13V	<b>Magnetically navigated delivery of vesicles and exosomes upgraded by magnetic nanoparticles</b> J. Skopalik <sup>1,2,3</sup> , J. Prucha <sup>2,3</sup> , A. Novobilsky <sup>4</sup> , J. Masek <sup>4</sup> , T. Parak <sup>1</sup> 1 Faculty of Pharmacy, Masaryk University, Brno, CZ 2 Department of Information and Communication Technologies in Medicine, Faculty of Biomedical Engineering Czech Technical University in Prague, CZ 3 Department of Health Care Disciplines and Population Protection, Faculty of Biomedical Engineering, Czech Technical University in Prague, CZ 4 Dept. of Pharmacology and Toxicology, Veterinary Research Institute, Brno, CZ

WS4 BIOSENSORS	POSTER AREA II Monday 5 July (13:00-14:00, 16:00-16:30): Poster Display Tuesday 6 July, Wednesday 7 July, Thursday 8 July: Poster Display & Presentations
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P4-1L	<b>Portable Plasmonic Nanochip for Fast Cardiac Troponin Biomarker Detection</b> Muresan I.1, Campu A.1, Lazar D.2,3, Cainap S.2,4, Lazar F. 5, Astilean S. 1, Maniu D. 1, Focsan M. 1 1 Babes-Bolyai University, Romania, 2 Emergency Cty Hosp Children, Dept Pediat Cardiol, Romania 3 Iuliu Hatieganu Univ Med & Pharm, Romania 4 Iuliu Hatieganu Univ Med & Pharm, Romania 5 Nicolae Stancioiu Heart Institute, Romania
P4-2L	<b>Novel Highly Stable Conductive Polymer Composite PEDOT:DBSA for Bioelectronic Applications</b> Tumová S.*1, Malečková R1, Kubáč L.2, Akrman J.2, Enev V.1, Kalina L.1, Šafaříková E.3, 4, Víteček J.3, Vala M.1, Weiter M.1 1 Faculty of Chemistry, Brno University of Technology, Czech Republic, 2 Centre for Organic Chemistry, Czech Republic, 3 Institute of Biophysics of the Czech Academy of Sciences, Czech Republic, 4 Department of Experimental Biology, Faculty of Science, Masaryk University, Czech Republic
P4-3L	<b>Effects influencing the transconductance of OECTs</b> A. Marková <sup>1</sup> , S. Strítešský <sup>2</sup> , M. Weiter <sup>1</sup> , M. Vala <sup>1</sup> <sup>1</sup> Faculty of chemistry, Brno University of Technology, CZ, <sup>2</sup> IQS nano s.r.o., CZ
P4-4L	<b>IL-6 EGOT-based biosensor: A comparison between OECT and EGOFET</b> P. Manco <sup>1</sup> , M. Berto <sup>1</sup> , F. Biscarini <sup>1,2</sup> , C.A. Bortolotti <sup>1</sup> <sup>1</sup> University of Modena and Reggio Emilia, Italy <sup>2</sup> Center for Translational Neurophysiology of Speech and Communication (CTNSC), Istituto Italiano di Tecnologia, Ferrara, Italy
P4-5L	<b>Characterization and Optimization of Novel Polymer Composite PEDOT:DBSA for Bioelectronic Applications</b> Malečková R.*1, Tumová S.1, Kubáč L.2, Akrman J.2, Enev V.1, Kalina L.1, Šafaříková E.3, 4, Víteček J.3, Vala M.1, Weiter M.1 <sup>1</sup> Faculty of Chemistry, Brno University of Technology, Czech Republic, <sup>2</sup> Centre for Organic Chemistry, Czech Republic, <sup>3</sup> Institute of Biophysics of the Czech Academy of Sciences, Czech Republic <sup>4</sup> Department of Experimental Biology, Faculty of Science, Masaryk University, Czech Republic
P4-6L	<b>Label-free detection of biomarkers of multiple sclerosis with EGOT-based biosensors</b> K. Solodka <sup>1</sup> , M. Berto <sup>1</sup> , F. Biscarini <sup>1,2</sup> , C.A. Bortolotti <sup>1</sup> , M. Pinti <sup>1</sup> <sup>1</sup> Department of Life Sciences, University of Modena and Reggio Emilia, Modena, Italy <sup>2</sup> Center for Translational Neurophysiology of Speech and Communication (CTNSC), Istituto Italiano di Tecnologia, Ferrara, Italy
P4-7L	<b>High throughput platform for identification and characterization of electrogenic bacteria.</b> Jiri Ehlich <sup>1</sup> , Lukasz Szydłowski <sup>2</sup> <sup>1</sup> Faculty of chemistry, Brno University of Technology, Czech Republic, <sup>2</sup> Malopolska Centre of Biotechnology, Jagiellonian University Krakow, Poland
P4-8L	<b>Rapid determination of COVID-19 viral loads with the intrinsic properties of carbon/graphene electrochemical systems combined with PBASE or EDC/NHS linker chemistry</b> D.E. Georgiadis <sup>1</sup> , A. Orfanos <sup>2</sup> , K.Tsimenidis <sup>2</sup> , S. Dermenoudis <sup>1</sup> , A. Laskarakis <sup>1</sup> , S. Logothetidis <sup>1</sup> 1. Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki, Greece 2. BL NanoBioMed, Thessaloniki, Greece
P4-1V	<b>Meta-chemical Surface for Glucose Sensing Application Based on Glucose Oxidase Using Dip-Pen Nanolithography</b> D. Saban <sup>1</sup> , C.J Dobos <sup>1</sup> , D. Shamir <sup>2</sup> , M. Zohar <sup>3</sup> , A. Burg <sup>1</sup> 1 Department of Chemical Engineering, Shammon College of Engineering, Beer-Sheva, Israel, 2 Nuclear Research Center, Beer-Sheva, Israel, 3 Department of Electrical and Electronics Engineering, Shammon College of Engineering, Beer-Sheva, Israel
P4-2V	<b>Favorable impact of EDTA-derived N in Me-N-C (Me= Fe, Co) electrocatalysts for dopamine electrochemical detection</b> G. Balkourani <sup>1</sup> , K. Molochas <sup>1</sup> , A. Brouzgou <sup>1,2</sup> , P. Tsiakaras <sup>1,3,4</sup> 1 Laboratory of Alternative Energy Conversion Systems, Department of Mechanical Engineering, School of Engineering, University of Thessaly, Greece., 2 Department of Energy Systems, Faculty of Technology, University of Thessaly, Greece. 3 Laboratory of Materials and Devices for Clean Energy, Department of Technology of Electrochemical Processes, Ural Federal University, Russian Federation., 4 Laboratory of Electrochemical Devices based on Solid Oxide Proton Electrolytes, Institute of High Temperature Electrochemistry (RAS), Russian Federation.
P4-3V	<b>Organic field-effect transistor with a plasmonic fiber optic gate for simultaneous monitoring of biomolecular charge and mass surface density</b> R. Hasler <sup>1</sup> , S. Fossati <sup>1</sup> , C. Reiner-Rozman <sup>1</sup> , P. Aspermer <sup>1</sup> , S. Lee <sup>2</sup> , M. Ibáñez <sup>2</sup> , J. Dostalek <sup>1,3</sup> , J. Binteringer <sup>1,4</sup> , W. Knoll <sup>1</sup> <sup>1</sup> AIT Austrian Institute of Technology GmbH, Austria <sup>2</sup> Institute of Science and Technology Austria (IST Austria), Austria <sup>3</sup> FZU-Institute of Physics, Czech Academy of Sciences,
P4-4V	<b>Sustainable packaging solutions on the basis of hybrid bioORMOCER<sup>®</sup> coatings</b> K. Emmert <sup>1</sup> , F. Somorowsky, S. Amberg-Schwab, P. Wenderoth <sup>1</sup> Fraunhofer Institute for Silicate Research, ISC (Chemical Coating Technology), Germany

WS5 Graphene	<b>POSTER AREA II</b> Monday 5 July (13:00-14:00, 16:00-16:30): Poster Display Tuesday 6 July, Wednesday 7 July, Thursday 8 July: Poster Display & Presentations
P5-1L	<b>Novel TiO<sub>2</sub> decorated graphene electrodes for lithium ion batteries</b> M. Sidoli <sup>1</sup> , G. Magnani <sup>1</sup> , L. Fornasini <sup>1</sup> , S. Scaravonati <sup>1</sup> , A. Morengi <sup>1</sup> , G. Berton <sup>2</sup> , M. Riccò <sup>1</sup> , D. Pontiroli <sup>1</sup> 1 - Dipartimento di Scienze Matematiche, Fisiche e Informatiche, Università degli studi di Parma, Italy, 2 - Istituto Nanoscienze CNR NANO, Via Giuseppe Campi 213, 41125 Modena MO, Italy

P5-2L	<b>Valorization of organic waste for energy storage applications</b> G. Magnani <sup>1</sup> , S. Scaravonati <sup>1</sup> , A. Morengi <sup>1</sup> , M. Sidoli <sup>1</sup> , C. Milanese <sup>2</sup> , A. Girella <sup>2</sup> , M. Riccò <sup>1</sup> , D. Pontiroli <sup>1</sup> <i>1 - Dipartimento di Scienze Matematiche, Fisiche e Informatiche, Università degli studi di Parma, , Italy, 2 - Pavia Hydrogen Lab, C.S.G.I &amp; Dipartimento di Chimica, Sezione di Chimica Fisica, Università degli Studi di Pavia, Italy</i>
P5-3L	<b>Two-Dimensional Molybdenum Diselenide Tuned by Bimetal Co/Ni Nanoparticles for Oxygen Evolution Reaction</b> A. Dymerska <sup>1</sup> , W. Kukułka <sup>1</sup> , K. Wenelska <sup>1</sup> , and E. Mijowska <sup>1</sup> <i>1 West Pomeranian University of Technology in Szczecin Poland</i>
P5-1V	<b>UlthraThin Polydopamine Films with Phospholipid Nanodiscs Containing a Glycophorin A Domain</b> T. Marchesi D'Alvise <sup>1</sup> , K. Wunderlich <sup>1</sup> , T. Weil <sup>1,2</sup> <i><sup>1</sup>Synthesis of Macromolecules (Max Planck institute for polymer research, Germany, Institute of Organic Chemistry III/Macromolecular Chemistry (Ulm University) Ulm, Germany</i>
P5-2V	<b>Characterization of Diamond-like carbon films produced by electron- beam physical vapour deposition</b> S. Rabadzhyiska, G. Kotlarski, S. Valkov, M. Ormanova, P. Petrov <i>Institute of Electronics „Akad. E. Djakov“, Bulgarian Academy of Sciences, Bulgaria</i>
P5-3V	<b>Electrochemical doping of two dimensional transition metal dichalcogenides</b> K. Filintoglou <sup>1,4</sup> , A. Michail <sup>2,3</sup> , I. Samaras <sup>1</sup> , I. Parthenios <sup>3</sup> , and K. Papagelis <sup>1,3</sup> <i><sup>1</sup>School of Physics Department of Solid State Physics, Aristotle University of Thessaloniki, Greece, <sup>2</sup>Department of Physics, University of Patras, Greece, <sup>3</sup>FORTH/ICE-HT, Institute of Chemical Engineering Sciences, Greece, <sup>4</sup>HENANOTEC, Greece</i>

I3D (common with NN21)	<b>POSTER AREA II</b> Monday 5 July (13:00-14:00, 16:00-16:30): Poster Display Tuesday 6 July, Wednesday 7 July, Thursday 8 July: Poster Display & Presentations
PI3D-1V	<b>Development of 3D printing filaments for dosimetry phantom applications in radiotherapy</b> A. Jreije <sup>1</sup> , D. Adliene <sup>2</sup> <i>1,2 Physics Department, Kaunas University of Technology, Studentų Str. 50, Kaunas, Lithuania</i>
PI3D-2V	<b>Bioprinting and in vitro Evaluation of Hydroxyapatite / Locust Bean Gum/Alginate Composite Bioinks for Bone Tissue Engineering</b> Sinemli R. <sup>1</sup> , Karacaoglu B. <sup>1</sup> , Morcimen Z. G. <sup>1</sup> , Sendemir A. <sup>1, 2*</sup> <i><sup>1</sup> Department of Bioengineering, Ege University, Izmir, Turkey <sup>2</sup> Department of Biomedical Technologies, Ege University, Izmir, Turkey</i>