



# 13<sup>th</sup> International Conference on Nanosciences & Nanotechnologies – NN16

## Porto Palace Conference Centre & Hotel, 5-8 July 2016

### Thessaloniki, Greece

## ORAL PRESENTATIONS PROGRAM

<b>Tuesday 5 July Porto Palace Conference Centre &amp; Hotel</b>	
08:00 – All Day Registration to NN16	
Keynote Talk Session I (All Workshops of NN16)	
09:00– 09:15 <b>'WELCOME &amp; OPENING REMARKS'</b> S. Logothetidis NN16 Chairman <i>Room: Crystal Hall</i>	
09:15 – 09:45 Keynote Talk <b>Materials for Energy Efficient Nanoelectronic Devices</b> At. Dimoulas <i>Inst. for Nanoscience and Nanotechnology, NCSR DEMOKRITOS, 15310, Athens, Greece</i>	
<b>Parallel Session</b> <b>W1 Session: Nanoelectronics I</b> <i>Chair: At. Dimoulas</i> <i>Room: Crystal Hall</i>	<b>Parallel Session</b> <b>W2 Session: NANOSTRUCTURES I</b> <i>Chair: P. Patsalas</i> <i>Room: Doc Six I</i>
09:45-10:15 Invited <b>Sidewall Roughness of Nanoelectronic and Nanophotonic Structures: Metrological Challenges and their Critical Role in Applications</b> V. Constantoudis	09:45-10:15 Invited <b>Self-ordered Ge-based nanostructures in glasses: fabrication, properties and application</b> M. Buljan
10:15-10:30 <b>Understanding the structure-property relationship in high-performance solution-processed bilayer metal oxide transistors</b> K. Tetzner	10:15-10:30 <b>Synthesis and structural characterization of Zn<sub>x</sub>Fe<sub>3-x</sub>O<sub>4</sub> ferrite nanoparticles obtained by an electrochemical method</b> M. Rivero,
10:30-10:45 <b>Relationship between the nanomorphology of the electron transport layer and the performance on Hybrid Light Emitting Diodes</b> E. Martinez-Ferrero	10:30-10:45 (AWARD APPLICANT) <b>Resistive switching in Pt/Hf<sub>0.5</sub>Zr<sub>0.5</sub>O<sub>2</sub>/Pt and TiN/ Hf<sub>0.5</sub>Zr<sub>0.5</sub>O<sub>2</sub>/TiN structures</b> F. Ambriz-Vargas
10:45-11:00 <b>Characteristics of silicon-on-insulator nanowire hot electron electroluminescence.</b> M. du Plessis	10:45-11:00 <b>Colloidal Au-Ag-Chalcogen-Based Heterostructured and Alloyed Nanocrystals for Energy Conversion Applications</b> A. Figuerola
11:00–11:30	<b>Coffee Break-Exhibition-Networking</b> <b>POSTER SESSION I:</b> <b>All participants of Workshop 1, Workshop 2 (P2-1 to P2-60) &amp; Workshop 5 should put their Posters to the NN16 Poster Area on Tuesday, 5 July (DAY 1) &amp; will remain until Wednesday, 6 July (DAY 2).</b> <i>Room: Grand Pietra Hall</i>
<b>BUSINESS FORUM 1</b>	

**SESSION 11:30-13:30**

<b>Parallel Session</b> <b>W1 – NANO -ELECTRONICS -PHOTONICS -PHONONICS -PLASMONICS -ENERGY</b> <b>Session: Nanoelectronics II - Nanophotonics</b> <i>Chair: V. Constantoudis</i> <i>Room: Crystal Hall</i>	<b>Parallel Session</b> <b>W2 – Nanomaterials, Nanofabrication, Nanoengineering &amp; Nanoconstruction</b> <b>Session: NANOSTRUCTURES II</b> <i>Chair: M. Buljan</i> <i>Room: Doc Six I</i>
11:30 – 11:50 Invited <b>Optimal high-index spheroidal structures for nanophotonic-enhanced thin film solar cells</b> M. J. Mendes,	11:30-12:00 INVITED <b>Solution Processing of Ferroelectric Colloidal Nanocrystals for Energy Storage and Transistor Applications</b> G. Caruntu
11:50-12:05 <b>Experimental Confirmation of the Existence of Electrodynamical Forbiddance of Strong Quadrupole Light-Molecule Interaction in Fullerene C<sub>60</sub></b> A.M. Polubotko	12:00-12:15 <b>Solvothermal AuNi Nanoparticle Synthesis and Characterization</b> J. Sopoušek
12:05-12:20 <b>Synthesis and Characterisation of New Types of Nanoresonators for Raman Analysis of Surfaces</b> A. Kudelski	12:15-12:30 <b>Effect of synthesis parameters on the catalytic properties of CuO-CeO<sub>2</sub> catalysts</b> J. Papavasiliou
12:20-12:35 <b>Plasmonic Nanostructures For Organic Photovoltaic Devices</b> A. Öztürk	12:30-12:45 <b>Friction and wear of fullerene-like WS<sub>2</sub>/MoS<sub>2</sub> nanoparticles. AFM analysis</b> L. Rapoport
12:35-12:50 <b>Dirac Point and ENZ Behavior with Exclusive Use of 2D Media</b> M. Mattheakis	12:45-13:00 <b>Controlling Multi-Exciton Dynamics in Engineered Spherical Quantum Wells</b> L.A. Padilha
12:50-13:05 <b>Fabrication and Characterization of SiNx/Au Nanopatch Cavities with Colloidal Nanocrystals</b> E. Brainis	13:00-13:15 <b>Au Nanoparticles grafted on Honeycomb-like Polymeric Membranes for Surface-Enhanced Raman Scattering Biodetection</b> C.-Y. Chiang
13:05-13:25 Invited <b>Ground state and out-of-equilibrium phenomena in prototypical topological insulators using time-, spin- and angle-resolved photoemission spectroscopy</b> E. Golias	13:15-13:30 <b>Correlation between structural and optical properties of Germanium nanocrystals embedded in dielectric matrix SiO<sub>2</sub></b> I.Fraj
13:25-13:40 <b>Plasmonic Compatibility of Conductive Transition Metal Nitrides via Laser Annealing</b> N. Kalfagiannis	13:30-13:45 <b>The Importance of Precision in Nano Biotechnology</b> P. Abdulkin

**13:30 – 15:00****Lunch Buffet Break***Room: Grand Pietra Hall***Poster Session I (DAY 1) - Exhibition – Networking****Posters of Workshop 1, Workshop 2 (P2-1 to P2-60) & Workshop 5 (already in the area)***Room: Grand Pietra Hall***SESSION 15:00-17:30**

15:00 – 15:30 Keynote Talk <i>Room: Crystal Hall</i> <i>Chair: M. Shalaev</i> <b>Responsive Nanostructured Materials For Energy Applications</b> Emmanuel P. Giannelis	
<b>Parallel Session</b> <b>W1 – Nano -Electronics -Photonics -Phononics -Plasmonics -Energy</b> <b>Session: Energy I</b> <i>Chair: M. Shalaev</i> <i>Room: Crystal Hall</i>	<b>Parallel Session</b> <b>W2 – Nanomaterials, Nanofabrication, Nanoengineering &amp; Nanoconstruction</b> <b>Session:</b> <i>Chair: Zoran V. Popović</i> <i>Room: Doc Six I</i>
15:30-15:50 Invited	15:30-16:00 Invited

<b>Solution Processed Photovoltaics: Interfaces, Electrodes, Processing and Devices</b> S. A. Choulis	<b>Nanomaterials in Food Chemistry</b> Ž. Lj. Tešić
15:50-16:10 Invited <b>Perovskite Solar Cells and Modules on Flexible Substrates</b> <i>T. M. Brown</i>	16:00-16:15 <b>The role of Zn in phosphine-based synthesis of InP quantum dots</b> N. Mordvinova
16:10-16:25 <b>Opto-Electronic Enhancement in Ultrathin Cu(In,Ga)Se<sub>2</sub> Solar Cells on Sn:In<sub>2</sub>O<sub>3</sub> back contact using Soft Imprinted Dielectric Nanopatterns</b> G. Yin	16:15-16:30 EU Project <b>NFFA-Europe: enhancing European competitiveness in nanoscience research and innovation.</b> <i>A.Pagkozidis</i>
16:25-16:40 <b>Optimization of dye sensitized solar cell's photo-anode characteristics towards an impressive energy conversion efficiency</b> D.A. Chalkias	16:30-16:45 <b>Biochar chemical depolymerization: a novel method for production of fluorescent nanoparticles</b> J. Plácido
16:40-16:55 <b>Multijunction a-Si:H/c-Si solar cells with vertically-aligned architecture based on silicon nanowires</b> A.S. Gudovskikh	16:45-17:00 <b>Giant enhancement of Polarisation and Strongly Improved retentions in Epitaxial Ba<sub>0.6</sub>Sr<sub>0.4</sub>TiO<sub>3</sub>-based Nanocomposites</b> O. Lee
16:55-17:10 <b>Recent advances of internal reforming methanol fuel cells for portable applications</b> G. Avgouropoulos	17:00-17:15 <b>Nanoparticle Pb<sub>1-x</sub>Fe<sub>x</sub>Se thin films and Pb<sub>1-x</sub>Fe<sub>x</sub>Se/Si heterojunctions.</b> A. Bhardwaj
17:10-17:25 (AWARD APPLICANT) <b>Doping of hole transport layer PEDOT: PSS with pentacene for PCDTBT:PCBM based organic solar cells</b> G.Sivakumar	
17:25-17:40 (AWARD APPLICANT) <b>Unique hole transport layer of PCDTBT doped with PCPDTBT for perovskite solar cells</b> T. Pratyusha	

17:30–18:30	<b>Coffee Break-Exhibition-Networking</b> <i>Room:Grand Pietra Hall</i>
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<b>Plenary Session (ISFOE16 Symposium and NN16 Conference)</b> <i>Room: Grand Pietra Hall</i>	
18:30 – 18:45 <i>Introduction by Prof. S. Logothetidis, NANOTECHNOLOGY 2016 Chairman</i>	
18:45 – 19:30 Plenary Talk <b>Nanoparticles: characterization and applications</b> Prof. Francesco Stellacci	
19:30 – 20:15 Plenary Talk <b>Biomaterials for Tissue Engineering</b> <i>Antonios G. Mikas</i>	
20:15 – 21:00 Plenary Talk <b>Materials and Concepts for Printed Photovoltaic Technologies</b> Prof. Christoph Brabec	
<b>END OF FIRST DAY</b>	

21:00	<b>DRINKS &amp; OFFICIAL DINNER (ISFOE16&amp;NN16)</b> <b>PORTO PALACE CONFERENCE CENTRE &amp; HOTEL - ROOF GARDEN</b>
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<b>Wednesday 6 July Porto Palace Conference Centre &amp; Hotel</b>		
08:00 – All Day <b>Registration to NN16</b>		
09:00-09:30 Keynote Talk <i>Chair: Emmanuel P. Giannelis</i> <i>Room: Doc Six I</i>		
<b>New Material Platforms &amp; Metasurface Designs for Plasmonics and Quantum Photonics</b> Vladimir M. Shalaev Purdue Univ.		
<b>Parallel Session</b> <b>W2 Thin Films I</b> <i>Chair: S. Kassavetis</i> <i>Room: Doc Six I</i>	<b>Parallel Session</b> <b>W3 :Basic Research in Nanomedicine towards Clinical Practice</b> <i>Chair: Y.Missirlis</i> <i>Room:Dock Six II</i>	<b>Parallel Session</b> <b>Joined Session of ISFOE16 and W5: GRAPHENE I</b> <i>Chair: A. Oikonomou</i> <i>Room: Crystal Hall</i>
09:30-10:00 Invited <b>Novel Fabrication Route for High Quality Visible-Light-Driven Photocatalysts- Flux Growth of Idiomorphic Oxynitride and Nitride Crystals</b> K. Teshima	09:30 – 10:00 Invited <b>Morphogenesis – epigenetic functions in cells : the role of biointerfacial mechanical signals</b> Yannis Missirlis	09:30-10:00 Invited <b>The hot pick-up technique for batch assembly of van der Waals heterostructures</b> Tim Booth
10:00-10:15 <b>Chemical vapor deposition of amorphous alumina films: An integrated process-nanostructure-barrier properties investigation</b> C. Vahlas	10:00 – 10:15 <b>Nanomechanical mapping of living cells -- effect of phenotype on cancer cells stiffness</b> J. Pribyl	10:00-10:30 Invited <b>New materials for van der Waals heterostructures</b> R. Gorbachev
10:15-10:30 <b>The influence of superparamagnetism on the exchange bias effect in [CoO/Co/Pd] multilayer system</b> M. Perzanowski	10:15 – 10:30 <b>Effect of DOPE PEG2000 on DPPC/Anti-SNAP25 mixed monolayer: A thermodynamic and AFM study</b> Lai Ti Gew	10:30 –11:00 Invited <b>Sustained inflammation and genotoxicity following pulmonary exposure to graphene and graphene oxide in mice</b> S. Bengtson
10:30-10:45 <b>Nano-materials deposition and the morphology changes induced by the deposition process</b> D. Shaw	10:30– 10:45 <b>Impedance spectroscopy studies of diamond-based materials and nanostructures</b> D. Coathup	11:00–11:15 <b>Surface Energy and Morphology of Graphene Nano Platelet Films by Plasma Deposition at Titanium</b> J. Heeg
10:45-11:00 EU Project <b>Indium-free transparent conductive oxide layer</b> A. Rexach	10:45– 11:00 <b>Behavior of hFOB 1.19 cells in injectable scaffold composing of Pluronic F127 and carboxymethyl hexanoyl chitosan</b> Lie-Sian Yap	
11:00 – 11:30	<b>Coffee Break-Exhibition-Networking</b> <i>Room: Grand Pietra Hall</i> <b>Posters of Workshop 1, Workshop 2 (P2-1 to P2-60) &amp; Workshop 5 (already in the area)</b>	
	<b>BUSINESS FORUM 2</b>	
<b>SESSION 11:30-13:30</b>		
Keynote Talk Session II (All Workshops of NN16) <i>Room: Doc Six I</i> <i>Chair: K. Teshima</i>		
11:30 – 12:00 Keynote Talk Practical Platform for Nanophotonics with Plasmonic Metal Nitrides and Transparent Conducting Oxides A. Boltaseva Purdue Univ.		

<b>Parallel Session</b> <b>W2 – Thin Films II</b> Chair: K. Teshima Room: Doc Six I	<b>Parallel Session</b> <b>W3 – Nanoparticles for Clinical Applications</b> Chair: C. Kiparissides, A. Kanaras Room: Dock Six	<b>Parallel Session</b> <b>Joined Session of ISFOE16 and W5: GRAPHENE II</b> Chair: T. Booth Room: Crystal Hall
12:00 – 12:30 Invited <b>Fabrication and plasmonic properties of metal nanoparticles grown on nanoripple patterns</b> D. Babonneau	12:00-12:20 Invited <b>Colloidal Gold Nanoparticles in Biomedical Applications</b> A. G. Kanaras	12:00-12:30 Invited <b>2D materials for energy</b> Oikonomou, A.
12:30-12:45 <b>Massive Ag migration through metal/ceramic nano-multilayers: interplay between temperature, stress-relaxation and oxygen-enhanced mass transport</b> M. Chiodi	12:20-12:35 <b>Superparamagnetic iron oxide nanoparticles as efficient mri contrast agent and magnetic-targeting tool for theranostic applications</b> M. K. Uchiyama	12:30-13:00 Invited <b>Graphene and transition metal dichalcogenides for flexible high frequency electronics</b> G. Deligeorgis
12:45 –13:00 <b>Silicide Formation During Depth Profiling of Noble Metal Films on Silicon: XPS Study</b> D. Karpuzov	12:35-12:50 <b>Impact of Silver Nanoparticle Suspensions on Mixtures of Fungal and Bacterial Microorganisms of Food Production</b> G. Balandin1,	13:00-13:15 <b>In-Situ and Real-time Spectroscopic Ellipsometry of CVD grown Graphene on metallic substrates</b> A. Zachariadis
13:00 –13:15 <b>Spray Deposition of Robust Silver Nanowire Networks</b> D. Fantanas	12:50-13:05 <b>Protein conjugation to nanoparticles by designer affinity tags</b> E. Ferrari	13:15-13:30 <b>About Possible Mechanism of SERS on Graphene</b> A.M. Polubotko
13:15-13:30 <b>Self-organization layers with silver nanoparticles</b> L. Kvitek	13:05-13:20 Invited <b>Recent Advances in Oral Delivery of Macromolecular Drugs via Lipid-based Drug Delivery Systems</b> C. Kiparissides	13:30-13:45 <b>Comparison of Organic Solvents for Wet Chemical Transfer of CVD Graphene</b> Taylan Erol

<b>13:30 – 14:45</b>	<b>Lunch Buffet Break</b> Room: Grand Pietra Hall
<b>Poster Session I (DAY 2)- Exhibition – Networking</b>	

<b>SESSION 15:00-17:30</b>			
<b>Parallel Session</b> <b>W2 – NanoCharacterization &amp; Nanoengineering I</b> Chair: C. Gravalidis Room: Doc Six I	<b>Parallel Session</b> <b>W3 –Nanomedicine and Pharma: Novel Drug Delivery Nanosystems</b> Chair: H.Schmid, I.Vizirianakis Room: Dock Six II	<b>Parallel Session</b> <b>Joined Session of ISFOE16 &amp; W4 - Bioelectronics of NN16</b> <b>Session: Bioelectronics I</b> Chair: G. Malliaras Room: Timber Hall I	<b>Parallel Session</b> <b>Joined Session of ISFOE16 and W5 – : GRAPHENEIII</b> Chair: George Deligiorgis Room: Crystal Hall
15:00 – 15:20 Invited <b>The investigation of CaCO3 polymorphs formation during the carbonation of nanolime dispersion in ethanol</b> R. Ševčík	15:00 – 15:30 Invited <b>Novel Nanoparticle-assisted Approaches for Oral Insulin Delivery</b> C. Kiparissides	15:00 –15:30 Invited <b>Capacitive Coupling in electrolyte-gated organic field effect transistors</b> F. Biscarini,	15:00-15:30 Invited <b>Two-dimensional materials and van der Waals heterostructures as a platform for integrated optoelectronic devices</b> Ilya Goykhman
15:20 – 15:35 <b>Indentation Resistance of Elastic and Elastic-plastic Auxetic Materials: A Finite Element Study</b> D. Photiou	15:30 – 15:45 <b>Fabrication of quercetin-loaded PLGA nanoparticles via electrohydrodynamic atomization for cardiovascular disease</b> M.Giannouli	15:30 –16:00 Invited <b>Sensing properties of WO3 nanoparticles</b> L. Santos	15:30-16:00 Invited <b>Photodetection and Sensing with Graphene</b> T.J. Echtermeyer
15:35-15:50 (AWARD APPLICANT) <b>Alloy Destabilization Behavior of Cu-Ni Thin Films on Si during Solid State Dewetting</b> S. Seshabhatar			
15:50–16:05 <b>Modified Photoactive Nanofiber Materials with Antibacterial Activity</b> P. Henke	15:45–16:00 <b>Synthesis of Zinc Oxide nanoparticles for antimicrobial surfaces</b> Z. Dardani	16:00–16:15 <b>New concept of 3D nano-micro structured biosensor with solid-liquid-gas co-existence for nanomole detection</b> X. Zhang	16:00 – 16:30 Invited <b>Graphene pillaring: Towards novel multifunctional materials</b> Dimitrios Gournis

16:05– 16:20 <b>Combining nanoscale 3D printing and inkjet printing</b> Christophe Moser	16:00–16:30 Invited <b>Pharmacological development of target-specific, delocalized lipophilic cation-functionalized carboranes for cancer therapy</b> Ioannis S. Vizirianakis,	16:15– 16:30 <i>New strategy for preparing fluorescent carbon nitride nanoparticles for selective optosensing biochemical molecules</i> Yong-Ill Lee <sup>1*</sup>	16:30– 16:45 EU Project <b>Green2 Multifunctional Composites of Natural Rubber and Nanocarbon from Food Waste</b> Christèle Jaillet-Bartholome
16:20– 16:35 Uracil-like nucleobases adsorbed on the Silicon(001) surface:an ab initio study of electronic and optical properties E. Molteni	16:30–16:45 EU Project <b>Nanotextured 3D substrates for bioanalytical applications</b> K. Ellinas	16:30– 16:45 <i>Paper-Based Nanobiosensors</i> A. Öztürk <sup>1</sup> ,	16:45– 17:00 <i>Stability and properties of van der Waals heterostructures</i> E. Gkogkosi <sup>1</sup> Dep. of Physics, Nat. Technical Uni. of Athens
16:35-16:55 Invited <b>Nanometrology in support of regulatory efforts for the nanotechnology industry</b> A. Gondikas	16:45–17:15 Invited <b>Hygiene Improvements by Nanosilver System Technology in Medical Environments</b> Prof. Helmut Schmid	16:45-17:00 Bio-nano-complexes of the cholesterol oxidase enzyme connected with the gold-nano-particles as a SERS probe E. M. Sheregii	17:00-17:15 (AWARD APPLICANT) Defective and oxidized SnS <sub>2</sub> monolayers: A first-principles study K. Iordanidou
16:55-17:15 Invited <b>Raman Spectra and Electronic Properties of Deformed Carbon Nanotubes</b> I Milošević,	17:15-17:30 <b>Biocompatible magnetic enzymatic sol-gel composites</b> A. S. Drozdov	17:00-17:30 Invited <b>Organic electronics for in vitro toxicology: focus on 3D tissue models</b> R. M. Owens,	17:15-17:30 <i>Identification of Carbon Allotropes in Tribolayers Obtained by Rubbing of Graphite</i> A. Mailian
17:15-17:30 <b>Low-Cost Fabrication Technologies For Nanostructures</b> A. Öztürk		17:30-17:45 <b>A microfluidics integrated electronic monitoring system for an in vitro model of the renal tubule</b> V.F. Curto	17:30-17:45 <b>Dichalcogenides supported single metal atoms and their fantastic catalytic activities</b> Haiping Lin, 17:45-18:00 <b>Ultrafast Carrier Dynamics and Its Fluence- Dependence in Stacked Monolayer Graphene</b> J.A. Castañeda 18:00-18:15 <b>Nanotechnology of Graphene Interconnects on Flexible Substrates</b> Aris Christou

20:00

BEACH PARTY (ISFOE16 &amp; NN16)

<b>Thursday 7 July Porto Palace Conference Centre &amp; Hotel</b>		
08:00 – All Day <b>Registration to NN16</b>		
<b>Keynote Talk Session V (All Workshops of NN16)</b> <i>Room: Dock Six I</i> <i>Chair: K. Komvopoulos</i>		
09:00 – 09:30 Keynote Talk <b>Injectable Hydrogels for Growth Factor and Stem Cell Delivery in Tissue Engineering</b> <i>Antonios G. Mikos</i> <i>Rice Un.</i>		
<b>Parallel Session W1-: Energy II</b> <i>Chair: T. Brown</i> <i>Room: Dock Six I</i>	<b>Parallel Session W3 – Nanomedicine</b> <i>Session: Clinical Nanomedicine for CANCER</i> <i>Chair: K.Kousoulas</i> <i>Room: Dock Six II</i>	<b>Parallel Session</b> <b>Joined Session of ISFOE16 and W5: GRAPHENE IV</b> <i>Chair: T.J. Echtermeyer</i> <i>Room: Timber Hall I</i>
09:30-10:00 Invited <b>Highly Efficient Mg<sub>2</sub>Si-based Thermoelectric Materials</b> <i>Theodora Kyratsi</i>	09:30-10:00 Invited <b>Development of a Novel Melanoma Cancer Vaccine</b> <i>K. G. Kousoulas</i>	09:30-10:00 Invited <b>Water-based 2D-crystal Inks: from Production to Devices</b> <i>C. Casiraghi</i>
10:00-10:15 EU Project <b>A Practical Application of Energy Harvesting Based on Piezoelectric Technology for Charging Portable Electronic Devices</b> <i>P. Tzanetis,</i>	10:00-10:15 <b>Devise and Manufacture of Cysteamine Functionalized-Gold Nanoparticles for Detecting and Expunging the Breast Cancer Cells</b> <i>Mehdi Tayybi Azar,</i>	10:00-10:30 Invited <b>Graphene-related materials for organic and perovskite solar cells</b> <i>Emmanuel Kymakis</i>
10:15-10:30 (AWARD APPLICANT) <b>Combustion-synthesized LiMn-based spinel nanostructures as cathode materials for lithium-ion batteries</b> <i>P. Angelopoulou</i>	10:15-10:30 <b>Design of New Near IR Fluorescent Proteinoid Nanoparticles for In vivo Detection of Colon Cancer</b> <i>M. Kolitz-Domb</i>	
10:30-11:00 Invited <b>On the role of intermolecular states and polymorphs in the optimization of solution-processed organic electronics</b> <i>P. E. Keivanidis</i>	10:30-10:45 <b>Zinc phthalocyanine based near infrared nanophotosensitizer for photodynamic therapy</b> <i>Jing Zuo</i>	10:30-10:45 <b>Graphene structuration by self-assembly of block copolymers</b> <i>J. Arias-Zapata</i>
	10:45-11:00 <b>In vivo 808 nm image-guided photodynamic therapy based on an upconversion theranostic nanoplatform</b> <i>Hong Zhang</i>	10:45-11:00 <b>Graphene Based Heterostructures Used for Fast and Broadband Photodetectors</b> <i>S. Li</i>
11:00 – 11:30	<b>Coffee Break-Exhibition-Networking</b> <b>POSTER SESSION II:</b> Posters of Workshop 4 & Workshop 5 (already in the area) All participants of Workshop 1, Workshop 2 (P2-1 to P2-60) & Worksho 5 should remove their Posters from the NN16 Poster Area. All participants of Workshop 2 (P2-61 to P2-124), Workshop 3& Workshop 4 should place their posters up to the NN16 Poster Area on Thursday, 7 July (Poster Session II – DAY 1) and will remain until Friday, 8 July (Poster Session II – DAY 2) <b>Room: Grand Pietra Hall</b>	
	<b>BUSINESS FORUM 3</b>	
<b>SESSION 11:30-13:30</b>		
<b>Keynote Talk Session VI (All Workshops of NN16)</b> <i>Room: Dock Six I</i> <i>Chair: A. Mikos</i>		
Keynote Talk <b>Electron-phonon interaction anomalies in layers</b> <i>M. Damnjanović</i> <i>NanoLab, Faculty of Physics, Uni Belgrade, 11158 Belgrade, Serbia</i>		

<b>Parallel Session</b> <b>W1- Nanoelectronics II</b> <i>Chair: M. J. Mendes</i> <i>Room: Dock Six I</i>	<b>Parallel Session</b> <b>W3 – Nanomedicine Session - Clinical Nanomedicine</b> <i>Chair: F.Cellesi, J. Lisziewicz</i> <i>Room:Dock Six II</i>	<b>Parallel Session</b> <b>Joined Session of ISFOE16 and W5 – Graphene and Related Materials : Graphene V</b> <i>Chair: C. Casiraghi</i> <i>Room: Timber Hall I</i>
12:00-12.30 Invited <b>Silicon-on-Insulator (SOI) nano-CMOS for Mobile Communications and the Internet of Things (IoT)</b> D.E. Ioannou	12:00-12:30 Invited <b>Nanomedicines for overcoming biological barriers in kidneys and treating proteinuric diseases</b> F. Cellesi	12:00-12:30 Invited <b>Graphene for energy applications: an update on running activities within the Graphene Flagship European project</b> Etienne Quesnel
12:30 – 12.45 <b>Reconstruction of the phonon spectra at the Dirac point and temperature stability of electron transport</b> J. Polit	12:30-12:45 <b>Electro-spun middle ear prosthesis coupling structure Implant development, in-vitro and in-vivo testing</b> M. Kruse	12:30-12:45 <b>Electrical and optical properties of graphene/BN heterostructures on ultra-high molecular weight polyethylene</b> E. H. Lock
12:45 – 13:00 <b>High temperature stability of electron transport on the topologically protected surface states</b> E.M. Sheregii	12:45-13:00 <b>Drug Delivery Nanosystems for Cardiac Tissue Engineering</b> V. Bakola	12:45-13:00 <b>A Novel Methodology for Patterning High Quality Graphene Electrodes using Ultra fast Pulse Laser</b> E. M. Pechlivani
13:00-13:15 <b>Slot die coated flexible organic opto-electronics on 3D printed scaffolds: Performance, lifetime and functionality</b> Michail J. Beliatis	<b>13:00-14:00</b> <b>2<sup>nd</sup> GENERAL ASSEMBLY OF GREEK NANOMEDICINE PLATFORM</b>	13:00-13:15 <b>Processing and Characterisation of Few-Layer Graphene Sheets by Electric Arc Discharge</b> D.Uzunsoy
13:15-13:30 EU Project <b>High Mobility Solution-Processed Transparent Oxide Quasi-Superlattice Transistors</b> Nikolaos A. Hastas		13:15-13:30 <b>The Effect of Production Parameters on Continuous Graphene Oxide Fiber</b> M Olmez

<b>13:50 – 15:00</b>	<b>Lunch Buffet Break</b> <i>Room: Grand Pietra Hall</i>  <b>Poster Session II Exhibition – Networking</b> <b>Poster Presentations of Workshop 4 &amp; Workshop 5 at 14:00 – 15:00</b> <b>Posters of Workshop 2 (P2-61 to P2-124), Workshop 3 &amp; Workshop 4 (already in the area)</b> <i>Room: Grand Pietra Hall</i>
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<b>SESSION 15:00-17:30</b>		
<b>Parallel Session</b> <b>Special Session on Nanoconstruction</b> <i>Chair: M. Stefanidou</i> <i>Room: Timber Hall II</i>	<b>Parallel Session</b> <b>WS2 –Thin Films III</b> <i>Chair: P. Patsalas</i> <i>Room: Dock Six I</i>	<b>Parallel Session</b> <b>W3 – Clinical Nanomedicine against Neurodegenerative Diseases &amp; Nanodentistry</b> <i>Chair: T.Mitsiadis,G. Orsini</i> <i>Room:Dock Six II</i>
15:00-15:20 Invited <b>Products innovation and sustainability: the contribution of nanotechnologies to the building construction sector</b> F. Fernandez	15:00 – 15:30 Invited <b>Improved electrochemical performance of porous electrodes for all-solid-state Li-ion microbatteries</b> T. Djenizian	15:00 – 15:30 Invited <b>Tooth on a chip: generation of stem cell niches using microfluidic devices</b> T. Mitsiadis
15:20-15:40 Invited <b>Nanomaterials for Preserving Buildings by an Inverse Micelle Mechanism: Consolidants, Superhydrophobic Agents and Self-cleaning photocatalysts</b> M. J. Mosquera	15:30 – 15:45 <b>A new and rapid coating method for optoelectronics and semiconductor applications</b> S.Pat,	15:30 –16:00 Invited <b>Differentiation potential of dental epithelial stem cells: an in vivo study</b> G. Orsini
15:40-16:00 Invited <b>Ag/Pt-ZnO nanocomposites: synthesis, characterization, and their enhanced photocatalytic activity</b> ME. Rabanal	15:45-16:00 <b>Ultrathin Amorphous Carbon Films for Future Magnetic Recording Technology</b> K. Komvopoulos	
16:00-16:15 <b>Study and evaluation of nano-structured cellulose fibers as additive for restoration of historical mortars and plasters</b>	16:00-16:15 <b>Superhard Nanocomposite Protective Coatings Developed by High Power Impulse Magnetron Sputtering</b>	16:00-16:15 <b>Fabrication and characterization of skin analogues</b> G.Kaklamani



L. Rosato	Spyros Kassavetis	
16:15-16:30 <b>Nanocarbon materials for nanocomposite cement mortars</b> C. Tzileroglou	16:15-16:30 <b>Tailored MnO<sub>2</sub> nanoparticles as cathode electrocatalysts for rechargeable Li-air batteries</b> E. Pargoletti	16:15-16:45 Invited <b>Perspectives and challenges on the clinical translation of nano- &amp; micro-sized systems for medical imaging applications</b> A. Maiocchi
16:30-16:45 <b>SiO<sub>2</sub>-CuO NPs coatings for application on building materials: evaluation of consolidant, hydrophobic and biocide effectiveness</b> R. A. Zarzuela	16:30-16:45 <b>Influence of nano-carbon morphology on densification and fracture toughness of hot-pressed ZrB<sub>2</sub>-SiC composites</b> I. Farahbakhsh	
16:45-17:00 <b>Innovative hydroxyapatite nanoparticles-based photocatalyst for application on marble: evaluation of self-cleaning properties</b> A. Vitali	16:45-17:00 <b>Drugs distribution assessment in solid tumor tissues. An advanced Imaging Mass Spectrometry analysis</b> G. Cappelletti	16:45-17:15 Invited <b>Bringing nano-enabled developments closer to the market, facilitated by a semi-holistic approach in nanosafety</b> A. Falk
17:00-17:15 <b>New superhydrophobic coatings for application on building materials</b> L. A. M. Carrascosa	17:00-17:15 <b>A novel nanocomposite reinforced by size-dependent polystyrene nanofibres through biomimic the lamellar structure of bone</b> Fengfeng Zhang	
17:15-17:30 <b>Influence of nano-silica and nano-alumina in lime-pozolan and lime-metakaolin binders</b> E-C Tsardaka	17:15-17:30 <b>Topography driven magnetic transitions in large area nanopatterned arrays with perpendicular magnetic anisotropy</b> M. Krupinski	17:15-17:35 <b>Precision Immunotherapy for Melanoma</b> Julianna Lisiewicz
17:30-17:50 Invited <b>Alternative applications of nano-engineering in cement-based systems</b> Z. Basaran Bundur		

17:30 –18:00 **Coffee Break-Exhibition-Networking**

**BUSINESS FORUM 8**

**SESSION 18:00-19:30**

**W2- NanoCharacterization & Nanoengineering III**

*Chair: I Milošević*

*Room: Dock Six I*

**Special Session & Round Table on Nanomedicine perspectives on Atherothrombosis: Diagnosis and Treatment**

*Chair: V. Karagkiozaki,*

*Room: Dock Six II*

18:00 - 18:30 Invited

**Carbon nanotubes grown on molecular sieve coated biomorphic carbon membrane by CCVD method**

Ik Jin Kim\*

18:00-18:15 Invited

**New Methods for the identification of the sites of myocardial infarction**

Dr. Dimos Katritsis

18:30 – 18:45

**A new composite material - Al<sub>1.5</sub>CoCrFeNi(NbC)<sub>x</sub> high entropy alloys clad by plasma cladding**

Zhihui Wang

18:15-18:30 Invited

**Invasive Management of atherothrombosis**

Dr. A. Kapetanopoulos,

18:45-19:00

**Synthesis of directly spinnable carbon nanotube forests**

Luman Zhang

18:30-18:45

**Nanoparticles for Mastering Atherosclerosis**

V. Karagkiozaki<sub>1,2</sub> S. Logothetidis<sub>1</sub>

19:00-19:15

**Exploiting Metallophilicity for the Assembly of Inorganic Nanocrystals and Conjugated Organic Molecules**

M. Dalmasas

18:45-19:15 Invited

**NanoAthero – An EU Programme**

**Nanomedicine for target-specific imaging and treatment of atherothrombosis**

Didier Letourneur,

**END OF THIRD DAY**

**Friday 8 July Porto Palace Conference Centre & Hotel**

**Keynote Talk Session VII (All Workshops of NN16)**

Room: Crystal Hall

Chair: S. Grigorian

09:00 – 09:30 Keynote Talk

**Biopolymer (Nano)Composites: Thin Films, Characterization and Degradation**

Franz Stelzer

**W2 – Thin Films IV**

Chair: S. Grigorian

Room: Timber Hall I

09:30-10:00 Invited

**Local epitaxial growth in reactively sputtered oxide thin films**

J.F. Pierson

10:00-10:15

**Al<sub>13</sub>Fe<sub>4</sub> Intermetallic Coatings Processed by Chemical Vapor Deposition**

I.G. Aviziotis

10:15-10:30

**Multifunctional Ultra-Lightweight Cellulosic Aerogels by Freeze-Drying Self-Assembly of Modified Cellulose Nanocrystals**

E. Abraham

**W3 –Regenerative Medicine**

Chair: K.Komvopoulos

Room:Crystal Hall

09:30-10:00 Invited

**Control of Nanofiber Conformity and Scaffold Structure by Micropattern Geometry and Electrospinning Condition for Cell Regulation**

Prof. Kyriakos Komvopoulos

10:00-10:15

**Nanofibers of Elastin-inspired peptides: structural characterization and biological properties**

V. Secchi

10:15-10:30

**Quantitative analysis of the biomechanical properties of gelatin type B gels in DMEM under physiological conditions**

A. Papadopoulou, E. Rizos, A. Aggeli

10:30-10:45

**Biochemical Functionalized Scaffolds Facilitate Nerve Regeneration**

F. Pappa

10:45 - 11:00

**Self assembling peptide hydrogel immobilization on titania as a function of pH and Ionic strength**

S. Franchi

11:00-11:30

**Coffee Break-Exhibition-Networking**

Posters of Workshop 2 (P2-61 to P2-124), Workshop 3 & Workshop 4 (already in the area)

Room: Grand Pietra Hall

**SESSION 11:30-13:30**

**W2 – Polymer Nanotechnologies II**

Chair: V. Koutsos

Room: Timber Hall I

11:30-12:00 Invited

**Preparation and Characterization of Thermally Conductive Polymer Nanocomposites**

I. Tavman

12:00-12:15

**Tuning Polymer Crystallinity in PEO / SiO<sub>2</sub> Nanohybrids**

K. Chrissopoulou

12:15-12:30

**Nitrogen-doped mesoporous carbon spheres for corrosion control in reinforced cement-based materials – preliminary studies towards feasibility & application**

D.A. Koleva

12:30-12:45

**Polymer Monolayers Studied by Atomic Force Microscopy**

A. Valavanis

12:45-13:00

**W3 Special Session: NANOTOXICITY**

Chair: S. E. Moya, E. Emmanouil-Nikoloussi

Room:Crystal Hall

11:30 – 12:00 Invited

**Translocation, biological fate, stability and effective dose of engineered NMs for safety studies and nanomedicine**

Dr. Sergio Enrique Moya

12:00 – 12:30 Invited

**Bio-Distribution of Nanoparticles and Developmental Toxicity**

Prof. Elpida-Niki Emmanouil-Nikoloussi,

12:30 – 12:45

**Different Formation Techniques of Iron Oxide Nanoparticle Labeled Microtissues and Comparison of Cytotoxic Effects of Nanoparticle Concentrations**

Aylin Sendemir-Urkmez

12:45 – 13:00

**Antibacterial properties of the coated organic electronic materials**

<b>Photophysics of a functionalized diarylethene for supramolecular assembly: from the solution to the photoresponsive thin film</b> I. Hamdi		Z.Pat
13:00-13:15 <b>Polymer/CNT nanocomposites and fiber/CNT hierarchical structures as thermoelectric generators</b> L. Tzounis		13:00 -13:15 <b>Biological compatibility of biochar-derived fluorescent nanoparticles</b> S. Bustamante-Lopez
13:15-13:30 <b>Butylglyceryl-modified polysaccharide nanoparticles for drug delivery to the brain</b> M. Bostanudin		13:15-13:30 <b>In vivo animal testing of nanotechnology enabled orthopedic implant</b> A.Moumkas
<b>13:30 – 15:00</b>		
<b>Lunch Buffet Break</b> Room: Grand Pietra Hall		
<b>Poster Session II (DAY 2) - Exhibition – Networking</b> <b>Poster Presentations of Workshop 2 (P2-61 to P2-124), Workshop 3 &amp; Workshop 4 at 14:00 – 15:00</b> Room: Grand Pietra Hall		
<b>SESSION 15:00-17:30</b>		
<b>W2 – NanoCharacterization &amp; NanoengineeringIV</b> Chair: J. Sczutko Room: Timber Hall I		<b>W3 – NanomedicineSpecial Session V: NANO-ORTHOPEDECS</b> Chair:M.Chatzinikolaïdou, F. Sayegh Room:Crystal Hall
15:00 – 15:30 Keynote Talk <b>Characterization of Organic Nanomaterials by Sychrotron Radiation</b> S. Grigorian		15:00 – 15:20 Invited <b>Engineering nanomaterials for tissue engineering with controlled immunomodulation</b> M. Chatzinikolaïdou
15:30 –15:45 <b>High Strength SWNT/Permalloy Nanoparticle/PVA Nanocomposite Fiber</b> J. Byun		15:20 –15:35 <b>Drug Delivery Nanoplatforms for Orthopedic-associated infections</b> A. R. Tsiapla
15:45 - 16:00 <b>Solutions for nano- pico- metrology and technology, application range from educational purposes up to fundamental studies.</b> P.N. Luskinovich		15:35 –15:55 Invited <b>Nanotechnology and its application in orthopedic implants</b> Prof. O.Savvidou
16:00-16:15 <b>Interference color injet printing</b> Aleksandr V. Yakovlev,		15:55-16:15 Invited <b>Development of a photopolymerized composite hydrogel and surgical implanting tool for a nucleus pulposus replacement</b> D.P. Pioletti
<b>16:15-16:30</b> <b>Effect of hydrogenation of amorphous silicon surfaces on protein adsorption</b> L. Filali		16:15 - 16:35 Invited <b>Is Chondrogenesis possible by Nanotechnology?</b> Prof.Fares Sayegh, MD
		16:35-16:55 Invited Ten Years After: Ethical Legal and Social Impacts of Emerging Nanotechnology Dr Ilise L Feitshans JD and ScM (Public Health) and DIR
		16:55-17:10 <b>3D printed PLA surgery equipment with enhanced antimicrobial properties</b> P. Bangeas
<b>17:15-17:45</b> <b>AWARDS CEREMONY</b> Room: Crystal Hall <b>NN16 CLOSING REMARKS</b>		



5-8 July 2016

# 13<sup>th</sup> International Conference on Nanosciences & Nanotechnologies–NN16

## Porto Palace Conference Centre & Hotel, 5-8 July 2016 Thessaloniki, Greece

### POSTER PRESENTATIONS Program

Workshop 1: Plasmonics - Nanoelectronics & Clean Energy	
P1-1	Optical Properties Of The Quantum Wells Of Different Geometries B. BEKAR <sup>1</sup> , F.K. BOZ <sup>2</sup>
P1-2	Fabrication of Ni nanowire based resistive change memory K. Takase <sup>1</sup> , T. Aono <sup>1</sup> , T. Shimizu <sup>2</sup> , S. Shingubara <sup>2</sup>
P1-3	Electrical Scattering Studies from Nanostructures In Incandescent Lamps' Tungsten Wires I. Karagiannis, I. Samaras
P1-4	Inter-valley Auger recombination in InGaAs/InP quantum wells Yu. A. Pusep <sup>1</sup> , M. A. Tito <sup>1</sup> , A. Gold <sup>2</sup> , M. D. Teodoro <sup>3</sup> , G. E. Marques <sup>3</sup> , and R. R. LaPierre <sup>4</sup>
P1-5	Peculiarities of Light Transmission and Reflection by a Nanocomposite Slab in Epsilon Near Zero Regime V. Zhurikhina <sup>1</sup> , A. Lipovskii <sup>1,2</sup>
P1-6	Surface enhancement of Raman scattering by individual silver nanoislands A. Lipovskii <sup>1,2</sup> , E. Babich <sup>2</sup> , I. Reduto <sup>1,3</sup> , S. Scherbak <sup>1,2</sup> , S. Chervinski <sup>2,3</sup>
P1-7	Oscillation spectra of the Oxidase Enzyme obtained due to immobilization on the Gold Nanoparticles Matrix J. Polit <sup>1</sup> , R. Wojnarowska <sup>1</sup> , D. Broda <sup>2</sup> , M. Gonchar <sup>2,3</sup> , J. Bobitski <sup>1</sup> and E. M. Sheregii <sup>1</sup>
P1-8	The CdTe Quantum Dots bio-imaging of the Human Cell Culture R. Wojnarowska-Nowak <sup>1</sup> , J. Polit <sup>1</sup> , I.D. Stolyarchuk <sup>2,3</sup> , A.I. Savchuk <sup>2</sup> , S. Nowak <sup>4</sup> , M. Romerowicz-Misielak <sup>4</sup> and E.M. Sheregii <sup>1</sup>
P1-9	Coupling Between Cyanine J-Aggregates and Plasmons of Silver Nanoparticles in Thin Films A. Starovoytov, R. Nabiullina, I. Gladskih
P1-10	Ultraviolet Emission Enhanced by Surface Plasmon from Photonic Emitter using Micro-holes with Metal Nanostructures Sohyeon Kim <sup>1</sup> , Soon-Cheol Shin <sup>1</sup> , Nam-Woo Kang <sup>1</sup> , Joon-Sung Kwon <sup>1</sup> , and Kyoung-Kook Kim <sup>1,2,*</sup>
P1-11	p-GaN Electrode Fabricated with Metal Honeycomb Nanostructure for High Efficiency LEDs Soon-Cheol Shin <sup>1</sup> , Sohyeon Kim <sup>1</sup> , and Kyoung-Kook Kim <sup>1,2,*</sup>
P1-12	Peat as a Low Cost Alternative to Producing Carbon Quantum Dots - CQD's R. S. Costa <sup>1</sup> , A. M. Ceschin <sup>2</sup>
P1-13	Improved spectral response does not lead to improved DSC performance: Studies on a ruthenium porphyrin-terpyridine conjugate A. Lanzilotto <sup>1</sup> , L. A. Büldt <sup>1</sup> , H. C. Schmidt <sup>1</sup> , A. Prescimone <sup>1</sup> , O. S. Wenger <sup>1</sup> , E. C. Constable <sup>1</sup> and C. E. Housecroft <sup>1</sup>
P1-14	Free-volume nanostructuring in rare-earth doped chalcogenide glasses Ya. Shpotyuk <sup>1,2</sup> , A. Ingram <sup>3</sup> , J. Szlezak <sup>1</sup> , J. Cebulski <sup>1</sup>
P1-15	Characterization and improvement of p-type dye sensitized solar cells. N. Marinakis <sup>1</sup> , C.E. Housecroft <sup>2</sup> , E.C. Constable <sup>3</sup> ,
P1-16	SnS Binary Nano-particles Synthesis for Solar Cell Applications Na Kyoung Youn, SeJin Ahn, Ara Cho, Jihye Gwak, Kyunghoon Yoon, Keeshik Shin, Seung Kyu Ahn, Jun Sik Cho, Ju Hyung Park, Jin Su Yoo, Kihwan Kim, Jae Ho Yun, and Young-Joo Eo *
P1-17	Thermoelectric Properties of Double-filled Nd <sub>1-x</sub> Yb <sub>2-x</sub> Fe <sub>4-x</sub> Co <sub>5</sub> Sb <sub>12</sub> Skutterudites Dong-Kil Shin, Soon-Chul Ur and Il-Ho Kim*
P1-18	The analysis on using the Nano Encapsulated Phase Change Material (NEPCM) slurry in micro-solar-thermal collector designed for biogas installation Gavrila Trif-Tordai, Dorin Lelea, Adrian Eugen Cioabla, Francisc Popescu, Roxana Milotin
P1-19	Biogas production using residual waters in co fermentation processes A. E. Cioabla <sup>1</sup> , G. A. Dumitrel <sup>2</sup> , F. Popescu <sup>1</sup> , D. Lelea <sup>1</sup> , G. Trif-Tordai <sup>1</sup>
P1-20	Preferential oxidation of CO over Cu-Ce oxide nanostructures J. Papavasiliou <sup>1</sup> , Costas Kappis <sup>2</sup> and G. Avgouropoulos <sup>2*</sup>
P1-21	Transition Metal based Polydentate Metal Complexes as Charge Transport Materials for Solid-state Dye-sensitized Solar Cells *Muhammad Kalim Kashif <sup>1</sup> , Michael Nippe <sup>2</sup> , Rebecca Milhuisen <sup>1</sup> , Yuji Sun <sup>2</sup> , Christopher J. Chang <sup>2</sup> , Jeffrey R. Long <sup>2</sup> , Leone Spiccia <sup>1</sup> , Udo Bach <sup>1</sup>
P1-22	GuGaO <sub>2</sub> Nanoparticles as Hole Transporting Material in Perovskite Solar Cell Wen-Tuan Wu <sup>1</sup> , Ming-Ming Liu <sup>1</sup> , Ching-Ming Hsu <sup>1</sup> , Wen-Ti Wu <sup>2*</sup>
P1-23	Enhanced electrical performance by atomic diffusion of aluminum in chemical vapor deposited monolayer MoS <sub>2</sub> field effect transistors. Hyung-Jun Kim <sup>1,2</sup> , Suk Yang <sup>1,2</sup> , Hojoong Kim <sup>1,2</sup> , Kyung Park <sup>1,2</sup> , Ah-Jin Choi <sup>1,2</sup> , and Jang-Yeon Kwon <sup>1,2</sup>
P1-24	Pyrolysis Temperature Effects on Polydopamine Source and Drain of Field Effect Transistor Seok Daniel Namgung <sup>1,2</sup> , Junghyun An <sup>3</sup> , Jaehun Lee <sup>3</sup> , Ik Rang Choe <sup>3</sup> , Ki Tae Nam <sup>3</sup> , Jang-Yeon Kwon <sup>1,2</sup>
P1-25	Modulation of the photophysical and photovoltaic properties of new organic sensitizers by changing the electron donating group K. Seintis <sup>1</sup> , D. Sygkridou <sup>1,2</sup> , I. Sigmundová <sup>3</sup> , P. Hrobárik <sup>3,4</sup> , E. Stathatos <sup>2</sup> , V. Giannetas <sup>1</sup> , M. Fakis <sup>1,*</sup>
P1-26	Excitation energy transfer in semiconducting polymers used in organic solar applications K. Seintis, L. L. Nikiforakis, L. C. Paliis, M. Fakis*
P1-27	DFT Calculations of the Pressure Induced Structural Phase Transitions and Elastic Constants for CdSe A.B. Karci Lebeoglu <sup>1</sup> , S. Ozdemir Kart <sup>1</sup> , I. Erdem <sup>1</sup>
P1-28	Structural, magnetic and electronic properties of CuFe nanoclusters by density functional theory calculations

	C. S. Cutrano, Ch. E. Lekka
P1-29	<b>Lumped Element Model to Study I-V Characteristics of Nanowire Photovoltaic Device</b> Hanif <sup>1</sup> , Daniyal <sup>1</sup>
P1-30	<b>Raman for Water soluble J-type PBI aggregation study</b> E. Alloa, <sup>1</sup> V. Grande, <sup>2</sup> S. Herbst, <sup>2</sup> F. Würthner, <sup>2</sup> S. C. Hayes <sup>1</sup>
P1-31	<b>Theory of fast ion transport on nanoscale</b> A.L. Despotuli, A.V. Andreeva
P1-32	<b>Ion-transport properties of interfaces in nanosystems of advanced superionic conductors</b> A.V. Andreeva, A.L. Despotuli
P1-33	<b>Wireless Sensor Network Fingerprinting Localization Using Affinity Propagation Technique</b> Pejman Abdollahzadeh KAREGAR , Ramin Shaghghi KANDOVAN
P1-34	<b>A Kriging Framework for the Efficient Exploitation of the Nanoscale Junctionless DG MOSFETs Including Source/Drain Extensions and Hot Carrier Effect</b> T. Bentrchia <sup>1</sup> , F. Djeflal <sup>2</sup> , E. Chebaki <sup>2</sup>
P1-35	<b>Improved ZnO/glass thin film UV photodetector performance based on a geometry optimization of interdigitated Schottky-contact structure</b> N. Boukhanoufa <sup>1</sup> , F. Djeflal <sup>2,3</sup> , R. Mahamdi <sup>1</sup> and D. Rechem <sup>4</sup>
P1-36	<b>Photoluminescent Properties of Eu<sup>3+</sup>-activated Sm<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub>, Pyrochlore</b> E. Öztürk <sup>1</sup> , E. Karacaoglu <sup>1</sup>
P1-37	<b>High Temperature Synthesis and Photoluminescence Properties of Dy<sub>1.90</sub>In<sub>0.10</sub>Zr<sub>2</sub>O<sub>7</sub>, Pyrochlore Type Phosphor</b> E. Öztürk <sup>1</sup> , E. Karacaoglu <sup>1</sup>
P1-38	<b>Cell Refractive Index Techniques and Models For Cell Biology And Disease Diagnosis</b> A. Öztürk <sup>1</sup> ,
P1-39	<b>Spectrally tunable circular dichroism of a trimer of plasmonic nanorods</b> A. Fazel Najafabadi <sup>1</sup> , T. Pakizeh <sup>2</sup>
P1-40	<b>Enhancement and tuning frequency of localized surface plasmon resonance in small gold nanoparticles via Anti-Galvanic Reduction (AGR) method</b> G. Kolodziej <sup>1</sup> , M. Wojcik <sup>2</sup>
P1-41	<b>Nanosecond laser irradiation tailoring of Au nanoparticle decorations with sharp plasmonic peaks on a U-type optical fiber sensor</b> D. Spasopoulos <sup>1</sup> , S. Kaziannis <sup>1</sup> , A.E. Karantzalis <sup>2</sup> , E. Lidorikis <sup>2</sup> , A. Ikiades <sup>1</sup> , C. Kosmidis <sup>1</sup>

<b>Workshop 2– NANOMATERIALS, NANOFABRICATION, NANOENGINEERING &amp; NANOCONSTRUCTION</b>	
P2-1	<b>Effectiveness of surfactant-assisted nanomaterials on “Pietra di Noto” biocalcarene: evaluation of consolidant, superhydrophobic and self-cleaning properties</b> G.M.C. Gemelli <sup>1,2</sup> , M.J. Mosquera <sup>2</sup> , L.A.M. Carrascosa <sup>2</sup> , F. Fernandez <sup>3</sup> , P.Livri <sup>4</sup>
P2-2	<b>Synthesis of large spherical and anisotropic nanoparticle dimers using a seeded-growth method</b> Johanna Midelet, <sup>a</sup> A. Heuer-Jungemann, <sup>a</sup> A. H. El-Sagheer, <sup>c,d</sup> T. Brown, <sup>c</sup> Martinus H. V. Werts, <sup>e</sup> and A. G. Kanaras <sup>a,b,*</sup>
P2-3	<b>Spectral Features of Luminescence in Nanoporous Aluminum Oxide after Annealing at Different Temperatures</b> D.O. Ilin, A.S. Volkov and I.A. Weinstein
P2-4	<b>Two-Photon Spectroscopy in Commercial CuInS<sub>2</sub> and CuInSe<sub>2</sub> Colloidal Quantum Dots</b> G. Nagamine <sup>1</sup> , H. McDaniel <sup>2</sup> , L.A. Padilha <sup>1</sup>
P2-5	<b>Structure and properties of Bi<sup>3+</sup>: KNbO<sub>3</sub> nanocrystalline ceramics obtained by hydrothermal method</b> P. Vlazan <sup>1</sup> , P. Sfirloaga <sup>1</sup> , M. Poienar <sup>1</sup> , M. Stoia <sup>2</sup>
P2-6	<b>Structural and magnetic properties of crednerite Cu<sub>1-x</sub>Mn<sub>x</sub>O<sub>2</sub> (x=0-0.08)</b> M. Poienar, P. Sfirloaga, P. Vlazan
P2-7	<b>PAMAM dendrimers in targeted delivery of antitumor agents</b> E.Nikolskaya <sup>1</sup> , N. Yabbarov <sup>1</sup> , O. Zhunina <sup>2</sup> , I. Zamulaeva <sup>2</sup>
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P2-91	<b>PFSA-Resorcinol-Formaldehyde Resin Composite Proton Exchange Membranes</b> A.M.I. TREFILOV, E.C. SERBAN, S. VOINEA, A.E. BĂLAN, I. STAMATIN
P2-92	<b>The Contact Angle Measurements of HDPE/Graphene and HDPE/Silver Nanocomposites</b> T. Evgin <sup>1</sup> , I. Tavman <sup>1</sup> , I. Novak <sup>2</sup>
P2-93	<b>Properties of Stretchable Expanded Graphite/Silicone Composites after Cyclic Tensile Test</b>

	<u>S. R. Kim</u> <sup>1</sup> , G. N. Kim <sup>2</sup> , G. D. Park <sup>1</sup> , Y. S. Song <sup>1</sup>
P2-94	<b>The effect of nanofillers on the properties of polyester composites</b> <u>A. Enotiadis</u> <sup>1</sup> , K. Kolovos <sup>1</sup> , L. Boutsika <sup>1</sup> , K. Krassa <sup>2</sup> , Th. Doudali <sup>2</sup> , M. Kainourgiakis <sup>1</sup> , Ch. Varelas <sup>2</sup> , Th. Steriotis <sup>1</sup> , G. Charalambopoulou <sup>1</sup>
P2-95	<b>Al-Cu-Fe quasicrystals reinforced composite materials based on high performance polymer matrices</b> <u>D.I. Chukov</u> , A. A. Stepashkin, L.K. Olifirov, V.V.Tcherdyntsev, S.D. Kaloshkin
P2-96	<b>Bulk oriented UHMWPE/MWCNT nanocomposites with nanofibrillar structure</b> <u>A. Maksimkin</u> <sup>1</sup> , K. Mostovaya <sup>1</sup> , D. Chukov <sup>1</sup> , F. Senatov <sup>1</sup> , S. Kaloshkin <sup>1</sup> , A. Kharitonov <sup>2</sup>
P2-97	<b>Self-reinforced composite materials based on ultra-high molecular weight polyethylene</b> <u>D.I. Chukov</u> , D.D. Zherebtsov, A. A. Stepashkin, K. S. Mostovaya, K.V. Nyaza
P2-98	<b>Porous UHMWPE for bone defects replacement</b> <u>A. Maksimkin</u> <sup>1</sup> , F. Senatov <sup>1</sup> , S. Kaloshkin <sup>1</sup>
P2-99	<b>Antimicrobial block copolymers bearing quaternized ammonium groups and their self-organization in organic solvents</b> N. D. Koromilas <sup>1</sup> , <u>G. Ch. Lainioti</u> <sup>1</sup> , G. Bokias <sup>1</sup> , J. K. Kallitsis <sup>1,2</sup>
P2-100	<b>Composite materials filled with tungsten nanopowder, boron carbide and nanocarbon for multipurpose radio, radiation protection</b> <u>A.A. Boykov</u> <sup>1</sup> , V.V. Tcherdyntsev <sup>1</sup> , V.N. Gulbin <sup>2</sup>
P2-101	<b>Structure-Property Relationships in Carbon Based Hybrid Polymer Nanocomposites</b> <u>A. Stimoniaris</u> <sup>1,2</sup> , E. Thomou <sup>2</sup> , D. Gournis <sup>2</sup> , M. Karakassides <sup>2</sup> , C. Delides <sup>1</sup>
P2-102	<b>Highly Efficient Graphene Supports for Fuel Cell Electrocatalysts</b> Veera Sadhu <sup>1</sup> , Esaam Jamil <sup>1</sup> , Selmiye Alkan Gürsel <sup>1,2</sup>
P2-103	<b>Polymer and Graphene Nanosheets Nanohybrids Coating for Drug-Eluting Stent</b> <u>Li-Ying Huang</u> <sup>1</sup> , T.-Y. Liu <sup>2*</sup> , Hui-Ming Tsou <sup>2</sup> , Che-Chun Liu <sup>2</sup> , Ming-Chien Yang <sup>1*</sup>
P2-104	<b>Enhanced Mechanical Properties of self-assembled fiber nanocomposites by multiscale simulation.</b> <u>Tien-Jung Huang</u> <sup>1,2</sup> , Cheng-Kuang Lee <sup>1</sup> , Hsin-Lung Chen <sup>2</sup> and We Shin Liu <sup>1</sup>
P2-105	<b>Effects of nitrogen and Ti dopants on the electrical properties of Ge<sub>1</sub>Sb<sub>2</sub>Te<sub>4</sub> films</b> M. Osiać, <u>G.E. Iacobescu</u> , M. Jigau
P2-106	<b>Perspective proton-conducting materials based on LaYO<sub>3</sub>: synthesis, stability, thermal and transport properties</b> N. Danilov <sup>1</sup> , G. Vdovin <sup>1</sup> , D. Medvedev <sup>1,2</sup> , A. Brouzgou <sup>3</sup> , A. Demin <sup>1</sup> , P. Tsiakaras <sup>1,3</sup>
P2-107	<b>Solvothermal Synthesis of Surface-Modified Graphene/C and Au-Fe<sub>3</sub>O<sub>4</sub> Nanomaterials for Antibacterial Applications</b> Z. Abdullaeva <sup>1*</sup> , Z. Kelgenbaeva <sup>1</sup> , S. Nagaoka <sup>2</sup> , M. Matsuda <sup>1</sup> , T. Masayuki <sup>1</sup> and T. Nishiyama <sup>3</sup>
P2-108	<b>Design and Development of Self Healing Poly(acrylic acid) Hydrogels containing hydrophobic organic nanoparticles</b> I. Thivaos <sup>1</sup> , G. Bokias <sup>1,2</sup>
P2-109	<b>Influence of growth parameters in structural characteristics of polycrystalline Si thin films for solar cell applications</b> <u>S. Kozakos</u> <sup>1</sup> , Ch. B. Lioutas <sup>1</sup> , N. Vouroutzis <sup>1</sup> , V. Gianneta <sup>2</sup> and A. G. Nassiopoulou <sup>2</sup>
P2-110	<b>Growth of thin layers of Ge quantum-wires in alumina on porous substrates</b> M. Buljan <sup>1</sup> , N. Nekić <sup>1</sup> , M. Gotić <sup>1</sup> , M. Jerčinović <sup>1</sup> , S. Bernstorff <sup>2</sup> , <u>D. Galonja</u> <sup>1</sup>
P2-111	<b>Evaluation of Ti-Ag-N Nanocomposite Coatings Using Medical Applications</b> <u>Z. Kahraman</u> , Z. Yurdakul,
P2-112	<b>Non-equilibrium Bose-Einstein condensates in (Cd,Zn,Mg,Mn)Te microcavity</b> <u>K. Lekenta</u> <sup>1</sup> , M. Król <sup>1</sup> , R. Mirek <sup>1</sup> , J.-G. Rousset <sup>1</sup> , M. Nawrocki <sup>1</sup> , W. Pacuski <sup>1</sup> , M. Matuszewski <sup>2</sup> , J. Szczytko <sup>1</sup> and B. Piętka <sup>1</sup>
P2-113	<b>Influence of doping DyVO<sub>4</sub> nanoparticles with europium atoms on magnetic properties</b> <u>Marcin Bartmański</u> <sup>1</sup> , Jarosław Rybusiński <sup>1</sup> ; Anita Gardias <sup>1</sup> ; Dragana Jovanovic <sup>2</sup> ; Jacek Szczytko <sup>1</sup>
P2-114	<b>A Micromechanical and Structural Characterization of Composite Polymeric Materials used in Additive Manufacturing (3D Printing) Reinforced with Nanoparticles</b> M.E. Mitrousi <sup>1</sup> , I. Zyganitidis <sup>1</sup> , D. Tzetzis <sup>2</sup> , E.C. Aifantis <sup>1</sup>
P2-115	<b>Synthesis, processing and characterization of FeMnGa nanoparticles for permanent magnet applications</b> G. Sempros <sup>1</sup> , K. Kanari <sup>1</sup> , C. Sarafidis <sup>1</sup> , M. Gjoka <sup>2</sup> , N. Lupu <sup>3</sup> , G. Ababei <sup>3</sup> , D. Niarchos <sup>2</sup> , O. Kalogirou <sup>1</sup>
P2-116	<b>Low cost low reflectance superhydrophobic oleophilic buckypapers</b> R. V. Campos <sup>1</sup> , S. S. Camargo Jr. <sup>1,2</sup>
P2-117	<b>The influence of crystallite size on the magnetic properties of Fe<sub>3</sub>O<sub>4</sub> nanoparticles</b> M. Witkowski <sup>1,2</sup> , A. Królikowska <sup>2</sup> , A. Twardowski <sup>1</sup> , J. Szczytko <sup>1</sup>
P2-118	<b>Metal nanoparticles enhancement of the near infrared absorption of organic solvents</b> K. Łempicka <sup>1</sup> , A. Grempeka <sup>1</sup> , P. Puła <sup>1</sup> , O. Szawcow <sup>1</sup> , J. Wagner <sup>1</sup> , A. Leniart <sup>1</sup> , G. Kofodziej <sup>1</sup> , B. Piętka <sup>1</sup> , B. Pałys <sup>2</sup> , J. Szczytko <sup>1</sup>
P2-119	<b>Two approaches for the fabrication of low-cost, indium-free transparent conductive films</b> <u>M. Vasileiadis</u> <sup>1</sup> , A. Meltsiotis <sup>2</sup> , K. Hrissagis <sup>2</sup>
P2-120	<b>PROtective composite Coatings via Electrodeposition and Thermal Spraying (PROCETS)</b> <u>M. Vasileiadis</u> <sup>1</sup> , P. Karlsson <sup>2</sup> , K. Hrissagis <sup>2</sup> , T. Kosanovic Milickovic <sup>3</sup>
P2-121	<b>Multifunctional facades of reduced thickness for fast and cost-effective retrofitting (MF-Retrofit)</b> M. Pappa, P. Karlsson, K. Hrissagis
P2-122	<b>Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub> core shell particles as platforms for the decoration of Ag nanoparticles: A magnetic recyclable catalyst towards the reduction of 4-nitrophenol</b> <u>L. Tzounis</u> , S. Vassiliadou, S. Logothetidis
P2-123	<b>Ultrathin SWCNT electrodes printed by gravure on PET flexible foils and optimisation of the coating parameters</b> <u>Lazaros Tzounis</u> , Christos Polizoidis, Saoula Vassiliadou, Christoforos Gravalidis, Stergios Logothetidis
P2-124	<b>Electrospun gelatin nanofibrous scaffolds for cartilage tissue engineering</b> <u>Sh. Aliakbarshirazi</u> <sup>1</sup> , A. Talebin <sup>2</sup> , Sh. Bonakdar <sup>3</sup>



Workshop 3 – Nanomedicine	
P3-1	<b>Synthesis and characterization of bio-nanomaterials for application in Photothermal Therapy</b> I.Monaco, <sup>1</sup> E. Locatelli, <sup>1</sup> M. Comes Franchini <sup>1</sup>
P3-2	<b>Use of mesoporous silica nanoparticles in preparation of polymeric microparticles for delivery of Paliperidone</b> S.G. Nanaki <sup>1</sup> , M. Tseklima <sup>1</sup> , D. Giliopoulos <sup>1</sup> , K. Triantafyllidis <sup>1</sup> , D.N. Bikiaris <sup>1</sup>
P3-3	<b>Effects of Particle Size of PEG Functionalized Iron Oxide Magnetic Nanoparticles on Neurotoxicity</b> S. Tasdemir <sup>1</sup> , A. A. Dogan <sup>1</sup> , A. Sendemir-Urkmez <sup>1,2,3</sup>
P3-4	<b>Effects of Graphene on Neuronal Connectivity on SH-SY5Y Neurons Cultured in Silk Fibroin (SF) Scaffolds</b> A. A. Dogan <sup>1</sup> , S. Tasdemir <sup>1</sup> , A. Sendemir-Urkmez <sup>1,2,3</sup>
P3-5	<b>Light-activated polymerization in dimethacrylate-based dental nanocomposites under a prism of annihilating positrons</b> Olha Shpotyuk <sup>1</sup> , Adam Ingram <sup>2</sup> , Oleh Shpotyuk <sup>3,4</sup>
P3-6	<b>Nanoarsenicals with guided anticancer functionality characterized by positron annihilation lifetime spectroscopy</b> Oleh Shpotyuk <sup>1,2</sup> , Adam Ingram <sup>3</sup> , Yaroslav Shpotyuk <sup>4</sup> , Zdenka Bujňáková <sup>5</sup> , Peter Baláž <sup>5</sup>
P3-7	<b>Nanohydroxyapatite - chitosan microspheres as implant drug delivery systems for bone tissue repair and regeneration</b> O. Ciobanu <sup>1</sup> , G. Ciobanu <sup>2</sup>
P3-8	<b>Preliminary results on the impact of nanoparticles on brain functioning.</b> A.Ivlieva <sup>1</sup> , V.Demin. <sup>2</sup> , E.Petritskaya <sup>1</sup> , A.Antsiferova <sup>2</sup>
P3-9	<b>Optimization of Polymeric Nanoparticles of Pioglitazone by Factorial Design</b> M. Silva de Abreu <sup>1</sup> , S. Ramos <sup>1</sup> , M. Egea <sup>1</sup> , M. Espina <sup>1</sup> , M. García <sup>1</sup>
P3-10	<b>Nanostructured lipid carriers of Halobetasol Propionate for topical delivery.</b> P. Carvajal-Vidal, M. Espina, M. García, A. Calpena.
P3-11	<b>Characterisation of titanate nanotube-active pharmaceutical ingredient (API) composites</b> B.Sipos <sup>1</sup> , T. Sovány <sup>1</sup> , A. Sági <sup>2</sup> , Z. Kónya <sup>2,3</sup> , K. Hódi-Pintye <sup>1</sup> , G. Regdon jr <sup>1</sup>
P3-12	<b>Enzymatic Nanoreactor of HRP@Hollow Silica for Intracellular Sensing of Reactive Oxygen Species</b> Hsin-Yi Chen <sup>1</sup> , Chien-Tsu Chen <sup>2</sup> , Fan-Ching Chien <sup>3</sup> , Chung-Yuan Mou <sup>1</sup> and Si-Han Wu <sup>4*</sup>
P3-13	<b>A Promising Protein Delivery Nano-platform for Cancer Therapy</b> Yu-Hsuan Lin <sup>1</sup> , Fan-Ching Chien <sup>2</sup> , Peilin Chen <sup>3</sup> , Chung-Yuan Mou <sup>1</sup> and Yi-Ping Chen <sup>4</sup>
P3-14	<b>The efficiency of lipid nanocarriers in accommodation of hydrophilic plant mixture</b> N. Badea, I. Lacatusu, G. Badea, A. Meghea
P3-15	<b>Nanostructured lipid carriers co-loaded with hydrophil and lipophil actives</b> I. Lacatusu <sup>1</sup> , N. Badea <sup>1</sup> , G. Badea <sup>1</sup> , M. Popescu <sup>2</sup> , L. Moldoveanu <sup>3</sup> , M. Panteli <sup>4</sup>
P3-16 (AWARD APPLICANT)	<b>Nano-gold in time-of-flight mass spectrometry of biological samples</b> L. Kolářová <sup>1</sup> , L. Kučera <sup>2</sup> , L. Prokeš <sup>1</sup> , P. Vaňhara <sup>2,3</sup> , A. Hamp <sup>2,3</sup> , J. Havel <sup>1,3</sup>
P3-17	<b>A Molecular Dynamics Study of Irbesartan in a Lipid Membrane</b> Grigorios Megariotis <sup>1</sup> , Thomas Mavromoustakos <sup>2</sup> , Doros N. Theodorou <sup>1</sup>
P3-18	<b>Cancer biomarker discovery by chip-nanoelectrospray mass spectrometry: application to human neuroblastoma</b> Alina D. Zamfir <sup>1,2</sup> , Adrian C. Robu <sup>1,3</sup> , Marius Trion <sup>3</sup> , Florina Capitan <sup>4</sup> , Željka Vukelić <sup>5</sup>
P3-19	<b>Glycomics of GAG oligosaccharides by high-performance mass spectrometry</b> Adrian C. Robu <sup>1,2</sup> , Laurențiu Popescu <sup>1</sup> , Florentina D. Munteanu <sup>3</sup> , Alina D. Zamfir <sup>1,3</sup>
P3-20	<b>Ion mobility mass spectrometry of glycolipids</b> M. Sarbu <sup>1,2</sup> , F. Munteanu <sup>1</sup> , D.E. Clemmer <sup>3</sup> , A.D. Zamfir <sup>1,2</sup>
P3-21	<b>Studies of gene delivery activity of aliphatic cationic head group containing 1,4-dihydropyridine</b> G. Apšite <sup>1</sup> , B. Vigante <sup>2</sup> , I. Timofejeva <sup>1</sup> , A. Vezane <sup>1</sup> , T. Kozlovskaja <sup>1</sup> , A. Plotniece <sup>2</sup> , M. Rucins <sup>2</sup> , K. Pajuste <sup>2</sup> , A. Sobolev <sup>2</sup>
P3-22	<b>Structure-activity relationships of a series designed cationic 1,4-dihydropyridines as gene delivery agent</b> K. Pajuste <sup>1</sup> , A. Vezane <sup>2</sup> , M. Rucins <sup>1</sup> , M. Gosteva <sup>1</sup> , I. Timofejeva <sup>2</sup> , Kl. Pajuste <sup>1</sup> , O. Petrichenko <sup>1,3</sup> , M. Plotniece <sup>1,4</sup> , B. Vigante <sup>1</sup> , T. Kozlovskaja <sup>2</sup> , A. Sobolev <sup>1</sup> , A. Plotniece <sup>1</sup>
P3-23	<b>Conjugation of cell penetrating peptide to polymeric nanoparticles to improve Dexibuprofen brain delivery</b> E. Sánchez-López <sup>1</sup> , M. Martínez <sup>1</sup> , M.J. Gómara <sup>2</sup> , I. Haro <sup>2</sup> , M.L. García <sup>1</sup>
P3-24	<b>Donepezil loaded PLGA-PEG nanoparticles: design and physicochemical characterization for the treatment of Alzheimer's disease</b> A. Cano <sup>1</sup> , A. Sabatini <sup>1</sup> , M. Espina <sup>1</sup> , M.A. Egea <sup>1</sup> , M.L. García <sup>1</sup>
P3-25 (AWARD APPLICANT)	<b>Surfactant directed synthesis and self-assembly of novel neo-geometric cytotoxic copper nanocrystals for enhanced cellular internalisation</b> K. Murugan <sup>1</sup> , Y.E Choonara <sup>1</sup> , P. Kumar <sup>1</sup> , L.C du Toit <sup>1</sup> , V. Pillay <sup>1</sup>
P3-26	<b>Investigational acute toxicity studies of some herbal mediated silver nanoparticles on animal models</b> Kalakotla Shanker <sup>1</sup> , Gottumukkala Krishna mohana <sup>1</sup> , Pravallika PL <sup>1</sup> , N Jayarambabu <sup>2</sup> , Ashfaq Hussain <sup>3</sup>
P3-27	<b>Bio-inactivation of human malignant cells through highly responsive diluted colloidal suspension based on magnetic nanoparticles</b> R. V. Ferreira <sup>1</sup> , P. P. Silva <sup>2</sup> , E. C. Pereira-Maia <sup>3</sup> , J. D. Fabris <sup>3,4</sup> , L. C. D. Cavalcante <sup>3,5</sup> , R. Z. Domingues <sup>3*</sup>
P3-28	<b>Making the Hospital a Safer Place by the Sonochemical Coating of the Textiles by Antibacterial Nanoparticles</b> A. Gedanken, I. Perelshtein
P3-29	<b>Development of an optimized experimental protocol for the systematic rheological investigation of equine synovial fluid</b> E. Rizos <sup>1</sup> , T. Goudoulas <sup>1</sup> , P. Tyrmenopoulou <sup>2</sup> , N. Diakakis <sup>2</sup> , A. Aggeli <sup>1</sup>
P3-30	<b>Rheological Properties of Pentavisc Hyaluronic Acid Solutions</b> N. Matisioudis, E. Rizos, A. Aggeli
P3-31	<b>Biopolymer gels containing silver nanoparticles: exploring their applications in Biomedical engineering</b> P. Mouzoura <sup>1</sup> , A.Spathis <sup>1</sup> , D.Papadopoulos <sup>3</sup> , A.Tsouknidas <sup>3</sup> , B.Angelou <sup>2</sup> , E.Rizos <sup>1</sup> , L. Papazoglou <sup>2</sup> , D.Tsipas <sup>3</sup> , N.Michailidis <sup>3</sup> , A.Aggeli <sup>1</sup>
P3-32	<b>Oral Nanocarrier for Insulin Colon Delivery</b> L. Salvioni <sup>1</sup> , L.Fiandra <sup>2</sup> , M.D. Del Curto <sup>3</sup> , D. Prosperi <sup>1</sup> , L. Palugan <sup>3</sup> , F. Corsi <sup>2</sup> , M. Colombo <sup>1</sup>
P3-33	<b>H-Ferritin nanoparticles allow doxorubicin targeted delivery in cancer cells, in vitro and in vivo</b> M. A. Rizzuto <sup>1</sup> , M. Bellini <sup>1</sup> , S. Mazzucchelli <sup>2</sup> , L. Fiandra <sup>2</sup> , M. Truffi <sup>2</sup> , F. Corsi <sup>2</sup> , D. Prosperi <sup>1</sup>
P3-34	<b>Functional Magnetic Nanocapsules for Effective Tumor Therapy</b> Shang-Hsiu Hu <sup>*</sup> , Jen-Hung Fang
P3-35	<b>Surface investigation of synthesized nanostructured ridges from electrospun Polyvinyl Alcohol – Egg Albumin composite using AFM</b> J. Ramis <sup>1</sup> , B. Pajarito <sup>2</sup>

P3-36	<b>BL NanoBiomed: Nanomedicine Catalyst for Implants</b> V. Karagkiozaki, F. Pappa
P3-37	<b>Nanomechanical Characterization of Fibrous PVA:PEDOT:PSS Scaffolds for Nerve Graft Conduits</b> F. Pappa <sup>1</sup> , V. Karagkiozaki <sup>1</sup> , P. Gkertiou <sup>1</sup> , S. Kassavetis <sup>1</sup> , S. Fachouri <sup>1</sup> , E. Pavlidou <sup>2</sup> , Th. Choli-Papadopoulou <sup>3</sup> , S. Logothetidis <sup>1</sup>
P3-38	<b>Synthesis and Characterization of Ag Nanoparticles for Orthopedic applications</b> M.D. Perli <sup>1</sup> , V. Karagkiozaki <sup>1,2</sup> , F. Pappa <sup>1,2</sup> , I. Moutsios <sup>1</sup> , L. Tzounis <sup>1</sup> , A. Zachariadis <sup>1</sup> , C. Gravalidis <sup>1</sup> , S. Logothetidis <sup>1</sup>
P3-39	<b>Business plan of a company that produces and deposits polymeric nanoparticles on medical implants</b> D. Papadopoulou <sup>1</sup> , V. Karagkiozaki <sup>2</sup> , S. Logothetidis <sup>1</sup> , ...
P3-40	<b>Histidine Kinase Inhibitors Delivered via Nanoparticles for Treatment of Bacterial Infections in Cystic Fibrosis</b> Nadya Velikova <sup>1</sup> , Nuria Mas <sup>2,3</sup> , José Ramón Murguía <sup>2,3</sup> , Ramon Martinez-Manez <sup>2,3</sup> , Jerry Wells <sup>1</sup>
P3-41	<b>Hybrid FePt/SiO<sub>2</sub>/Au nanoparticles for nanomedical applications</b> Nina Kostevšek <sup>1,2</sup> , Sašo Šturm <sup>1</sup> , Igor Serša <sup>1</sup> , Ana Sepe <sup>1</sup> , Matjaž Spreitzer <sup>1</sup> , Spomenka Kobe <sup>1</sup> , Kristina Žužek Rožman <sup>1</sup>
P3-42	<b>Electrochemical study of Selenium (IV) Mediated by Carbon Nanotubes Modified Glassy Carbon Electrode in blood medium</b> Muhammed Mizher Radhi <sup>1*</sup> and Wasan A. Gharbi Al-dulimy <sup>2</sup> , Maysara Samer Khalaf <sup>1</sup>
P3-43	<b>In Silico study on organization of PAA-Vancomycin assembly from electro-neutral complex to Nanoplex formation</b> SB Vepuri, DR Sikwal, RS Kalhapure, S Rambharose, M Soliman, C Mocktar, and T Govender.
P3-44	<b>Novel biocompatible materials based on self-assembling oligopeptides anchored onto titanium alloys surfaces: molecular structure and organization.</b> S. Franchi <sup>1</sup> , A. Vladescu <sup>2</sup> , V. Secchi <sup>1</sup> , M. Santi <sup>1</sup> , M. Braic <sup>2</sup> , M. Dettin <sup>3</sup> , G. Iucci <sup>1</sup> , C. Battocchio <sup>1</sup>
P3-45	<b>Cell behavior on responsive polymeric surface</b> M.A. Frysalı <sup>1,2</sup> , G.Kaklamani <sup>1*</sup> , L.Papoutsakis <sup>1,2</sup> , S.H. Anastasiadis <sup>1,2</sup>
P3-46	<b>Development of Broad Spectrum Antimicrobial Nanofibrous Formulation Based on Natural Materials and Bacteriophage</b> W.A. Sarhan <sup>1</sup> , M.A.F Khalil <sup>2</sup> , H.M.E Azazy
P3-47	<b>Testing of quercetin loaded-PLGA nanoparticles targeting Reduction of Oxidative Stress in Patients</b> V. Karagkiozaki <sup>1,2</sup> , M. Giannouli <sup>2</sup> , F. Pappa <sup>1,2</sup> , I. Moutsios <sup>2</sup> , S. Logothetidis <sup>2</sup>

#### Workshop 4 – Bioelectronics

P4-1	<b>Charge oscillations in DNA monomers and dimers</b> Maria Tassi <sup>1</sup> , Andreas Morphis <sup>1</sup> , Konstantinos Kaklamani <sup>1</sup> , Konstantinos Lambropoulos <sup>1</sup> , Richard Lopp <sup>2</sup> , Georgios Georgiadis <sup>1</sup> , Marina Theodorakou <sup>1</sup> , Maria Chatzileftheriou <sup>3</sup> and Konstantinos Simserides <sup>1</sup>
P4-2	<b>Targeted detection of mRNA biomarkers using graphene oxide and upconversion nanoparticles.</b> Patrick Vilela, <sup>1</sup> A. H. El-Sagheer, <sup>3,4</sup> T. Brown, <sup>3</sup> Timothy M. Millar, <sup>5</sup> Otto L. Muskens, <sup>1,2</sup> and A. G. Kanaras, <sup>1,2*</sup>
P4-3	<b>Celestine blue as a redox intercalating probe for electrochemical isothermal nucleic acid amplification platform</b> Tsong-Tao Huang <sup>1,2</sup> , Yu-Jen Lin <sup>2</sup> , Jun-Sheng Wang <sup>1</sup> , Yu-Hsiang Tang <sup>1</sup> , Chih-Sheng Yu <sup>1</sup> , and Sheng-Tung Huang <sup>2*</sup>
P4-4	<b>Evaluating nucleic acid amplification platform by an electrochemical redox: Tert-butylhydroquinone (TBHQ)</b> Tsong-Tao Huang <sup>1,2</sup> , Yu-Jen Lin <sup>2</sup> , Jun-Sheng Wang <sup>1</sup> , Yu-Hsiang Tang <sup>1</sup> , Chih-Sheng Yu <sup>1</sup> , and Sheng-Tung Huang <sup>2*</sup>
P4-5	<b>Freshness evaluation of food products using a chromogenic gas sensor based on organic dyes</b> S.M. Iordache, A. M. Iordache, G. C. Zarnescu, C. Ceaus, L.Popovici, A. Tiliakos
P4-6	<b>Silver-Coated Gold Nanorod-Based Logic Operations Facilitated by Etching and Coating Processes</b> Yanmei Zhang, Xinjian Yang and Zhigiang Gao
P4-7	<b>All-in-one fabrication process of a rigidified flexible depth probe</b> Jolien Pas, Marc Ferro, George Malliaras
P4-8	<b>Computational Study of a New Deep Submicron RADFET Dosimeter Design Based on Graphene Nanoribbon for Radiotherapy Applications</b> K. Tamersit, F. Dieffal and D. Arar
P4-9	<b>A handheld colorimeter for determining salivary alpha-amylase activity and its applications to stress assessment</b> Hsien-Yi Hsiao, Chih-Chi Chou, Richie L. C. Chen, Tzong-Jih Cheng*
P4-10	<b>Electrochemical assay for rapid and universal detection of bacteria or virus using lipid nanovesicles</b> Chan Ho Chung <sup>1,2,7</sup> , Yoon-Aa Choi <sup>1,7</sup> , Dongeun Yong <sup>3</sup> , Heungsup Sung <sup>4</sup> , Dae-Sub Song <sup>5</sup> , Seungjoo Haam <sup>6</sup> , Bong Hyun Chung <sup>1</sup>
P4-11	<b>NEMS Bio-Sensor on a Chip for A Single-Molecule Detection</b> A. Öztürk <sup>1</sup> ,
P4-12	<b>Carbon aerogel-based bioelectrodes for amperometric detection of phenolic compounds</b> V. Munteanu <sup>1*</sup> , V. Danciu <sup>1</sup> , L.C. Cotet <sup>1</sup> , A.I. Cadis <sup>2</sup> , L.M.Muresan <sup>1</sup>
P4-13	<b>Graphene Oxide Modified Disposable Sensors for Electrochemical Detection of Nucleic Acids</b> D. Isin, E. Eksin and A. Erdem*

#### Workshop 5 – Graphene And Related Materials

P5-1	<b>A comparison of electronic properties of few-layer graphene and germanene</b> D. Coello-Fiallos <sup>1</sup> , C. Vacacela Gomez <sup>2</sup> , J. L. Guayllas <sup>3</sup> , A. Haro <sup>3</sup> , T. Tene <sup>2</sup>
P5-2	<b>Facile synthesis of few-layer graphene flakes by hydrothermal and sonication treatments in a water-surfactant solution</b> C. Vacacela Gomez <sup>1</sup> , D. Coello-Fiallos <sup>1,2</sup> , E. Cazzanelli <sup>1</sup> , A. Tavolaro <sup>2</sup> , L. S. Caputi <sup>1</sup>
P5-3	<b>Post-growth modification of graphene films by microwave N<sub>2</sub> plasma treatments</b> G. Robert-Bigras <sup>1</sup> , L. Vandsburger <sup>1</sup> , L. Stafford <sup>1</sup> , A. Sarkissian <sup>2</sup>
P5-4	<b>Nonlocal vibration of a nanoplate influenced by in-plane magnetic field using finite element method</b> M.Lazarević <sup>1</sup> , M. Cajić <sup>2</sup> , N.Nešić <sup>2</sup> , D. Karličić <sup>3</sup> , N.Đurović <sup>1</sup> ,Lj.Bucanović <sup>1</sup>
P5-5	<b>Thermal smearing of the magneto-Kohn anomaly for Dirac materials and comparison with the two-dimensional electron liquid</b> A. Balassis <sup>1</sup> , G. Gumbs <sup>2</sup> , D. Dahal <sup>2</sup> , M. L. Glasser <sup>3</sup>
P5-6	<b>Exfoliation method of Graphene oxide with large lateral size Via Couette-Taylor flow reactor</b> Young Jin Do <sup>1</sup> , Won kyu Park <sup>1</sup> , Seonmi Yoo <sup>1</sup> , Seungdu Kim <sup>1</sup> , Woo Seok Yang <sup>1*</sup>
P5-7	<b>Rapid synthesis of high-quality graphene oxide sheets using taylor vortex flow reactor</b> Seonmi Yoo <sup>1</sup> , Won kyu Park <sup>1,2</sup> , Seungdu Kim <sup>1,3</sup> , Young Jin Do <sup>1</sup> , Woo Seok Yang <sup>1*</sup>
P5-8	<b>Modulation of graphene properties by underneath metals and its influence to contact resistance</b>

	<a href="#">G. Astromskas</a> , <a href="#">V. Nargelienė</a> , <a href="#">V. Bukauskas</a> , <a href="#">A. Lukša</a> , <a href="#">A. Sakavičius</a> , <a href="#">A. Šetkus</a>
P5-9	<b>Morphic Transitions of Nanocarbons via Laser Photopyrolysis of Polyimide Films</b> <a href="#">A. Tiliakos</a> <sup>1</sup> , <a href="#">C. Ceaus</a> <sup>1</sup> , <a href="#">S. M. Iordache</a> <sup>1</sup> , <a href="#">E. Vasile</a> <sup>2</sup> , <a href="#">I. Stamatina</a> <sup>1</sup>
P5-10	<b>Graphene-based Xerogels as Electrodes in Microbial Fuel Cells</b> <a href="#">A. Cucu</a> <sup>1</sup> , <a href="#">A.M.I. Trefilov</a> <sup>1</sup> , <a href="#">A. Tiliakos</a> <sup>1</sup> , <a href="#">I. Stamatina</a> <sup>1</sup> , <a href="#">A. Ciocanea</a> <sup>2</sup>
P5-11	<b>Energy Transfer from Quantum Dots to Graphene and MoS<sub>2</sub>: The Role of Absorption and Screening in 2D Materials</b> <a href="#">J. Zultak</a> <sup>1,2,3</sup> , <a href="#">A. Raja</a> <sup>2,3,7</sup> , <a href="#">A. Montoya-Castillo</a> <sup>2</sup> , <a href="#">X-X. Zhang</a> <sup>3,7</sup> , <a href="#">Z. Ye</a> <sup>3,7</sup> , <a href="#">C. Roquelet</a> <sup>3</sup> , <a href="#">D. A. Chenet</a> <sup>4</sup> , <a href="#">A. M. van der Zande</a> <sup>4</sup> , <a href="#">P. Huang</a> <sup>2</sup> , <a href="#">J. Hone</a> <sup>4</sup> , <a href="#">D. R. Reichman</a> <sup>2</sup> , <a href="#">L. E. Brus</a> <sup>2</sup> , <a href="#">T. F. Heinz</a> <sup>3,7,8</sup>
P5-12	<b>Reduction of Graphene Oxide with various aromatic diamines for electrically conductive materials</b> <a href="#">V. Belessi</a> <sup>1,2*</sup> , <a href="#">D. Petridis</a> <sup>2</sup> , <a href="#">V. Georgakilas</a> <sup>3</sup> , <a href="#">M. Baikousi</a> <sup>2</sup> , <a href="#">K. Spyrou</a> <sup>2</sup> , <a href="#">V. Psycharis</a> <sup>2</sup> , <a href="#">D. Gournis</a> <sup>4</sup> and <a href="#">Th. Steriotis</a> <sup>2</sup>
P5-13	<b>Electrical and Photovoltaic Characteristics of a Multi-Layer GaTe/IGZO p-n Heterojunction</b> <a href="#">Ah-Jin Cho</a> <sup>1,2</sup> and <a href="#">Jang-Yeon Kwon</a> <sup>1,2</sup>
P5-14	<b>Graphene based composites using the monomers as a reducing agent</b> <a href="#">Chang Uk Seo</a> <sup>1,2</sup> , <a href="#">Su Yeon Choi</a> <sup>1</sup> and <a href="#">Woo Seok Yang</a> <sup>1*</sup>
P5-15	<b>Comparison of heavy metal adsorption properties using magnetite-graphene oxide and magnetite-reduced graphene oxide</b> <a href="#">Sungkyun Lee</a> <sup>a,c</sup> , <a href="#">Yeojoon Yoon</a> <sup>a</sup> , <a href="#">Seungdu Kim</a> <sup>a,b</sup> , <a href="#">Dae Ho Yoon</a> <sup>c</sup> , <a href="#">Woo Seok Yang</a> <sup>a*</sup>
P5-16	<b>Fabrication of graphene on the electroplating Cu/Graphite sheet for improving thermal properties.</b> <a href="#">ChanWoong Park</a> <sup>a,b</sup> , <a href="#">Yena Kim</a> <sup>a,c</sup> , <a href="#">Sungkyun Lee</a> <sup>a,c</sup> , <a href="#">YoungJoon Hong</a> <sup>b*</sup> , <a href="#">WooSeok Yang</a> <sup>a*</sup>
P5-17	<b>Graphitization of SiC (0001) surface in Si flux</b> <a href="#">P. Ciochoń</a> <sup>1</sup> , <a href="#">J.J. Kołodziej</a> <sup>1</sup>
P5-18	<b>Low light solar cells</b> <a href="#">Djordje Jovanović</a> <sup>1</sup> , <a href="#">Tijana Tomasević</a> <sup>1</sup> , <a href="#">Aleksandar Matković</a> <sup>1,2</sup> , <a href="#">Nikola Tasić</a> <sup>3</sup> , and <a href="#">Radoš Gajić</a> <sup>1</sup>
P5-19	<b>Modification of reduced graphene oxide with gold nanoparticles stabilized by SH-PEG-NH<sub>2</sub></b> <a href="#">A. Leniart</a> <sup>1</sup> , <a href="#">P. Szustakiewicz</a> <sup>1</sup> , <a href="#">W. Lewandowki</a> <sup>1</sup>
P5-20	<b>Transparent Graphene Oxide and reduced Graphene Oxide Humidity Sensors</b> <a href="#">D.-P. Argyropoulos</a> <sup>1</sup> , <a href="#">S. Papamatthaiou</a> <sup>1</sup> , <a href="#">F. Farmakis</a> <sup>1</sup> , <a href="#">N. Georgoulas</a> <sup>1...</sup>
P5-21	<b>Sustained inflammation and genotoxicity following pulmonary exposure to graphene and graphene oxide in mice</b> <a href="#">S. Bengtson</a> <sup>1,2</sup> , <a href="#">K Kling</a> <sup>1</sup> , <a href="#">K. B. Knudsen</a> <sup>1</sup> , <a href="#">Z. O. Kyjovska</a> <sup>1</sup> , <a href="#">A. M. Madsen</a> <sup>1</sup> , <a href="#">P. A. Clausen</a> <sup>1</sup> , <a href="#">A. W. Nørgaard</a> <sup>1</sup> , <a href="#">R. Ramos</a> <sup>3,4</sup> , <a href="#">H. Okuno</a> <sup>3,5</sup> , <a href="#">J. Dijon</a> <sup>3,4</sup> , <a href="#">B. Alonso</a> <sup>6</sup> , <a href="#">A. Pesquera</a> <sup>6</sup> , <a href="#">A. Zurutuza</a> <sup>6</sup> , <a href="#">N. R. Jacobsen</a> <sup>1</sup> , <a href="#">H. Wallin</a> <sup>1,7</sup> and <a href="#">U. Vogel</a> <sup>1,8</sup> .
P5-22	<b>Direct transfer of graphene using poly vinyl alcohol films</b> <a href="#">D. Papas</a> <sup>1</sup> , <a href="#">Z. Kyroudis</a> <sup>1</sup> , <a href="#">E.M. Pehlivani</a> <sup>2</sup> , <a href="#">A. Laskarakis</a> <sup>1</sup> and <a href="#">S. Logothetidis</a> <sup>1</sup>
P5-23	<b>Effect reduced Graphene oxide and SWCNTs on performance of aqueous ink for printed supercapacitor</b> <a href="#">M. Ahmadi Zeidabadi</a> <sup>1</sup> , <a href="#">S. Carrion</a> , <a href="#">C. Aucher</a> , <a href="#">D. Gutierrez</a>