

PROGRAM

Saturday 2 July 2022

	School 1, School 2 & School 3 (Crystal & ISSON 1)		
11:00-13:00	<p><i>Welcome - S. Logothetidis (Nanotechnology Lab LTFN, AUTH, Greece)</i></p> <p>(L) S. Logothetidis (Nanotechnology Lab LTFN, AUTH, Greece) <i>Nanotechnology and Applications and short discussion with the participants</i></p>		
13:00-14:30	<i>Lunch Break</i>		
	School 1 (Crystal & ISSON 1)	School 2 (Timber Hall I & ISSON 2)	School 3 (Timber Hall II & ISSON 3)
14:30-16:30	<p>(L) Martin Krebs <i>Printed Batteries</i></p>	<p>(L) Dr. Martina Aurora Costa Angeli, Free University of Bozen-Bolzano, Italy <i>Printed flexible and stretchable sensors: from material to devices</i></p>	<p>(L) Dr. Maria Pitou, Chemistry Dept. AUTH, Greece <i>Intelligent short protein regions for scaffold creation</i></p>
16:30-17:00	<i>Coffee Break</i>		
	School 1, School 2 & School 3 (Crystal & ISSON 1)		
17:00-19:00	<p>(L) Kyriakos Porfyrakis, University of Greenwich, UK <i>Carbon Nanomaterials: Synthesis, Properties and Applications</i></p>		
19:00-20:00	ISSON22 Poster Session		

Sunday 3 July 2022

	School 1, School 2 & School 3 (Crystal & ISSON 1)		
11:00-13:00	(L) Dr. Francesco De Angelis, Italian Institute of Technology, Italy <i>In-vitro sensing of cells and tissues with opto-electronic nanodevices</i>		
13:00-14:30	<i>Lunch Break</i>		
	School 1 & School 2 (Crystal & ISSON 1)		School 3 (Timber Hall I & ISSON 3)
14:30-15:30	(L) Prof. Elefterios Lidorikis, University of Ioannina, Greece <i>Multiscale and Multiphysics Modelling of nanomaterials and nanodevices</i>	(V) Prof. Weishan Huang, Louisiana State University, USA <i>Introduction to Virus Nanotechnology</i>	
15:30-16:30	(L) Dr. Aron Kneer, TinniT Technologies GmbH, Germany <i>Low pressure processes with an extended CFD-model</i>	(V) Prof. Ioan Andricioaei, University of California Irvine, USA <i>Computer Simulations Methods in Bio-Nanotechnology: From Atomistic Molecular Dynamics to the Elastic Continuum</i>	
16:30-17:00	<i>Coffee Break</i>		
	School 1 (Crystal & ISSON 1)	School 2 (Timber Hall I & ISSON 2)	School 3 (Timber Hall II & ISSON 3)
17:00-19:00	(V) Prof. Tiina Nypelo, Chalmers University of Technology, Sweden <i>Cellulose nanoparticles</i>	(L) Prof. Ravi Silva, University of Surrey, UK <i>The Design of Nanoscale Structures in Optimising Organic Solar Cells</i>	(L) T. Mitsiadis (University of Zurich, Switzerland) <i>Trends in modern dentistry</i>

Saturday 9 July 2022

	School 1 (Crystal & ISSON 1)	School 2 (Timber Hall I & ISSON 2)	School 3 (Timber Hall II & ISSON 3)
9:00-11:00	(V) Dr. Raul Arenal, University of Zaragoza, Spain <i>Studies of Nanomaterials at the Local Scale: Principle and Applications of Electron Energy Loss Spectroscopy (EELS) in a TEM</i>	(V) Prof. Fabio Biscarini, Italian Institute of Technology/University of Modena and Reggio Emilia, Italy <i>Organic Bioelectronics</i>	(L) Prof. Yannis Missirlis, Lab of Biomechanics & Biomedical Engineering, University of Patras, Greece <i>Introduction to Bioreactors for Tissue Engineering</i>
11:00-11:30	<i>Coffee Break</i>		
	All Schools (Crystal & ISSON 1)		
11:30-13:30	(L) Ms. Pavla Dohanyosova, Ramem/Arquimea, Spain (L) Dr. Ernesto Gonzalez, ITENE, Spain <i>Exposure and Health Effects monitoring of engineered nanomaterials</i>		
13:30-15:00	<i>Lunch Break</i>		
	All Schools (Crystal & ISSON 1)		
15:00-17:00	(L) I. Feitshans (Institute for Work and Health University of Lausanne, Switzerland) <i>Global Health Impacts of Nanotechnology Law for Scientists Solutions that Avoid Liability</i>		
17:00-17:30	<i>Closing Remarks</i>		

POSTERS

P1 (L)	<p>Enhanced photo generation by multiple exciton formation in germanium nanowires Tkalčević Marija¹, Periša Ivana¹, Mičetić Maja¹ Šarić Iva², Bernstorff Sigrig³ ¹ Ruđer Bošković Institute, Bijenička cesta 54, 10000 Zagreb, Croatia ² Department of Physics and Center for Micro- and Nanosciences and Technologies, University of Rijeka, Radmile Matejčić 2, 51000 Rijeka, Croatia ³ Elettra Sincrotrone, S.C.p.A., Strada Statale 14, km 163.5 in AREA Science Park, 34149 Basovizza/Trieste, Italy</p>
P2 (L)	<p>Synthesis and characterization of polyurethane dendrimers and nanoparticles with possible application as a DNA carrier Borcan F, Popescu R, Andreescu NI, Chirita-Emandi A "Victor Babes" University of Medicine and Pharmacy Timisoara, 2nd Eftimie Murgu Sq., Romania</p>
P3 (L)	<p>Optical and morphological properties of annealed gold thin films E. Hedl¹, V. Blažek-Bregović¹, J. Sancho-Parramon¹, A. Bergmann² ¹ Ruđer Bošković Institute, Bijenička 54, 10000 Zagreb, Croatia ² Graz University of Technology, Rechbauerstraße 12, 8010 GRAZ, AUSTRIA</p>
P4 (L)	<p>Sulfidation of air-stable zerovalent iron nanoparticles Vichová V.^{1,2}, Oborná J.¹, Filip J.¹ ¹ Regional Centre of Advanced Technologies and Materials, Palacký University, Šlechtitelů 27 CZ-783-71, Olomouc, Czech Republic ² Department of Experimental Physics, Faculty of Science, Palacký University, CZ-779-00, Olomouc, Czech Republic</p>
P5 (L)	<p>Highly Ordered Titanium Nitride Nanostructures for Plasmonic Applications P. Rampota, S. Panos, S. Kassavetis, D. Tselekidou, N. Pliatsikas, P. Patsalas Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Thessaloniki, GR-54124, Greece</p>
P6 (L)	<p>Ge based core/shell quantum dot lattices in alumina matrix: tuning the spectral response Periša I.¹, Tkalčević M.¹, Basioli L.¹, Bernstorff S.², Mičetić M.¹ ¹ Division of Materials Physics, Ruđer Bošković Institute, Bijenička cesta 54, 10000 Zagreb, Croatia ² Elettra-Sincrotrone Trieste, SS 14 km 163.5, 34149 Basovizza, Italy</p>
P7 (L)	<p>Solution Processing Techniques for the Development of 0D-2D Hybrid Structures-Based Light-driven Nanoscale Devices Maqueira Albo I.^{1,2}, Curreli N.¹, Camellini A.¹, Ilka Kriegel I.¹ ¹ Functional Nanosystems, Istituto Italiano di Tecnologia, Via Morego 30, 16163 Genoa, Italy ² Physics Department, University of Genoa, Via Dodecaneso 33, 16146 Genoa, Italy</p>
P8 (L)	<p>Innovative gas separation system for sensing applications Orlando A.^{1,2}, Sitar A.¹ Gaiardo A.¹, Valt M.¹, Bagolini A.¹, Belluti P.¹, Krik S.², Lugli P.², Petti L.² ¹ FBK - Sensors and Devices - Micro Nano Facility - via Sommarive, 18 - 38123 Povo, Trento, Italy ² Faculty of Science and Technology – Free University of Bolzano- Bozen, Piazza Università 5, 39100 Bolzano, Italy</p>
P9 (L)	<p>Effect of Cu₃N and Cu on the photocatalytic activity of Cu₂O nanoparticles Paredes E.P.¹, Wragg D.², Rauwel E.¹, Rauwel P.¹ ¹ Institute of Forestry and Engineering Sciences, Estonian University of Life Sciences, Tartu, Estonia ² Department of Chemistry, University of Oslo, Oslo, Norway</p>
P10 (L)	<p>Microwave-assisted solvothermal synthesis of Al, Ga or In doped zinc oxide plasmonic nanoparticles dedicated to IR and optoelectronic applications Da Silva A.^{1,2}, Vancaeyzeele C.¹, Aubert P.-H.¹, Vidal F.¹, Dupont L.² ¹ LPPI, CY Cergy-Paris University, 5 mail Gay Lussac, 95310 Neuville-Sur-Oise, FR ² Optics department, IMT Atlantique, Technopôle Brest-Iroise, 29238 Brest, FR</p>
P11 (L)	<p>Multifunctional indolocarbazole-based derivatives as TADF emitters for non-doped blue OLEDs Mahmoudi M, Gudeika D, Volyniuk D, Urbonas E, Simokaitiene J, Grazulevicius JV Department of Polymer Chemistry and Technology, Kaunas University of Technology, Radvilenu pl. 19, LT-50254, Kaunas, Lithuania</p>

P12 (L)	<p>Electrolyte-Gated Organic Transistors as Versatile Building Blocks in Translational Neuroelectronics De Salvo A.^{1,3}, Di Lauro M.¹, Zucchini E.^{1,3}, Calandra S. G.², Murgia M.^{1,4}, Bianchi M.¹, Biscarini F.^{1,5}, Fadiga L.^{1,3}</p> <p>¹ Center for Translational Neurophysiology of Speech and Communication, Fondazione Istituto Italiano di Tecnologia (IIT-CTNSC), 44121 Italy ² Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università di Modena e Reggio Emilia, Via Campi 287, Modena, 41125 Italy ³ Sezione di Fisiologia, Dipartimento di Neuroscienze e Riabilitazione, Università di Ferrara, via Fossato di Mortara 17/19, Ferrara, 44121 Italy ⁴ Istituto per lo Studio dei Materiali Nanostrutturati (CNR-ISMN), National Research Council, via Gobetti 101, Bologna, 40129 Italy ⁵ Dipartimento di Scienze della Vita, Università di Modena e Reggio Emilia, Via Campi 103, Modena, 41125 Italy</p>
P13 (L)	<p>Optical and electrical characteristics of ZnO-PEDOT:PSS heterojunction Nagpal K.¹, M. Rosario Soares², Rauwel E.², Rauwel P.³</p> <p>Institute of Forestry and Engineering, Estonian University of Life Science, Kreutzwaldi 56/1, Tartu, Estonia CICECO, University of Aveiro, 3810-193 Aveiro, Portugal</p>
P14 (L)	<p>Flexible Neural Interfaces Based on 3D PEDOT:PSS micropillars Alice Lunghi^{1,2}, Michele Bianchi¹, Mauro Murgia^{1,3}, Pierpaolo Greco^{1,2}, Michele Di Lauro¹, Luciano Fadiga^{1,2}, Fabio Biscarini^{1,4}</p> <p>¹ Center for Translational Neurophysiology of Speech and Communication, Fondazione Istituto Italiano di Tecnologia, via Fossato di Mortara 17, 44121 Ferrara, Italy. ² Sezione di Fisiologia, Università di Ferrara, via Fossato di Mortara 17, 44121 Ferrara, Italy. ³ Institute for Nanostructured Materials (ISMN), Consiglio Nazionale delle Ricerche, via Gobetti 101, 40129 Bologna, Italy. ⁴ Life Science Department, Università di Modena e Reggio Emilia, via Campi 103, 41125 Modena, Italy</p>
P15 (L)	<p>Biohybrid microelectrodes coated with human brain microvascular endothelial cells (hBMECs) as a novel therapeutic tool for tackling foreign body reaction Guzzo S.^{1,2}, Zucchini E.^{1,2}, Pavan B.^{1,2}, Biscarini F.^{1,3}, Bianchi M.^{1,2}, Fadiga L.^{1,2}</p> <p>¹ Department of Neuroscience and Rehabilitation, Section of Physiology, Università di Ferrara, Ferrara, Italy ² Center for Translational Neurophysiology of Speech and Communication, Fondazione Istituto Italiano di Tecnologia, Ferrara, Italy. ³ Life Science Department, Università di Modena e Reggio Emilia, Modena, Italy</p>
P16 (L)	<p>Hydrogen bonding-controlled transfer-printing of PEDOT:PSS films for flexible and stretchable electronics C. Volkert¹, R. Colucci¹, P. Blom¹, U. Kraft¹</p> <p>¹ Max Planck Institute for Polymer Research, Ackermannweg 10, 55128 Mainz (Germany)</p>
P17 (L)	<p>Electroactive polymer films for Bioelectronics: P3HT-MWCNT properties Paola Campione, Grazia M.L. Messina, Giovanni Marletta</p> <p>Department of Chemical Sciences, University of Catania, Italy</p>
P18 (L)	<p>Exploitation of phenothiazine–pyrimidine linking pattern for the achievement of efficient TADF Starykov H., Simokaitiene J., Volyniuk D., Grazulevicius J.V.</p> <p>Department of Polymer Chemistry and Technology, Kaunas University of Technology, Barsausko 39, LT- 51423 Kaunas, Lithuania</p>
P19 (L)	<p>Fully printed ternary organic photovoltaic devices based on PPDT2FBT- PC70BM - BTP-12 system G.Atsas, O. Heben, C. Kapnopoulos, I. Kortidis, C. Gravalidis, D. Tselekidou, S. Logothetidis, A. Laskarakis</p> <p>Lab for Thin Films, Nanosystems & Nanometrology (LTFN), Department of Physics, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece</p>
P20 (L)	<p>Molecular doping of fully printed flexible organic solar cells using F4-TCNQ additive A. Paliagkas, C. Stavragi, C. Kapnopoulos, V. Heben, I. Kortidis, D. Tselekidou, C. Gravalidis, S. Logothetidis, A. Laskarakis</p> <p>Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p>
P21 (L)	<p>Optical and structural characterization of lead-free tin-based perovskite nanolayers for high performance solution processed solar cells C. Stavragi¹, A. Galatsopoulos², A. Paliagkas¹, C. Kapnopoulos¹, V. Heben¹, I. Kortidis¹, D. Tselekidou¹, S. Logothetidis¹, A. Laskarakis¹</p> <p>¹ Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece ² Organic Electronic Technologies P.C. (OET), 19km Tagarages road, Thessaloniki, 57001, Greece</p>
P22 (L)	<p>Lab-scale co-polymer bearing Carbazole and Benzothiadiazole moieties as Emissive Layer in PLEDs: White emission capabilities, color stability and printability K. Papadopoulos¹, D. Tselekidou¹, V. Kyriazopoulos^{2,1}, S. Kassavetis¹, A. K. Andreopoulou³, K. Andrikopoulos³, J. K. Kallitsis³, A. Laskarakis¹, M. Gioti¹</p> <p>¹ Nanotechnology Lab LTFN (Lab for Thin Films – Nanobiomaterials – Nanosystems – Nanometrology) Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece ² Organic Electronic Technologies P.C. (OET), Antoni Tritsi 21B, GR-57001 Thessaloniki, Greece ³ Department of Chemistry University of Patras, University Campus, Rio-Patras GR-26504, Greece</p>

P23 (L)	<p>Solution-processable red phosphorescent OLEDs with different Ir(dmpq)2(acac) doped organic materials as emitting layers D. Tselekidou¹, L. Panagiotidis¹, K. Papadopoulos¹, V. Kyriazopoulos², S. Kassavetis¹, S. Logothetidis¹, M. Gioti¹ ¹ Nanotechnology Lab LTFN, Department of Physics, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece ² Organic Electronic Technologies P.C. (OET), Antoni Tritsi 21B, GR-57001 Thessaloniki, Greece</p>
P24 (L)	<p>Optimization study of fully printed flexible OPV devices based on PBDB-T:BTP-12 system and photoactivation process investigation. V. Heben¹, C. Kapnopoulos¹, C. Stavrak¹, A. Paliagkas¹, E. Doudis¹, D. Tselekidou¹, A. Zachariadis¹, C. Gravalidis¹, A. Laskarakis¹, S. Logothetidis¹ ¹ Lab for Thin Films - Nanobiomaterials - Nanosystems & Nanometrology (LTFN), Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</p>
P25 (L)	<p>Biocompatibility Assessments of Albumin & Fibrinogen on Conductive Metal Nitride Films T. Odutola¹, N. Pliatsikas¹, S. Panos¹, I. Fekas¹, S. Kassavetis¹, M. Gioti¹, P. Patsalas¹ ¹ Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, GR-54124, Greece</p>
P26 (L)	<p>Novel hybrid nano-phages for nanotechnology applications H. Ahmed^{1,2}, L. Boselli¹, P.P. Pompa¹ ¹ Nanobiointeractions and Nanodiagnostics Istituto Italiano di Tecnologia (IIT), Via Morego 30, 16163 Genova, Italy ² Department of chemistry and industrial chemistry, Università degli studi di Genova, via Dodecaneso, 31, 16146 Genova, Italy</p>
P27 (L)	<p>Advanced nanozymes for antioxidant therapy G. Tarricone^{1,2}, L. Boselli¹, V. Castagnola³, P.P. Pompa¹ ¹ Nanobiointeractions & Nanodiagnostics, Istituto Italiano di Tecnologia (IIT), Via Morego 30, 16163 Genova, Italy ² Department of Chemistry and Industrial Chemistry, University of Genova, Via Dodecaneso 31, 16146 Genova, Italy ³ Center for Synaptic Neuroscience and Technology, Fondazione Istituto Italiano di Tecnologia, 16132 Genova, Italy</p>
P28 (L)	<p>Graphene-based biosensors for multimodal detection of breast cancer biomarkers Gajdošová K.^{1,2}, Hrubý V.^{1,2}, Džibelová J.^{2,3}, Dědek I.^{1,2}, Belza J.^{1,2}, and Ranc V.^{2,4} ¹ Department of Physical Chemistry, Faculty of Science, Palacký University Olomouc, 17. listopadu 12, 771 46 Olomouc, Czechia ² Regional Centre of Advanced Technologies and Materials, Czech Advanced Technology and Research Institute (CATRIN), Palacký University Olomouc, Czechia ³ Department of Experimental Physics, Faculty of Science, Palacký University Olomouc, 17. listopadu 12, 771 46 Olomouc, Czechia ⁴ Laboratory of Experimental Medicine, Faculty of Medicine and Dentistry, Institute of Molecular and Translational Medicine, Palacký University Olomouc, Olomouc, Czechia</p>
P29 (L)	<p>Electrodeposition of gold nanoparticles on flexible substrate for electrochemical bio-sensing applications P. Stavropoulos¹, A. Batsi¹, K. Tsimenidis², A. Orfanos², A. Laskarakis¹, S. Logothetidis¹ ¹ Nanotechnology Lab LTFN, Faculty of Sciences, Aristotle University of Thessaloniki, Greece ² BL-NanoBiomed P.C.</p>
P30 (L)	<p>Poly(3, 4 -ethylenedioxythiophene):Poly(styrenesulfonate) (PEDOT:PSS) Properties Improvement Through Cross-linking with an Oxetane Unit Jorge S. M.^{1,2}, Santos L. F.², Galvão A.², Morgado J.^{1,3} and Charas A.¹ ¹ Instituto de Telecomunicações, Instituto Superior Técnico, Av. Rovisco Pais, P-1049-001, Lisboa, Portugal ² Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, P-1049-001 Lisboa, Portugal ³ Department of Bioengineering, Instituto Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, P-1049-001 Lisboa, Portugal</p>
P31 (L)	<p>Detection of graphene oxide in HeLa cells using a Multivariate Curve Resolution (MCR) – based Raman spectroscopy method Z. Chaloupková¹, V. Ranc¹, K. Poláková¹, Jan Belza¹ ¹ Czech Advanced Technology and Research Institute – Regional Centre of Advanced Technologies and Materials, Palacký University in Olomouc, Czech Republic</p>
P32 (L)	<p>Study of the biofunctionalization of chitosan-capped gold nanoparticles for the detection of cardiac Troponin T (cTnT) using screen-printed electrochemical sensors D.E. Georgiadis¹, A. Orfanos², K. Tsimenidis², S. Dermenoudis¹, S. Logothetidis¹, A. Laskarakis¹ ¹ Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki, Greece ² BL NanoBioMed, Thessaloniki, Greece</p>
VIRTUAL POSTERS	
P1 (V)	<p>Polymeric blends enriched with gentamycin as barriers for guided tissue regeneration Anna M. Tryba¹, Małgorzata Krok-Borkowicz¹, Katarzyna Reczyńska-Kolman¹, Gabriela Markowicz¹, Natalia Piergies², Monika Brzychczy-Włoch³, Czesława Paluszkiwicz² and Elżbieta Pamuła¹ ¹ Department of Biomaterials and Composites, Faculty of Materials Science and Ceramics, AGH University of Science and Technology, Poland; ² Institute of Nuclear Physics, Polish Academy of Sciences, ul. Radzikowskiego 152, 31-342 Kraków, Poland; ³ Department of Molecular Medical Microbiology, Faculty of Medicine, Jagiellonian University Medical College, ul. Czysza 18, 31-121 Kraków, Poland</p>