4th International Meeting

on Developments in

Materials, Processes & Applications

of Emerging Technologies

28-30 July 2010

University of Minho

Braga, Portugal

Technical Programme

Welcome to MPA 2010

It is with great privilege and honour that we welcome you all to this 4th International Meeting on Developments in Materials, Processes and Applications of Emerging Technologies hosted here at the University of Minho in Braga, Portugal.

Braga proudly hosts the "International Iberian Nanotechnology Laboratory (INL)" and we are very pleased to organise and hold the 4th MPA conference in close proximity to INL

We would like to thank you all for travelling from all over the world to be here today in Braga for this very important event. Thanks to you all we had received around 380 abstracts in total.

This year's event is the first time that such a meeting in the MPA series has been held outside the United Kingdom. Previous such events have been held in Belfast, Cambridge and Manchester.

MPA-series of meetings are designed to provide an interactive platform for researchers and scientists, both from academia and industry, who's work in focused on applied/industrial research as well as fundamental research, to exchange knowledge and technical know-how in order to make further advancements in better understanding and developing emerging technologies, especially nanotechnology, and exploring novel application areas of advanced materials.

This year's event will offer two complementary short courses on nano-related topics. Furthermore, the event will host an exhibition. We are delighted to have with us a large number of world class and world renowned scientists and our invited speakers who will lecture on different aspects of Nanoscience and Nanotechnology. Up to 100 oral talks will be presented during the course of the three days in 2 to 3 parallel sessions and around 200 posters will be presented in two poster sessions that will be held during 28th and 29th July.

We hope you will enjoy all aspects of this year's MPA meeting hosted here in Braga, Portugal.

Sincerely yours,

Vasco Teixeira, Chairman, MPA-2010
Nasar Ali, Co-chairman, MPA-2010

Universidade do Minho

LOT Oriel Group Europe

INNOVNANO
CHALLENGE OUR INNOVATION

Tuesday 27th July

10:00-18:00 **REGISTRATION**

13:15-16:15

SHORT COURSES
(Room C)

Course 1: "Introduction to Bionanosystems and Applications"

Speakers: ***Prof. Elisabete Oliveira*** *(University of Minho, Portugal);*
Dr Paulo Coutinho *(University of MInho, Portugal)*

16:30-18:30

Course 2: "About nano-piezotronics and nanosensoristics:
properties and physics at nanoscale"

Speaker: ***Dr Paolo Di Sia,*** *(Verona University, Italy)*

08:00 onwards	Registration
09:00-09:15	**WELCOME ADDRESS** ***Professor Vasco Teixeira*** *(chair), Portugal* ***Dr Nasar Ali*** *(co-chair), UK* Room: Auditorium A1 (Building CP1)
09:15-10:45	**PLENARY LECTURE I** ***Dr Tapani Ryhanen,*** NOKIA Research Centre, Director of NOKIA Research Laboratory - Eurolab *(Cambridge, UK; and Lausanne, Switzerland)* “Nanotechnologies as enablers for mobile devices and services”
10:45-11:15	**PLENARY LECTURE II** ***Professor Sergio Mascarenhas*** Brazilian Academy of Science, Sao Carlos, *Brazil* “Perspectives of bionanotechnology for the XXI century.”
11:15-11:30	**Refreshments Break**
11:30-12:30	**PLENARY LECTURE III** ***Professor Jose Rivas Rey*** INL-International Iberian Nanotechnology Laboratory, *Portugal* “The international Iberian Nanotechnology Laboratory as an example of international cooperation”
12:30-13:00	**PLENARY LECTURE IV** ***Professor Marcel H. Van de Voorde,*** University of Technology Delft, *The Netherlands* “Nanomaterials: Research, Development and Technology (R&D&T) Roadmaps - 2020”

Wednesday 28th July

Time	Auditorium B1	Auditorium B2
13:00-14:00	**Lunch**	
	Invited Session 1 (Bionanotechnology) Chair Person: ***T. Neves-Petersen*** (Denmark), Xiaojun Zhao (USA) Room: Auditorium B1	Commercialisation of Advanced Technologies Chair Person: ***Vasco Teixeira*** (Portugal), Tim Harper (UK) Room: Auditorium B2
14:00-14:30	**INVITED 25: *Xiaojun Zhao,*** MIT,USA *"Fabrication of Nanobiomaterials through Molecular Self-assembling Peptides and Their Applications"*	**INVITED 20: *Tim Harper,*** Cientifica Ltd, UK *"How to make money from Emerging Technologies"*
14:30-15:00	**INVITED 19: *S. Prakash,*** McGill University, Canada *"Noscapine-loaded Nanoparticles Designed to Specifically Target Breast Cancer"*	**INVITED 22: *M. Graf zu Eulenburg,*** InovisCoat GmbH, Germany *"NanoCoatings close to the market"*
15:00-15:15	**INVITED** 21: ***Li-Min Zhu,*** Donghua University, China *"Transdermal Drug Delivery Systems based on Electrospun Nanofiber Mats"*	**MPA148: *Dr Matthias Pickavé,*** Technical Service Nanotechnology, BYK-Chemie GmbH, Germany *"Additives for Coatings and Plastics-Bringing Nanotechnology into the Market"*
15:15-15:30		**MPA321: *Prof. Jorge Frade*,** Aveiro University, Portugal *"Competitive nanocrystalline zirconia powders for technical ceramics"*
15:30-15:45	**Refreshments Break**	

	Special Invited Session: Nanoelectronics, Flexible and Organic Electronics Chair Person: ***Rodrigo Martins***,(Portugal) Room: Auditorium B2	Nanomaterials for Energy Applications Chairperson: ***Vladimir Matolin*** (Czech Republic), **João Calado** (Portugal), **Joquim Carneiro** (Portugal) Room: Room C
15:45-16:15	**INVITED 28:** ***Rodrigo Martins*** Universidade Nova de Lisboa, Portugal *"Away from silicon era: the paper* electronics*"*	**INVITED 17:** ***Prof. Vladimir Matolin,*** Charles University in Prague, Czech Republic *"New anode material for PEM fuel cells: Pt-cerium oxide thin films deposited on CNTs by sputtering"*
16:15-16:30	**MPA311:** ***Dr Axel Schindler,*** University of Stuttgart, Germany, *"Carbon Nanotubes in Flexible Display Applications"*	**MPA258:** ***Mr Zhan Gao,*** Royal Institute of Technology, Sweden *"Nanometric co-doped Ce0.8−xSm0.2SrxO2−δ for intermediate Temperature SOFCs"*
16:30-16:45	**MPA30:** ***Dr C. J. Tang,*** University of Aveiro, Portugal *"Two-phonon absorption of chemical vapor deposited diamond films: the impact of grain size"*	**MPA90:** ***Prof. Peter Balaz,*** Slovak Academy of Sciences, Slovakia *"Mechanochemically synthesized ZnxCd1-xS nanoparticles for solar energy application"*
16:45-17:00	**MPA127:** ***Dr P. Carvalho,*** University of Minho, Portugal *"Opto-Mechanical properties of GZO thin films deposited on flexible substrates at room temperature"*	**MPA243:** ***Dr L. M. Goncalves,*** University of Minho, Portugal *"Improvement of LIPON Ionic Conductivity to apply as Electrolyte in Solid-State Film Batteries"*
17:00-17:15	**MPA327:** ***L. Pereira,*** Universidade Nova de Lisboa, Portugal *"Novel dielectrics for low cost electronics applications"*	**MPA264:** ***Dr Jong-Sung Yu,*** Korea University, Korea *"Ordered Hierarchical Nanostructured Carbon as an Efficient Anode Material in Li Ion Battery"*
17:15-17:30	**MPA328:** ***Dr Isabel Ferreira,*** Universidade Nova de Lisboa, Portugal *"Self rechargeable paper batteries"*	**MPA260:** ***Dr C. Batista,*** University of Minho, Portugal *"Influence of substrate temperature and film thickness on crystal structure, morphology and optical and electrical response of pulsed-dc sputtered thermochromic VO2 thin films"*
17:30-17:45	**MPA329:** ***Dr Pedro Barquinha,*** Universidade Nova de Lisboa, Portugal *"High-performance multicomponent oxide TFT"*	

Wednesday 28th July

Carbon Nanotubes
Chairperson: ***Chih-Pong Huang (Taiwan),***
M. Pérez-Cadenas (Spain)
Room: Auditorium B1

15:45 - 16:00	**MPA56:** ***Pola Goldberg-Oppenheimer,*** University of Cambridge, UK *"Advanced structure formation via electrohydrodynamic patterning of carbon nanotubes polymer composites"*
16:00 - 16:15	**MPA52:** ***Dr B. Haidar,*** Institut De Science De Materiaux De Mulhouse, Cnrs, France *"CNT in polymer based nanocomposites, expectations and reality"*
16:15 - 16:30	**MPA188:** ***Dr M. Pérez-Cadenas,*** UNED, Spain *"Building up multiwall carbon nanotubes nanostructures inside millimetric channels of ceramic monoliths"*
16:30 - 16:45	**MPA216:** ***Prof. Urszula NARKIEWICZ,*** West Pomeranian University of Technology, Poland *"Comparison of hydrogen and oxygen treatment on the efficiency of carbon nanotubes purification"*
16:45 - 17:00	**MPA296:** ***Dr A. J. Paleo,*** University of Minho, Portugal *"Sensor performance of piezoresistive polypropylene-carbon nanofibre composites"*
17:00 - 17:15	**MPA47:** ***Mr Meysam Rahmat,*** McGill University, Canada *"Molecular Dynamics Simulation of Single-Walled Carbon Nanotube – PMMA Interaction"*
17:15 - 17:30	**MPA42:** ***Dr Chih-Pong Huang,*** National Chung Hsing University, Taiwan *"Investigation of Self-Assembly Fullerene Overlayers Embedded Silicon Surfaces with Scanning Probe Microscopy"*

17:30-19:00 **Welcome Reception Cum Poster Session I (Main Foyer Area)**

17:30-19:00

Poster Session I (main foyer)

MPA162 An easy methodology for the incorporation of carbon nanotubes on surfaces of components applied as electronic devices, **Prof. I. Rodriguez-Ramos,** *Instituto de Catálisis y Petrol, Spain*

MPA168 Hardness of nanocrystalline TiO2 thin films, **Dr Damian Wojcieszak,** *Wroclaw University of Technology, Poland*

MPA178 PECVD-grown carbon nanotubes mats for microelectronics interconnections and their electrical characterization, **Dr Mireille Gaillard,** *Université-CNRS, France*

MPA180 Raman and photoluminescence studies of ZnO nanoparticles, **Dr T. L. Phan** *Chungbuk National University, Korea*

MPA189 Effect of LSCO Seed Layer on the Electrical and Structural Properties of Multilayered PZT films deposited by Pulsed Laser Ablation, **Sofia Rodrigues,** *University of Minho, Portugal*

MPA191 Platinum nanoparticles as pH sensor for intelligent packaging, **Dr P. J. G. Coutinho** *University of Minho, Portugal*

MPA192 Spray-pyrolysis and deep- and spin-coating deposition of nanocrystalline oxide thin solid films and amorphous microcomposites, **Dr Joana Zaharieva,** *University of Sofia, Bulgaria*

MPA196 Study of mechanical behavior of metal protective film of polyurethane derivate from castor oil, **Dr E. C. Azevedo,** *Universidade Tecnológica Federal do Paraná, Brazil*

MPA203 Magnetically Controlled Phase Boundaries in Ni52Mn26Ga22, **Dr Nigel Mellors** *University of Salford, UK*

MPA206 Direct imaging of label-free DNA array by using a microwave scanning microscope, **Dr Kiejin LEE,** *Sogang University, Korea*

MPA212 Surface Initiated Atom Transfer Radical Polymerization of Poly(dimethyl siloxane) for Biomedical Applications, **Sara Gonçalves,** *University of Minho, Portugal*

MPA215 Influence of calcination temperature on luminescent properties of ZrO2:Tb nanopowders obtained in modified sol-gel process, **Prof. Urszula NARKIEWICZ** *West Pomeranian University of Technology, Poland*

MPA222 Bio-functionalization of Silica and Superparamagnetic Core-Shell Nanoparticles using new Photonic Technology, **Manuel Correia,** *Aalborg University, DenmarK*

MPA223 FIB Preparation and Characterization of Site-controlled Quantum Dots, **J. Hernández Saz,** *Universidad de Cádiz, Spain*

MPA225 Interaction of Cytotoxin with Nanobiomembrane, **Dr Farshad Kowsary,** *University of Tehran, Iran*

MPA226 Synthesis of the monodispersed spherical -Al2O3 nano particles by forced hydrolysis method, **Dr Hee-Suk Roh**, *Seoul National University, Korea*

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MPA230 Structural And Electrical Properties Of Ba0.8 Sr0.2tio3 Films Deposited By Pulsed Laser Ablation, **José P. B. Silva,** *University of Minho, Portugal*

MPA249 Distribution of Bismuth Atoms in GaAsBi Epilayers, **Juan Francisco Rodrigo Oliva** *Universidad de Cádiz, Spain*

MPA254 The role of weak disorder and matrix mediated hopping in the electrical response of carbon nanotube composites, **J. Silva,** *University of Minho, Portugal*

MPA255 Influence Of The Heat Treatment On The Mgo Periclase Formation By Sol-Gel Method, **Mr G.Smalarz,** *University of Minho, Portugal*

MPA256 Monoolein-based lipoplexes (DODAB/MO/DNA) as non-viral vector for transfection-from physicochemical characterization to biological application, **Dr Elisabete Oliveira,** *University of Minho, Portugal*

MPA130 Effects of preparation method on the physicochemical characteristics and cell transfection efficiency of non-viral nanocarriers, **Dr Elisabete Oliveira,** *University of Minho, Portugal*

MPA284 Preparation of nanomaterials supported on a carbon paper/Teflon substrate – Application as electrocatalyst for fuel cells, **Mrs Maria C. Oliveira,** *Universidade de Trás-os-Montes e Alto Douro, Portugal*

MPA288 Porosity Development In Carbon Nanofibers By Physical And Chemical Activation, **Dr J.M.D. Tascón,** *Instituto Nacional del Carbón, Spain*

MPA290 Synthesis, characterization and temperature dependent PL dynamics of colloidal CdTe/CdTexSe1-x/CdSe core-alloyed shell quantum dots, **Dr Aldona Sashchiuk** *Russell Berrie Nanotechnology Institute and Solid State Institute, Israel*

MPA292 New Composite Material For Luminescent Solar Concentrator, **Dr Tsiala Saraidarov** *Hebrew University of Jerusalem, Israel*

MPA298 Investigation on the surface recombination of ZnO nanorods arrays, **Lili Yang** *Linköping University, Sweden*

MPA301 Surface modification of polydimethylsiloxane using Low Pressure Chemical Vapor deposition of poly-chloro-p-xylene, **Dr Paul-Emile POLENI,** *LIMMS/CNRS, Japan*

MPA309 Silk Fibroin-Based Fiber Mesh Scaffold In Cartilage Engineering, **Ronaldo Amaral** *Universidade Federal do Rio de Janeiro, Brazil*

MPA314 Grafting of Zn(II) perfluorinated porphyrin onto multiwall carbon nanotubes for light-energy conversion devices, **Dr Cristina Freire,** *Universidade do Porto, Portugal*

MPA46 POLIMERSOMES: Nanotechnological Applications, **Dr Emilio Castro** *Universidade de Santiago de Compostela, Spain*

MPA165 Spin Structure of Depinning Domain Wall on Notched Ferromagnetic Wire, **Prof. Suhk Kun Oh,** *Chungbuk National University, Korea*

MPA145 Interaction Of Bacillus Cereus And Pseudomonas Putida Cells With Nanostructured Zink Oxide Thin Films, **Dr K. Papazova,** *University "St. Kliment Ohridski", Bulgaria*

MPA70 Evaluation of thermal/electrical conductivity of carbon nanostructures, **Dr Nadjib Semmar,** *Université-CNRS, Orléans, France*

MPA95 Humidity Sensing Properties of Polymer Nanocomposites with Carbon Black/Carbon Nanotube Hybrid Filler, **Dr Nam Ki Min,** *Korea University, Korea*

MPA98 Photoluminescence Analysis of Cu-doped Zinc Oxide Films Deposited by Radio Frequency Magnetron Sputtering Method, **Dr Toshio Takeuchi,** *Waseda University, Japan*

MPA100 Photoluminescence of GdVO4:Eu, Al Phosphors under VUV Excitation, **Dr K. Park** *Sejong University, Korea*

MPA169 Photoluminescence and photocatalytic properties of nanocrystalline TiO2:Tb thin films, **Dr Damian Wojcieszak,** *Wroclaw University of Technology, Poland*

MPA132 Properties of Si NWs with TiOx & TiOxN layers on the surface, **Dr O.V.Naumova,** *SB Russian Academy of Sciences, Russia*

MPA135 Fabrication and nanostructural investigation of Ni-W/CNT nanocomposite layer by surface mechanical attrition electrodeposition, **Dr M. Aliofkhazraei** *Tarbiat Modares University, Iran*

MPA295 Nanoemulsions Based On Solbrax And Polyoxide For Application In Cleaning Up Soil, **Prof. Claudia R. E. Mansur,** *Cidade Universitária, Brazil*

MPA297 Optical Antireflection of a Medium by Nanoparticles' Layer, **Dr Alexander S. Shalin** *Ulyanovsk State University, Russia*

MPA320 Engineering of Recombinant Silk and Elastin Copolymers, **Prof. Margarida Casal** *University of Minho, Portugal*

MPA323 The surface properties of nanocrystalline bulk titanium, **Dr ANDRZEJ Garbacz** *Warsaw University of Technology, Poland*

MPA324 Self-Cleaning effect: the application of TiO2 nanocoatings as photocatalyst in ceramic materials for civil construction, **Dr J. O. Carneiro,** *University of Minho, Portugal*

MPA330 Evaluation of Piezoelectric Smart Materials for Power Harvesting, **Dr I. Patel, M. Uzun** *University of Bolton, UK*

MPA331 Physical Properties of Milk Protein Fiber, **M. Uzun, Dr I. Patel,** *University of Bolton, UK*

MPA44 PA6.6 and PET fabrics coated with thin films of ZrOxNy, **Rosa Bessada,** *University of Minho, Portugal*

MPA250 Preparation of superhydrophobic finishing on textiles fabrics surface with carbon nanotubes nanocoating, **Jose O. Nascimento,** *University of Minho, Portugal*

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MPA253 Damage evaluation of polyester/glass fiber C (SMC) by acoustic emission, **Dr Ahmed KOUADRI-BOUDJELTHIA,** *USTHB of. Bab Ezzouar ALGIERS, Algeria*

MPA313 Influence of film thickness and substrate temperature on the structural, optical and photocatalytic properties of pulsed-dc sputtered TiO2 films, **C. Batista,** *University of Minho, Portugal*

MPA261 Crystallization and clustering effects on boron transient enhanced diffusion behavior in strongly implanted polycrystalline-silicon thin layers, **Dr Salah ABADLI,** *University of 20 August 1955, Algeria*

MPA262 Synthesis and tribological properties of nano-laminated Ti3SiC2 crystals, **Dr Changsheng Li,** *Jiangsu University, China*

MPA269 Dye Sensitized Sputtered Nanocristaline Tio2 - Optoelectronic Properties, **Dr C. Nunes,** *LNEG, Portugal*

MPA273 Structural, Optical and Electrical Characterization of In2S3 Films Deposited by SILAR Method, **Dr Turan Taskopru,** *University of Anadolu, Turkey*

MPA279 Effective Approach for Dark Current Reduction Factor of Quantum Well Infrared Photodetectors **Dr Mohamed S. El_Tokhy,** *NRC, Egypt*

MPA232 Developing a novel multifunctional TiO2 Nanocoating on PLA fibres by pulsed DC magnetron sputtering (PMS), **José H. O. Nascimento,** *University of Minho, Portugal*

MPA01 Mechanically assisted electroplating of Ni-P-SiC Composite Coatings on Carbon Steel **Dr Zhaoxia Ping**, *Beijing Normal University, China*

MPA05 Preparation, characterization and activity evaluation of Nb2WO8/ZnO photocatalyst prepared by ball milling, **Dr Chen Shifu,** *Huaibei Normal University, China*

MPA07 Fabrication and Characterization of High Performance Ceramic Membrane Having Nanometric pores, **Prof. A. A. Hosseini,** *Mazandaran University, Iran*

MPA08 The effect of precursor materials on the morphology of Fluorapatite/TiO2 Nanocom posite synthesized via Mechanochemical Method, **Dr Reza Ebrahimi-Kahrizsangi** *Islamic Azad University, Iran*

MPA09 Non-volatile memory capacitors based on atomic layer deposited high-k HfO2 insulator (tunneling and blocking) layers and Pt nanocrystals as charge storage media, **Dr Beso Mikhelashvili,** *Technion-Israel Institute of Technology, Israel*

MPA14 Nanocrystalline ITO particles from Combustion Synthesis and its Optical Characterization **Dr Ayesha Mariam,** *Alagappa University, India*

MPA15 Influence of preparation conditionson superconducting properties of Bi-2223 thin films **Dr Nguyen Thi Mua,** *Hanoi University of Technology, Vietnam*

MPA18 Synthesis and optical investigation of wurtzite Zinc-Oxide nanorods, **Dr H. Haratizadeh,** *Shahrood University of Technology, Iran*

MPA19 Synthesis and characterization of polyimide-based optical anti-reflective nanocomposite films **Dr Yang-Yen Yu,** *Mingchi University of Technology, Taiwan*

MPA20 Preparation and Characterization of regioregular poly(3-hexylthiophene)/multi-walled carbon nanotube nanocomposites for hybrid solar cells, **Dr Yang-Yen Yu** *Mingchi University of Technology, Taiwan*

MPA21 Microwave-assisted synthesis of acrylic polymer/silica- titania core shell nanoparticle hybrid thin films, **Dr Wen-Chen Chien**, *Mingchi University of Technology, Taiwan*

MPA22 Conductive Behaviour and Self-Conductance Characteristic of Carbon Nanotubes/ Functionalized Graphene Hybrid Films, **Prof Mo SONG,** *Loughborough University, UK*

MPA23 Creep Behaviour of Polyurethane Nanocomposite Coatings Investigated by Nanoindentation **Prof Mo SONG,** *Loughborough University, UK*

MPA32 Composition and properties of Al-Si-O coating on aluminium alloy produced by micro-arc oxidation, **Dr S. G. Xin,** *Shanghai Institute of Ceramic, Chinese Academy of Sciences, China*

MPA37 The study of ancient Egyptian black surfaced copper alloys, **Dr Wafaa Mohamed** *Cairo University, Egypt*

MPA38 Color Alteration of Ancient Egyptian Blue Faience, **Professor Fouad Ali** *Cairo University, Egypt*

MPA39 Diagnosis of pigment materials affected by air pollution and clay minerals in Sabil Alkazlar - Cairo - Egypt, **Dr Abu Bakr Moussa,** *Cairo University, Egypt*

MPA49 Influence of substrate surface morphology on growth CaF2 on Si (100) in low and high temperature modes, *Novosibirsk State Technical University, Russia*

MPA51 Synthesis and characterization of PtSnNi/C electrocatalysts for direct ethanol fuel cells **Dr Antonio Shigueaki Takimi,** *Universidade Federal do Rio Grande do Sul, Brazil*

MPA63 All-cellulose nanocomposites made from cellulose nanofibers, **Mr Hossein Yousefi** *University of Tehran, Iran*

MPA65 Synthesis and antibacterial effects of Cu–TiO2 pigment by sol–gel method, **Dr Maryam Hosseini Zori,** *Institute for Colorants, Iran*

MPA80 Thermal Factor Effect on the Concentration and Structure Ordering in Ion-Plasma Coatings of Carbide, Boride and Nitride Solid Solutions, **Prof. Oleg Sobol** *National Technical University, Ukraine*

MPA88 Analysis by AES and EELS of the Antimony evaporation effect on InP surface bombarded and on In massif, **Dr Z. Lounis,** *Ecole Normale Supérieure d'Enseignement Technique (ENSET) d'Oran, Algeria*

MPA92 InGaN growth and annealing effects on the properties of InGaN films grown by Plasma Assisted Molecular Beam Epitaxy, **Dr Quan-Bao Ma,** *Katholieke Universiteit, Belgium*

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MPA96 The Fabrication and Investigation of Self-Assembly Fullerene Overlayers Embedded Silicon Surfaces, **Dr C. C. Su,** *National Chung Hsing University, Taiwan*

MPA101 Thin film acting as a barrier against the spread chromates in glass furnaces, **Dr CHEMANI Halima,** *M'Hamed Bougara University, Algeria*

MPA102 Structural and Mechanical properties of magnetron co-sputtered chromium silicon nitride coating and chromium aluminum nitride, **Dr Hetal N Shah** *Indian Institute of Technology Roorkee, India*

MPA103 Influence of the support's surface area on the CCVD growth of carbon nanotubes, **Dr Roya Ahgababazadeh,** *Iran composite Institute, Iran University of Science and Technology, Iran*

MPA105 Evaluation of physical parameters and optical properties of aluminium oxynitride thin films deposited by dc Magnetron sputtering for bandpass optical filters applications, **Dr César Martins,** *University of Minho, Portugal*

MPA115 Improvement of porous silicon proprieties by electrografting of polythiophene through chemical modification, **Dr Belhousse Samia,** *USTHB, Algeria*

MPA121 Optical Wavelength Division Multiplexer Device for the Visible Window, **Dr P. Louro** *CTS-UNINOVA, Portugal*

MPA129 Formation and Field Emission Properties of Thermally Evaporated ZnO Nanocombs, **Dr Jai Singh,** *Banaras Hindu University, India*

MPA141 Size control and magnetophoresis behaviour of single core Nickel nanobeads, **Dr Maria Benelmekki,** *University of Minho, PortugaL*

MPA147 The magnetocaloric effect of La1-xSrxMnO3 (x= 0, 0.1, 0.2) perovskite compound, **Yingde Zhang,** *Chungbuk National University Cheongju, Korea*

MPA152 The effect of Mn-site substitution by diamagnetic ions (Zn, Ti) in La-deficient compound La0.9MnO3, **Mr K. De,** *University of Minho, Portugal*

MPA155 Atomistic investigation of friction of Ni nanoparticles, **Dr A.V.Khomenko,** *Sumy State University, Ukraine*

MPA160 Surface Plasmon Resonance Effect On The Optical Properties Of Tio2 Doped By Noble Metals Nanoparticles, **Dr M. Torrell,** *University of Minho, Portugal*

MPA166 High Frequency Transmission Behavior in Ferromagnetic Nanowire, **Dr D.-H. Kim** *Chungbuk National University, Korea*

MPA332 Nanoenergy R&D activitities analysis in Spain and Portugal, **H. Fonseca** *University of Minho, Portugal*

MPA334 Development of nanostructured materials for medical nanobiosensors **S. Azavedo** *University of Minho, Portugal*

	INVITED SESSION 3 (Nanomedicine) Chairperson: ***Xiaojun Zhao*** (USA), Steffen B. Petersen (Denmark) Room: Auditorium B1	**INVITED SESSION 4:** (Nanomaterials and Technological Applications) Chairperson: ***Maria Ines Bruno Tavares*** (Brazil), Elvira Fortunato (Portugal), Room: Auditorium B2
09:00 - 09:30	**INVITED 14:** ***Paulo Freitas,*** INESC, INL- International Iberian Nanotechnology Laboratory, Portugal *“Spintronic platforms for biological and biomedical applications”*	**INVITED 12:** ***Luigi Marras,***Genefinity S.r.l., Italy *"Innovation through vacuum deposition: practical application in biomedical devices"*
09:30 - 10:00	**INVITED 11:** ***Josep Samitier,*** Institute for Bioengineering of Catalonia (IBEC), Spain *“Cell behaviour on polymer micro-nanopattemed substrates: a study of cell-substrate interactions”*	**INVITED 10:** ***Elvira Fortunato,*** CENIMAT/I3N *"Oxide semiconductors: from materials to devices"*
10.00 - 10.30	**INVITED 8:** ***Higino Correia,*** University of Minho, Portugal *“Wireless biomedical microsystems for neural implants”*	**INVITED 23:** ***Raphaël Pugin,*** CSEM, Switzerland *"Micro/Nanostructured surfaces and devices: fabrication by combining top-down and bottom-up approaches and industrial applications"*
10:30 - 10:50	**Refreshments Break**	
	Nanobiotechnology Chairperson: ***Josep Samitier*** (Spain), S. Prakash (Canada) Room: Auditorium B1	Thin Films & Coatings Chairperson: ***Milko Angelov*** (Bulgaria), Luis Cunha (Portugal) Room: Auditorium B2
10:50 - 11:05	**MPA174:** ***Dr M.T. Neves-Petersen,*** Aalborg University, Denmark *“Engineering nanoparticle based drug carriers using a novel photonic technology”*	**MPA201:** ***Dr D. Martínez-Martínez,*** University of Groningen, Netherlands *“DLC films on rubber seals”*

Thursday 29th July

11:05 - 11:20	**MPA84:** ***Dr António A. Vicente,*** University of Minho, Portugal *"Nanomodification of surfaces using a complex polyelectrolytic carbohydrate/ protein"*	**MPA184:** ***Luis Cunha,*** University of Minho, Portugal *"Black Ti(C,N,O) thin films: understanding structure and chemical bonds"*
11:20 - 11:35	**MPA238:** ***Dr R. Da Costa Martins,*** University of Navarra, Spain *"Nanoparticles for an effective and safer vaccine approach against animal brucel-losis"*	**MPA45:** ***Dr Pavel Ctibor,*** Institute of Plasma Physics, ASCR, Czech Republic *"Plasma sprayed BaTiO3 coatings using extremely different spray distances"*
11:35 - 11:50	**MPA246:** ***Dr M. Barreiros,*** Institut de Bioenginyeria de Catalunya, Spain *"Fabrication of a multi sensor for electrochemical detection of pathogenic bacteria"*	**MPA233:** ***Dr Ana Pinheiro,*** Univer-sity of Minho, Portugal *"Building Pectin/Chitosan nanofilms using layer-by-layer technique: characterization and application"*
11:50 - 12:05	**MPA113:** ***Dr Jiale Huang,*** Xiamen University, China *"Facile plant-mediated biosynthesis of single crystalline silver nanowires by fruit of Gardenia jasminoides Ellis at ambient temperature"*	
12:05 - 12:20	**MPA25:** ***Prof. Artur Cavaco-Paulo,*** *University of Minho, Portugal* *"Folate-based nanobiodevices for inte-grated diagnosis/therapy targeting chronic inflammatory diseases"*	

12:00 - 13:05 **Lunch**

	Micro/Nano Scale Characterisation of Surfaces **Chairperson:** ***M.A. López-Quintela*** (Spain), Peter Gnauck (Germany) **Room:** Auditorium B1	SBN: Surface Science, Engineering & Technology **Chairperson:** ***N. Ali (UK),*** Junji Haruyama (Japan) **Room:** Auditorium B2
13:05 - 13:20	**MPA10:** ***Professor Maria Ines Bruno Tavares,*** Universidade Federal do Rio de Janeiro (IMA/UFRJ), Brazil *"The Use of Solid-State NMR to Evaluate EVA/Silica films"*	**MPA117:** ***Mr Miguel Fernandes,*** ISEL, Portugal *"Three transducers embedded into one single SiC photodetector LSP direct image sensor, optical amplifier and demux"*
13:20 - 13:35	**MPA33:** ***Dr. Peter Gnauck,*** Carl Zeiss NTS GmbH, Germany *"The He Ion Microscope - A new tool for high resolution imaging and analysis"*	**MPA133:** ***Dr T. Tsarfati,*** FOM Institute for Plasma Physics Rijnhuizen, The Netherlands *"Surface and interface treatment of capped Mo/Si and nitridated B4C/La multilayer optics"*
13:35 - 13:50	**MPA69:** ***Dr Nadjib Semmar,*** Université-CNRS, Orléans, France *"Thermal conductivity measurement of nanoporous silicon by pulsed photothermal method"*	**MPA200:** ***Dr L. Diéguez,*** Universitat de Barcelona, Spain *"Fabrication of different optical gratings for efficient biosensing by Optical Waveguide Spectroscopy"*
13:50 - 14:05	**MPA83:** ***Dr Ana Mª Beltrán Custodio,*** Universidad de Cádiz, Spain *"TEM Characterization of Sb Irradiated InAs Quantum Dots"*	**MPA202:** ***Dr Yu-Lun Chuch,*** National Tsing Hua University, Taiwan *"Formation of InAs Nanowire by Solid Source Reaction: A promising material as the high mobility channel for nanoelectronics"*
14:05 - 14:20	**MPA131:** ***Dr O.V.Naumova, SB*** Russian Academy of Sciences, Russia *"Modification and characterisation of surface of SOI Nanowire sensors"*	**MPA217:** ***Priscila Anadão,*** University of São Paulo, Brazil *"Influence of the clay content and molar mass on polysulfone nanocomposite membrane properties"*
14:20 - 14:35	**MPA154:** ***Dr Arghya Narayan Banerjee,*** Yeungnam University, Korea *"Fesem imaging and field-emission characterization of densely packed vertically aligned nickel nanopillars synthesized by electrodeposition process on metal-coated si substrate"*	**MPA259:** ***Paulo J. M. Cardoso,*** University of Minho, Portugal *"Weak disorder transition and its relation to the conductivity of VGCNF/epoxy composites"*

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14:35 - 14:50	**MPA156:** ***Karen Dawson,*** Tyndall National Institute, University College Cork, Ireland *“Direct Electrochemical Detection of H2O2 at Single Gold Nanowire Electrode Sensors”*	**MPA125:** ***Prof. Semra Kurama,*** Anadolu University, Turkey *“Improving of oxidation properties of sialon ceramics by using nano powders”*
14:50 - 15:05	**MPA228:** ***Isabel Moura,*** University of Minho, Portugal *“Synthesis and Characterization of EVA/PLA nanostructured copolymers”*	**MPA43:** ***Paolo Di Sia,*** University of Verona, Italy *“High diffusive nanosensors based on ZnO oxides”*
15:05 - 15:20	**MPA245:** ***Dr Maria Vittoria Diamanti,*** Politecnico di Milano, Italy *“Production and characterization of nanostructured anodic films on titanium: influence of anodizing parameters”*	**MPA197:** ***Mr Pedro Martins,*** University of Minho, Portugal *“Room temperature magnetic response of sputter deposited TbDyFe films as a function of the deposition parameters”*
15:20 - 15:35	**MPA268:** ***Dr Qin Hu,*** University of Cambridge, UK *“Thermal Dynamic Evolution of Compound Nanoparticles Induced by Focused Ga Ion Beam Milling and Effect on Machined Moulds for Micro/Nano Lithography”*	**MPA153:** ***Dr Arghya Narayan Banerjee,*** Yeungnam University, Korea *“Size-dependent optical properties of p-type semiconducting transparent copper aluminum oxide nanoparticles for transparent electronic applications”*
15:35 - 15:50	**MPA272:** ***Dr S.C. Ferreira,*** Universidade Nova de Lisboa, Portugal *“Characterization of the physical and mechanical properties of anodic oxide films produced on Al/SiCnp metal matrix composite”*	**MPA48:** ***Dr Rizwan Raza,*** Royal Institute of Technology (KTH), Sweden *“The effect of coated oxides on Samarium doped ceria”*
15:50-16:05	**MPA27:** ***Prof. Artur Cavaco-Paulo,*** *University of Minho, Portugal* *“Bionanomaterials for controlled release”*	
16:05-18:00	**Poster Session II with Refreshments**	
19:00/20:00	**MPA-2010 BANQUET**	

16:00-18:00

Poster Session II (with refreshments)

MPA03 Large-Scale Synthesis of Porous Magnetic Composites for Catalytic Applications
Dr Horacio Falcón Richeni, *Instituto de Catálisis y Petroleoquímica, CSIC, Spain*

MPA11 Incorporating functionalized gold nanoparticles into polymersomes for bioimaging
Dr. Emilio Castro Otero, *University of Santiago de Compostela, Spain*

MPA29 A comparative study of hydrogen bonding among different diamonds from single crystal to nanocrystalline film, **Dr C. J. Tang**, *University of Aveiro, Portugal*

MPA34 Benzothiadiazole-Based Copolymers as Hole Transporting Materials
Dr. Jadwiga Soloducho, *Wroclaw University of Technology, Poland*

MPA35 Influence of the structure of TiAlN thin coatings on the micro-abrasion wear resistance
Rui Pedro Martinho, *Instituto Superior de Engenharia do Porto, Portugal*

MPA41 A Surface Fabrication by Nanoscale Removal Processes using a Design of Cross Tool
Prof. P. S. Pa, *National Taipei University of Education, Taiwan*

MPA57 Carbon nanotube supported Pt2,4+- CeO2 catalyst for proton exchange membrane fuel cells, **Dr Iva Matolinova,** *Charles University, Czech Republic*

MPA67 Synthesis and characterisation of nanostructured ZnO thin films for sensor application,
Dr K. Papazova, *University "St. Kliment Ohridski", Bulgaria*

MPA72 Electronic characterization of bimetallic magnesium transition metal clusters,
Mr Wilber Silva, *Jinju National University, Korea*

MPA76 Hydrogenation of Mg thin films in CH4+Ar plasmas, **Prof. Liudvikas Pranevicius,** *Tallinn University of Technology, Estonia*

MPA86 The Analysis of the device degradation with W/E cycles in SONOS charge trapping Flash Memories, **Prof. B. Kim,** *Universidad de Antioquia, Colombia*

MPA87 Electrochemical deposition of CdSe nanowires for CdSe/polymer photovoltaic structures,
Dr Julia Kois, *Vytautas Magnus University, Lithuania*

MPA89 Influence of the Mn content on structural and magnetic properties of Fe100-xMnx alloy nanoparticles, **Prof. Suhk Kun Oh,** *Chungbuk National University, Korea*

MPA91 Realgar As4S4 nanoparticles: Physico-chemical properties and anti-cancer effects
Prof. Peter Balaz, *Slovak Academy of Sciences, Slovakia*

MPA94 Oxygen Plasma Etching and Surface Modification of Single Walled, Multiwalled, Thin-multiwalled Carbon Nanotube Films for use as working electrodes in electrochemical immunosensors, **Dr Nam Ki Min,** *Korea University, Korea*

MPA97 Vacuum Annealing Effects to Mosaicity of Zinc Oxide Films Deposited by Radio Frequency Magnetron Sputtering Method, **Dr Toshio Takeuchi,** *Waseda University, Japan*

MPA99 Structural and thermoelectric properties of Na(Co1-xNix)2O4 for power generation
Dr K. Park, *Sejong University, Korea*

MPA104 Boron-doped Nanocrystalline Silicon Thin Films for Solar Cells and Photodiodes
Dr Y. Vygranenko, *Electronics Telecommunications and Computer Engineering, Portugal*

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MPA106 The Effect of Nanoparticle on Inkjet Printed Conductive Lines, **Dr Y F Liu,** *National Cheng Kung University, Taiwan*

MPA107 Pre-annealing effect on magneto optical property of Bi-YIG thin film prepared by MOD method, **Hanju Lee,** *Sogang University, Korea*

MPA120 Properties of ZnO Rods Grown on Flexible Polyether Sulfone (PES) Substrates by a Hydrothermal Synthesis under Various Buffer Layer Thicknesses, **Dr Hyukhyun Ryu,** *Inje University, Korea*

MPA122 Study on the surface characteristics of parylene-C films in an inductively coupled O2/CF4 and O2/CHF3 gas plasmas, **Dr Kwang-Ho Kwon,** *Korea University, Korea*

MPA126 Increase of the magnitude of the energy barrier distribution due to weak dipolar inter action in Ni nanoparticles, **Prof. Renato Jardim,** *Universidade de São Paulo, Brazil*

MPA134 Study of Growth Process for Functionally Gradient Nanocomposite Coating Fabricated by Plasma Electrolytic Carburizing, **M. Aliofkhazraei,** *Tarbiat Modares University, Iran*

MPA138 Electrochemical Performance of Inverse Spinel Ferrite Nanoparticles, **Dr Dong-Wan Kim,** *Ajou University, Korea*

MPA140 Fabrication of Conductive Patterns by Inkjet Printing of Silver Nitrate/poly(N-vinyl-2-pyrrolidone) Inks, **Dr Ming-Hsiu Tsai,** *National Cheng Kung University, Taiwan*

MPA144 Porous Polymer Coatings on Coronary Stents, **Mr Dániel Domján,** *Budapest University of Technology and Economics, Hungary*

MPA146 Magnetocaloric effect in double perovskites materials of Ba¬2-xLaxFeMoO6, **Prof. Seong-Cho Yu,** *Chungbuk National University, Korea*

MPA150 Development of an artificial cornea made of glass-reinforced hydroxyapatite, **Lívia Santos,** *University of Porto, Portugal*

MPA151 Proton and anion exchange membranes: a comparative study, **Maria Joao Paulo** *Institut National de la Recherche Scientifique – Canada*

MPA149 Facile Synthesis of Hybrid Cu/Cu2O Nanostructured Anodes for Li-Ion Batteries, **Dr Dong-Wan Kim,** *Ajou University, Korea*

MPA157 The magnetocaloric properties of Perovskite manganites La1-xBaxMnO3, **Prof. Seong-Cho Yu,** *Chungbuk National University, Korea*

MPA204 Structural and Magnetic Characterisation of FeGa/NiFe Nanowires, **Dr Nigel Mellors** *University of Salford, UK*

MPA193 Influence of carbon nanotubes on the TiO2 and lanthanoid-doped TiO2 photocatalytic activity, **Dr Joana Zaharieva,** *University of Sofia, Bulgaria*

MPA181 Structural and optical properties of CVD-grown ZnO nanocombs, **Dr T. L. Phan,** *Chungbuk National University, Korea*

MPA218 Preparation And Characterization Of Conductive Nanocomposites, **Priscila Anadão,** *University of São Paulo, Brazil*

MPA247 A model for endoscopic capsule steering and active motion inside the human body **Dr L. M. Goncalves,** *University of Minho, Portugal*

MPA289 Oxygen Plasma Surface Modification Of Carbon Nanofibers With Different Structural Characteristics, **Dr J.M.D. Tascón,** *Instituto Nacional del Carbón, Spain*

MPA291 Radiative processes in PbSe core and PbSexS1-x/PbSeyS1-y alloyed core-shell structures and their contribution in photovoltaic cells, **Dr Aldona Sashchiuk,** *Russell Berrie Nanotechnology Institute and Solid State Institute, Israel*

MPA235 Preparation of surface functionalized carbon micro/nanofibers for the adsorptive removal of a persistent gaseous organic pollutant, **Dr Mekala B,** *Indian Institute of Technology Kanpur, India*

MPA237 Raman Investigation of Amorphous and Microcrystalline Si PECVD Films, **Dr David Adley,** *Trinity College Dublin, Ireland*

MPA241 Si doped CrN thin films produced by magnetron sputtering: structural and mechanical properties, **Dr L. Cunha,** *University of Minho, Portugal*

MPA205 Preparation and Dispersion of Nanosize Ceria in High Electrolyte Slurry by Ball-Milling **Dr Hanwei He,** *Central South University, China*

MPA209 Nanomaterials For Biomedical Application, **Patrícia Lima,** *University of Minho, Portugal*

MPA171 Circularly Polarized Emission From Ingaas/Gaas Quantum Well Structures With Inserted Delta<Mn>-DOPED LAYER, **Dr Yu.A. Danilov,** *Nizhny Novgorod State University, Russia*

MPA172 Reactive Laser Deposition: Using For Formation Of Ferromagnet Ic Half-Metallic Mnas And Mnp Layers, **Dr Yu.A. Danilov,** *Nizhny Novgorod State University, Russia*

MPA177 On-Line Characterization Of Nanocomposites Preparation By Near-Infrared Spectroscopy, **Joana M. Barbas,** *University of Minho, Portugal*

MPA179 Grafting Of A Functionalized Polymer On Porous Silicon Surface, **Dr TIGHILT FATMA ZOHRA,** *UDTS, 2, Bd Frantz-Fanon, Algeria*

MPA185 Atomic Force Measurement of adsorbed water on AgPd thick films, **Mr Szabolcs** *Budapest University of Technology and Economics, Hungary*

MPA195 Effect of chemical oxidation on the photoluminescence of silicon nanowires, **Dr O. Fellahi,** *Unité de Développement de la Technologie du Silicium, Algeria*

MPA108 Influence of composition and structure on the mechanical/tribological properties of ZrCN coatings, **Emanuel Silva,** *University of Minho, Portugal*

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MPA123 SiOx thin films produced by pulsed DC magnetron sputtering for substrate passivation proposes, **Dr Emanuel Silva,** *University of Minho, Portugal*

MPA143 Syntheization, structural and electrical properties of new multilayer chip Ni0.7-xCu0.3Fe2O4 ferrite nanoparticles, **Dr Khalid Mujasam Batoo,** *Aligarh Muslim University, India*

MPA161 Structural properties of Au:TiO2 nanocomposite films: the influence of thermal annealing, **Dr Luís Cunha,** *University of Minho, Portugal*

MPA81 Dynamics of nanotube-sheet assembly, **Dr Veena Verma,** *Govt. College, Naya Nangal, India*

MPA85 Enhancement of the electrical conductivity of Nb-doped TiO2 transparent thin films deposited by sputtering, **Dr C.J. Tavares,** *University of Minho, Portugal*

MPA93 Abilities of pyrolysis in a closed container, the arc and spark discharge methods to produce different kinds of carbon nanoparticles, **Dr N. Koprinarov,** *BAS, SENES, Bulgaria*

MPA176 Suface Modification of Gate Dielectric for Improve the Properties of Flexible Organic Thin Film Transistors, **Dr H.-J. Yun,** *ETRI & Chungnam National University, Korea*

MPA182 Electron transitions in organic semiconductors, based on europium clam—shell bis- and trisphthalocyanine complexes and magnesium naphthalocyanine and dinaphthalocyanine complexes, **Dr I.A. Belogorokhov,**

MPA183 Luminescent features of composite semiconductor systems made from porous silicon and erbium tris (tetra-butylphthalocyanine) molecules, **Dr I.A. Belogorokhov** *Institute of Rare Metals*

MPA194 Synthesis and applications of magnetite nanoparticles, **Dr Fernando B. Effenberger** *Russia Universidade de São Paulo, Brazil*

MPA199 Effect of High Gradient Magnetic Field on NanoBiofluid Effective Viscosity (Blood with Magnetic Nano-Particles) **Dr AZADEH SHAHIDIAN,** *K.N.Toosi University of Technology, Iran*

MPA210 Mo2N synthesised by gas solid reaction for catalytic applications, **Dr. Roya Aghababazadeh,** *Iran composite Institute, Iran University of Science and Technology, Iran*

MPA219 Localized Raman Spectroscopy at the Interface Ceramic-Ceramic: Case of Layered Bulk Ceramics Based on (Ba,Sr)TiO3, **Dr M. Pereira,** *University of Minho, Portugal*

MPA220 Structural Micro- / Nano- Characterization of Materials by Raman Spectroscopy, Applied to Glaze and Ceramic Pigments in Ancient Portuguese Ceramic Wall Tiles (« Azulejos ») **Dr M. Pereira,** *University of Minho, Portugal*

MPA221 On the ordering in Cd1-xZnxTe thin semiconductor alloys : agreement experience – ab initio calculations, **Dr A. Arbaoui,** *Université Mohammed V-AGDAL, Algeria*

MPA224 Nanocomposites of Poly(Vinylidene Fluoride) Doped with Silver Nanoparticles for Radiation Detection, **Dr J. G. Rocha,** *University of Minho, Portugal*

MPA234 Cohesive strength of ZnO:Ga thin films deposited at room temperature, **Dr L. Rebouta,** *University of Minho, Portugal*

MPA236 Oxidation of dyes on carbon nanotubes modified electrodes, **Miss Marta Ferreira,** *University of Minho, Portugal*

MPA239 Structure and properties of silver nanoclusters implanted in PET by DC sputtering, **Dr M. Benelmekki,** *University of Minho, Portugal*

MPA242 Two Phase Simulation of Heat Transfer in Nanofluids, **H. Afshar,** *K.N.Toosi University of Technology, Iran*

MPA252 Growth of Highly aligned ZnO Nanorods for Dye Sensitized Solar cell Applications, **Dr D.Yuvaraj,** *Indian Institute of Science, India*

MPA257 Low temperature processing of highly densified CNFs-Glass composites, **Dr Cristina Palencia,** *Ceramic and Glass Institute (CSIC), Spain*

MPA265 Classical and Hybrid Molecular Dynamics Simulations Methods for Nanobio Channels, **N. Maftouni,** *University of Tehran, Iran*

MPA266 Physical Properties Of Cadmium Sulfide Thin Films, **Dr Nazar Abbas Shah,** *COMSATS Institute of Information Technology, Pakistan*

MPA271 Influence of prepared conditions on properties of Bi-2223 thin films, **Dr Nguyen Thi Mua,** *Hanoi University of Technology, Vietnam*

MPA274 Effects of Annealing on Structural, Optical and Electrical Properties of ZnO Films Deposited by Spin Coating, **Dr Sena Altuncu,** *Eskişehir Osmangazi University, Turkey*

MPA275 Effects of Coating Thicknesses on Structural, Optical and Electrical Properties of CdO Films, **Dr A. Senol Aybek,** *Anadolu University, Turkey*

MPA276 Some Structural, Optical and Electrical Properties of ZnO Films Deposited by SILAR Method, **Dr Ahmet Taner,** *Anadolu University, Turkey*

MPA277 Electrical Properties of p-type SnS Film Deposited by Chemical Bath Method, **Dr Metin Kul,** *Anadolu University, Turkey*

MPA281 Prospects of Development of a Problem of Physics, Chemistry and Technology of Antimatter, **Dr E.P.Prokopev,** *A.I.Alikhanov Institute for theoretical and experimental physics (ITEP), Russia*

MPA282 The preparation of Palladium nanoparticles onto MWCNTs by a pyrolysis of PdCl2 in the presence of RTILs of EMIBF4, **Dr Ke-Qiang Ding,** *Hebei Normal University, China*

MPA283 Characterization of the binding capacity of alendronate sodium on implant surface of Ti-7.5Mo treated by biomimetic method, **Dr A.L.A.Escada,** *Univ Estadual Paulista, Brazil*

MPA285 Carbon Nanotubes in Pharmaceutical Nanotechnology: an introduction to Future drug delivery system, **Dr Sheveta Babu,** *Guru Gobind Singh Indraprastha Univer SITY, India*

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MPA286 Growth And Characterization Of Mid-Infrared Inassbp-Based Quantum Dot Diode Heterostructures And Photoresistors, **Dr Karen Gambaryan,** *Yerevan State University, Armenia*

MPA293 Dendrimers: Nanopharmaceuticals for Drug Delivery, **Dr D. Smriti,** *MSIP, India*

MPA299 Preparation of palladium oxide nanoparticles by hydrothermal synthesis, **Dr Keqiang Ding,** *Hebei Normal University, China*

MPA302 Direction selected and Localized growth of Graphene, **Dr Xin Li,** *Xi'an Jiaotong University, China*

MPA303 ZnO nanowires based SAW ethonal gas sensor, **Dr Y. Wu,** *Xi'an Jiaotong University, China*

MPA304 Fabrication of localized and structured nano-gaps for surface conduction electron emitting , **Dr Hongzhong Liu,** *Xi'an Jiaotong University, China*

MPA305 Graphene FETs array based on the localized and structured nano-gaps, **Dr Hongzhong Liu,** *Xi'an Jiaotong University, China*

MPA306 Study Of Hydroxy Propyl Methyl Cellulose Capping On Zns Quantum Dots For Controlled Release Formulations, **Dr Sunil Kumar,** *Maharishi Markandeshwar University, India*

MPA307 Cantilevers In Cancer Therapy, **Dr Smriti Khatri,** *GGSIPU, India*

MPA310 Morphology and Surface Plasmon Enhanced Optical Processes of Silver Nanoparticles/¬Cationic Polythiophene Composites System and Its Application to SERS, **Dr S. Kazim,** *Institute of Macromolecular Chemistry, AS CR v.v.i.,*

MPA322 Synthesis And Characterisation Of Conductive Dna-Templated Polymer Nanowires **Dr Mahdi M. Almaky,** *Newcastle University, UK*

MPA109 The structural and electrical properties characterization of nanocrystalline Si thin films by reactive particle beam assistance deposition, **Prof. Hyung-Ho Park,** *Yonsei University, Korea*

MPA110 Analysis on thermal property of mesoporous TiO2 film using simulation, **Prof. Hyung-Ho Park,** *Yonsei University, Korea*

MPA40 Synthesis of solid silica core-mesoporous shell nanoparticles based on anionic sur factants for potential drug control release applications, **Dr Ahmed Mohamed El-Toni** *King Saud University, Saudi Arabia*

	INVITED SESSION 5	INVITED SESSION 6
	INVITED SESSION 5 (Nanoparticles and Nanoclusters) Chairperson: ***Petr Dub*** (Czech Republic), Seong. S. Choi (Korea) Room: Auditorium B1	**INVITED SESSION 6** (Smart Nanomaterials) Chairperson: ***Vasco Teixeira*** (Portugal), Jose Lagaron (Spain) Room: Auditorium B2
09:00 - 09:30	**INVITED 15:** ***Steffen B. Petersen,*** Aalborg University, Denmark *"Visualization and quantification of magnetic field induced self organization of superparamagnetic nanoparticles"*	**INVITED 26:** ***Jose Lagaron,*** NanoBioMatters Ltd, Spain *"Active Multifunctional NanoBioComposites to Enhance the Performance of Bioplastics"*
09:30 - 10:00	**INVITED 29:** ***M.A. López-Quintela,*** University of Santiago de Compostela, Spain *"Small sub-nm metal clusters: the key missing point in many catalytic processes?"*	**INVITED 27:** ***Lorenzo Pastrana,*** University of Vigo, Spain *"Use of nanoparticulate poly(Nisopropylacrylamide) hydrogels for the controlled release of pimaricin in active packaging"*
10.00 - 10.30	**INVITED 24:** ***Junji Haruyama,*** Aoyama Gakuin University, Japan *"Superconductivity in carbonnanotubes"*	**MPA213 (Invited):** ***Gero Decher,*** Université de Strasbourg and C.N.R.S, France *"High Performance Multifunctional Smart Coatings for Devices, Implants, Textiles or Cars"*
10:30 - 10:50	**Refreshments Break**	
	Thin Films & Coatings Chairperson: ***Han Seo*** (Korea), Pedro Carvalho (Portugal), Room: Auditorium B1	Micro/Nano Scale Materials (Deposition and characterization techniques) Chairperson: ***Gero Decher*** (France), Jong-Sung Yu (Korea) Room: Auditorium B2
10:50 - 11:05	**MPA198:** ***Dr P. Alpuim,*** University of Minho, Portugal *"UV-Excimer laser annealing of B and P doped nanocrystalline silicon thin films deposited on plastic substrates"*	**MPA60:** ***Dr Milko Angelov,*** Milko Angelov Consulting Co. Ltd, Bulgaria *"High Vacuum Plants for reactive sputter deposition of multi-layer stacks"*

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11:05 - 11:20	**MPA326:** ***Goncalo Goncalves,*** Universidade Nova de Lisboa, Portugal *"Transparent conductive oxides for OLED application"*	**MPA300(1):** ***Prof Arturo Domínguez-Rodríguez,*** Universidad de Sevilla, Spain *"Preparation of nanotube-reinforced yttria stabilized zirconia by spark plasma sintering"*
11:20 - 11:35	**MPA24:** ***Dr Marzena Mitoraj,*** Institut Carnot de Bourgogne, UMR 5209 CNRS-Université de Bourgogne, France *"MOCVD elaboration of nanometric barium silicate films"*	**MPA136:** ***Dr F. P. Rouxinol,*** University of Campinas – UNICAMP, Brazil *"Deposition of few-layer suspended graphene by dielectrophoresis"*
11:35 - 11:50	**MPA159:** ***Mr Han Seo,*** Korea Institute of Ceramic Engineering and Technology, Korea *"Study of properties of various compound Transparent Conducting Indium Zinc Tin oxide films prepared by RF - magnetron sputtering"*	**MPA325:** ***Dr Tomáš Šikola,*** Brno University of Technology, Czech Republic *"Hybrid methods for fabrication of nanostructures: patterning of surfaces and guided growth"*
11:50 - 12:05	**MPA54:** ***Dr J. A. Santos,*** University of Aveiro, Portugal *"The deposition of nanocrystalline diamond by HFCVD in different materials"*	**MPA74:** ***Prof. Seong. S. Choi,*** Seoul SunMoon University, Korea *"Fabrication of Plasmonic Nanopore Device for Single Molecule Dynamics"*
12:05 - 12:20	**MPA270:** ***Dr D. Gloess,*** Fraunhofer Institute for Electron Beam and Plasma Technology, Germany *"Reactive pulse magnetron sputter deposition of piezoelectric AlN layers"*	**MPA278:** ***Dr T. Monteiro,*** Universidade de Aveiro, Portugal *"Highly crystalline ZnO nano/micro structures grown by laser assisted flow deposition"*

12:30 - 13:30 **Lunch**

	Nanotechnology and environment applications Chairperson: ***Vasco Teixeira*** (Portugal), Sherif A. El-Safty (Japan), António A. Vicente (Portugal) Room: Auditorium B1	Micro/Nano Scale Materials (Deposition and characterization techniques) II Chairperson: ***T. Sikola*** (Czech Republic), Jong-Sung Yu (Korea) Room: Auditorium B2
13:30 - 13:45	**MPA248:** ***Dr Ilka Gehrke,*** Fraunhofer UMSICHT, Germany *"Development of advanced nano-coated membranes for water purification"*	**MPA31:** ***Prof. Irina V. Antonova,*** Institute of Semiconductor Physics, Russian Academy of Sciences, Russia *"Energetic Ion Irradiation as Advanced Process for Functionalization of the Silicon Nanocrystals in SiO2 matrix"*
13:45 - 14:00	**MPA317:** ***Dr Sherif A. El-Safty,*** National Institute for Materials Science (NIMS), Japan *"Optical Mesoporous Sensors for Ultra-Purification of Water from Toxic Metals"*	**MPA263:** ***Dr Jong-Sung Yu,*** Korea University, Korea *"Recrystallization of Mesoporous Materials from SBA-15/Carbon Composite"*
14:00 - 14:15	**MPA167:** ***M. Oliveira,*** University of Minho, Portugal *"Nanomaterials for water treatment"*	**MPA55:** ***Pola Goldberg-Oppenheimer,*** University of Cambridge, UK *"Rapid Electrohydrodynamic Lithography Using Low Viscosity Resists"*
14:15 - 14:30	**MPA244:** ***Dr Maria Vittoria Diamanti,*** Politecnico di Milano, Italy *"A comparative study over the photocatalytic activity of differently obtained nanostructured titanium dioxide layers"*	**MPA28:** ***Dr David Cox,*** University of Surrey, UK *"Focused ion beam fabrication of micro and nanomechanical resonators"*
14:30 - 14:45		**MPA82:** ***Dr Ana Mª Beltrán Custodio,*** Universidad de Cádiz, Spain *"Effects of Introducing a GaAs Intermediate Layer in GaSb-capped InAs Quantum Dots"*

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14:45 - 15:00		**MPA214:** ***Mr Pedro Sa,*** University of Minho, Portugal *"Structural and magnetic characterization of lead metaniobate thin films deposited by pulsed laser ablation"*
15:00 - 15:15		**MPA229:** ***Dr Omid Majidi,*** MSA Co, Iran *"The Latest Advances in Nano-Surface Engineering of Orthopedic Implants"*

15:15 **Refreshments and Closing Remarks**