


Tuesday 2 July 2024

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| 08:00 – 18:00                     | Registration  |
| 09:00-11:00<br>🏠CH                | WELCOME SESSION   |
| 09:00-09:30<br>WELCOME            |  Welcome and Opening Remarks<br>S. Logothetidis<br>NN24 Chairman   |
| 09:30-10:00<br>NANOTEX<br>KEYNOTE | High performance optoelectronic devices, based on Polyvinylidene Fluoride based copolymers, through ink formulation and printing process optimization<br>G.s Hadziioannou<br><i>Emeritus Chemistry Professor at Un. of Bordeaux, InterNat. member of the US NAE<br/>                 Laboratoire de Chimie des Polymères Organiques (LCPO) UMR CNRS 5629, Bordeaux France</i> |
| 10:00-11:00<br>🏠CH                | WS2: Advanced Nanomaterials<br>Chair: J. Pflieger   |
| 10:00-10:30<br>KEYNOTE            | Purcell Effect Revisited: The impacts of photonic environment and quantum interferences<br>E. Kapon<br><i>Inst.e of Physics, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland</i>   |
| 10:30-11:00<br>INVITED            | 1D Nanomaterials - Detailed Nanoscopic Investigations<br>R. Arenal<br><i>Un. of Zaragoza, Spain</i>   |

11:00-11:30      COFFEE BREAK      Grand Pietra Exhibition Hall      **NN24 POSTER Session**      **EXPO24 Exhibition & Networking**

|                        |  |                        |  |   |   |                    |                                  |
|------------------------|--|------------------------|--|---|---|--------------------|----------------------------------|
| 11:30-13:30<br>🏠 TH1   | Workshop on AI, ML, Intelligent Manufacturing and Automation 1 (NN24 & ISFOE24)<br>Chair: S. Lebigre   |                        |  |   |   |                    |                                  |
| 11:30-11:35            | Welcome & Opening Remarks<br>S. Logothetidis<br>ISFOE24/NN24 Chairman  |                        |  |   |   |                    |                                  |
| 11:35-12:00<br>KEYNOTE | Digital Era of Advanced Materials Design and Development<br>N. Konchakova <sup>1</sup> , S. Belloutar <sup>2</sup> , F. Pirker <sup>3</sup> , A. Laskarakis <sup>4</sup> , P. Klein <sup>5</sup><br><i><sup>1</sup> Helmholtz-Zentrum Hereon, Geesthacht/ Germany, <sup>2</sup> LIST, Luxembourg, <sup>3</sup> AC2T Researchg GmbH, <sup>4</sup> LTFN, AUTH, Greece <sup>5</sup> Fraunhofer-Inst. für Techno- und Wirtschaftsmathematik, Germany</i> |                        |  |   |   |                    |                                  |
| 12:00-12:30<br>INVITED | In-line and Real-time Nano-characterization technologies for the high yield manufacturing of Flexible Organic Electronics<br>A. Laskarakis<br><i>Nanotechnology Lab LTFN, Physics Dept., Aristotle Un. of Thessaloniki, Greece</i>   | 12:00-13:30<br>🏠 DS1   | Workshop on Bioelectronics 1 (NN24 & ISFOE24)<br>Chair: D. A. Koutsouras   | 12:00-13:30<br>🏠 DS2  | WS1 NanoPhotonics<br>Chair: N. Kalfagiannis   | 12:00-13:30<br>🏠CH | WS2: Polymer<br>Chair: R. Arenal |
|                        | 12:00-12:30<br>KEYNOTE<br>Organic Electrochemical Transistors for Disease Diagnostics<br>Sahika Inal<br><i>King Abdullah Un. of Science and Technology, Saudi Arabia</i>   | 12:00-12:30<br>KEYNOTE | 12:00-12:30<br>INVITED<br>Synapse-Mimicking Memristive Phenomena in Carbazole-Bridged Metallo-supramolecular Polymer<br>J. Pflieger, A. Pandey, Y.R. Panthi<br><i>Inst.e of Macromolecular Chemistry CAS, Prague, Czech Republic</i> | 12:00-12:30<br>INVITED<br>The nanolayering of polymers: a tool for the improvement of their mechanical and gas barrier properties<br>A. Guinault<br><i>PIMM lab, UMR Arts et Métiers, Cnrs and Cnam, France</i>   |   |                    |                                  |
| 12:30-13:00<br>INVITED | Update on in-line characterization of compositional, electronic and structural properties  | 12:30-13:00<br>INVITED | Thin-film Electronics for Circumferential Bidirectional Interaction with the Spinal Cord   | 12:30-12:45<br>Granular Aluminum nanoSQUID<br>S. Avraham <sup>1,2</sup> , S. Bachar <sup>1</sup> , A. G. Moshe <sup>3</sup> , E. Farbaer <sup>2</sup> , and G. Deutscher <sup>1</sup><br><i><sup>1</sup>School of Physics and Astronomy, Tel Aviv Univ., Israel</i> | 12:30-13:00<br>INVITED<br>A humidity-responsive actuator with high sensitivity, based on cross-linked composite monolayer membranes with dual conductivity. |                    |                                  |

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|                    | <p><b>of advanced thin film solar cells</b><br/>C. Defranoux, F.Korsos, P.Basa, T.Brigancz, C.Balogh, A.Hajtman<br/><i>Semilab Co. Ltd., Budapest, Hungary</i></p>   |                                 | <p><b>S. El-Hadwe</b><sup>1,2</sup>, B. J Woodington<sup>1</sup>, J. Lei<sup>2</sup>, A. Carnicer-Lombarte<sup>1</sup>, A. Güemes-González<sup>1</sup>, T. E Naegele<sup>1</sup>, S. Hilton<sup>1</sup>, R. A. Trivedi<sup>3</sup>, G. G Malliaras<sup>1</sup>, D. G Barone<sup>1,2</sup><br/><sup>1</sup> Dept. of Engineering, Un. of Cambridge, UK<br/><sup>2</sup> Dept. of Clinical Neuroscience, Un. of Cambridge, UK<br/><sup>3</sup> Division of Neurosurgery, Addenbrooke's Hospital, UK</p>   | <p>12 :45-13 :00</p> | <p><sup>2</sup><i>Depts Physics &amp; Electrical/Electronic Engineering, Ariel Un., Israel</i><br/><sup>3</sup><i>Nat. Inst.e of Chemical Physics &amp; Biophysics, Estonia</i></p> <p><b>6G industrially scalable metal oxide diodes fabricated via rapid photonic sintering</b><br/>L. Panagiotidis<sup>1</sup>, H. Faber<sup>1</sup>, Y. Yu<sup>2</sup>, S. Doukas<sup>3</sup>, L. Luo<sup>1</sup>, M. Ghadiyali<sup>1</sup>, G. T. Harrison<sup>1</sup>, D. Naphade<sup>1</sup>, S. Mandal<sup>1</sup>, W. S. Alghamdi<sup>1</sup>, H. F. Mazo-Mantilla<sup>1</sup>, T. Maksudov<sup>1</sup>, G. Pappas<sup>1</sup>, U. Schwingenschlöggl<sup>1</sup>, S. Fatayer<sup>1</sup>, E. Lidorikis<sup>3</sup>, A. Shamim<sup>2</sup> and T. D. Anthopoulos<sup>1</sup><br/><sup>1</sup> <i>Physical Science and Engineering Division, KAUST Solar Center, KAUST, Saudi Arabia</i><br/><sup>2</sup> <i>Computer, Electr., Mathem. Science and Engineering Division, KAUST, Saudi Arabia</i><br/><sup>3</sup> <i>Dept Materials Science &amp; Engineering, Un. Ioannina, Greece</i></p> | <p>I. Tzoumani<sup>1</sup>, D. Druvari<sup>1</sup>, K. C. Andrikopoulos<sup>1</sup>, A. Dominguez-Alfaro<sup>3</sup>, G. G. Malliaras<sup>3</sup>, J. K. Kallitsis<sup>1,2</sup><br/><sup>1</sup><i>Dept. of Chemistry, Un. Patras, Greece</i><br/><sup>2</sup><i>Foundation for Research and Technology-Hellas, Inst.e of Chemical Engineering Sci. (FORTH/ICE-HT), Greece</i><br/><sup>3</sup><i>Electrical Engineering Division, Dept. of Engineering, Un. of Cambridge, Cambridge, UK.</i></p> |
| <p>13:00-13:15</p> | <p><b>Advancing Large-Scale Production: Intelligent Manufacturing of Flexible Printed Organic Photovoltaics</b><br/>I. Gkaragkos, E. Mekeridis, S. Fachouri, S. Zygridou, S. Logothetidis<br/><i>Organic Electronic Technologies P.C. 20th KM Thessaloniki - Tagarades, Themi, Greece</i></p>            | <p>13:00--13:30<br/>INVITED</p> | <p><b>Biofunctionalized interfaces for single molecule detection</b><br/>G. Scamarcio<sup>1,2</sup>, C. Di Franco<sup>1,2</sup>, M. Piscitelli<sup>1</sup>, C. Scandurra<sup>3</sup>, M. Catacchio<sup>4</sup>, E. Macchia<sup>3,4</sup>, Luisa Torsi<sup>5</sup><br/><sup>1</sup><i>Dipartimento Interateneo di Fisica, Università degli Studi di Bari Aldo Moro, Bari, Italy</i><br/><sup>2</sup> <i>CNR, Istituto di Fotonica e Nanotecnologie, Sede di Bari, Italy</i><br/><sup>3</sup> <i>Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy</i><br/><sup>4</sup> <i>Faculty of Science and Engineering, Åbo Akademi Un., Turku, Finland</i><br/><sup>5</sup> <i>Dipartimento di Farmacia-Scienze del Farmaco, Università degli Studi di Bari Aldo Moro, 70125 Bari (Italy)</i></p>                              | <p>13:00-13:15</p>   | <p><b>Investigation of photo response and carrier mobility in thin <math>\alpha</math>-IGZO layers with the PDL-1000</b><br/>A. Bojtor<sup>1,2</sup>, G. Parada<sup>1</sup>, P. Túttő<sup>1</sup>, H. Korka<sup>1</sup>, K. Szőke<sup>1</sup>, F. Korsós<sup>1</sup><br/><sup>1</sup> <i>Semilab Co. Ltd., Budapest, Hungary</i><br/><sup>2</sup> <i>Dept. of Physics, Inst.e of Physics, Budapest Un. of Technology and Economics, Hungary</i></p>   | <p><b>Designing Nanostructured Single-ion Polymer Electrolytes for Solid State Lithium Metal Batteries</b><br/>E. Glynos<br/><i>Dept. Materials Science and Engineering, Un. of Crete, Greece &amp; IESL FORTH, Greece</i></p>   |
| <p>13:15-13:30</p> | <p><b>ELORPrintTec, an innovation center enabling the emerging science and technology of organic/polymer electronics and systems</b><br/>G. Hadziioannou, S. Ducat, G. Payrot, S. Khiev, W. Smaal<br/><i>ELORPrintTec, University of Bordeaux, Allée Geoffroy Saint-Hilaire, 33615 Pessac France</i></p> | <p>13:00--13:30<br/>INVITED</p> | <p><b>Nonlinear optical phenomena in BIC metasurface</b><br/>K. Branko<sup>1</sup>, E. Pruszyńska-Karbownik<sup>1</sup>, T. Fas<sup>1</sup>, D. Dmitriy Yavorskiy<sup>2,3</sup>, B. Stonio<sup>4</sup>, J. Wrobel<sup>3</sup>, T. Stefaniuk<sup>1</sup>, R. Bozek<sup>1</sup>, P. Karbownik<sup>5</sup>, W. Pacuski<sup>1</sup>, T. Czeszanowski<sup>6</sup> and J. Suffczynski<sup>1</sup><br/><sup>1</sup><i>Faculty of Physics, Un. of Warsaw, Poland</i><br/><sup>2</sup><i>Centera Laboratories, Inst.e of High Pressure Physics, Polish Ac. of Sci., Poland</i><br/><sup>3</sup><i>Inst.e of Physics, Pol. Ac. Sci., Poland</i><br/><sup>4</sup><i>CEZAMAT, Warsaw Univ. Techn., Poland</i><br/><sup>5</sup><i>Center of Dev. &amp; Implementation, Poland</i><br/><sup>6</sup><i>Inst.e of Physics, Łódź Un. of Technology, Poland</i></p> | <p>13:15-13:30</p>   | <p>12:30--13:00<br/>INVITED</p>   | <p><b>Designing Nanostructured Single-ion Polymer Electrolytes for Solid State Lithium Metal Batteries</b><br/>E. Glynos<br/><i>Dept. Materials Science and Engineering, Un. of Crete, Greece &amp; IESL FORTH, Greece</i></p>   |

13:30-15:00

**LUNCH BREAK**  
Grand Pietra Exhibition Hall

**NN24 POSTER Session**

**EXPO24 Exhibition & Networking**

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|---|--|--------------------------------|---|--|
| <p>15:00-15:30<br/><b>KEYNOTE</b><br/>Chair: A. Guinault<br/>Room: CH</p> | <p><b>Fine-Tuning the Surface and Interfacial Properties of Nanoparticles to Modulate and Control Assembly at Interfaces</b><br/>E. P. Giannelis<br/><i>Materials Science and Engineering, Cornell Un., USA</i></p>  |                                | <p>15:00-17:00<br/>TH1</p>  | <p><b>Workshop on AI, ML, Intelligent Manufacturing &amp; Automation 2 (NN24 &amp; ISFOE24)</b><br/>Chair: N. Konchakova</p>   |
| <p>15:30-17:30<br/>CH</p>   | <p>WS1: Energy<br/>Chair: A. Guinault</p>  | <p>15:30-17:00<br/>DS1</p>     | <p><b>Bioelectronics 2 (Joined Session of NN24 &amp; ISFOE24)</b><br/>Chair: S. El-Hadwe</p>  |  |
| <p>15:30-16:00<br/>INVITED</p>  | <p><b>Nanoengineered interfacial materials for energy conversion and storage devices</b><br/>G.P. Demopoulos, S. Wang, and A. La Monaca<br/><i>Materials Engineering, McGill Un., Montreal, QC, Canada</i></p>   | <p>15:30-16:00<br/>INVITED</p> | <p><b>Bioelectronic devices and Therapeutic applications</b><br/>D. A. Koutsouras<br/><i>Imec-NL, High Tech Campus 31, 5656 AE Eindhoven, The Netherlands</i></p>   |  |
| <p>16:00-16:30<br/>INVITED</p>  | <p><b>Functionalized two-dimensional transition metal dichalcogenides for energy applications</b><br/>I. K. Sideri, N. Tagmatarchis<br/><i>Nat. Hellenic Research Foundation, Theoretical and Physical Chemistry Inst.e Greece</i></p>   | <p>16:00-16:15</p>             | <p><b>Detection of chloride in sweat with extended-gated organic electrochemical transistors</b><br/>C. Bortolotti<sup>1,2</sup>, A. Kyndiah<sup>2</sup>, A. Aliverti<sup>1</sup>, M. Caironi<sup>2</sup><br/><sup>1</sup> <i>Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano, Italy</i><br/><sup>2</sup> <i>Center for Nano Science and Technology @PoliMi, Istituto Italiano di Tecnologia, Italy</i></p>  |  |
|   |  | <p>16:15-16:30</p>             | <p><b>Monitoring of 3D-bioengineered biohybrid actuators by means of Organic Transistor-based mechanical sensors</b><br/>S. Lai<sup>1</sup>, J. Fuentes Llanos<sup>2</sup>, G. Casula<sup>1</sup>, P. Cosseddu<sup>1</sup>, M. Guix Noguera<sup>3</sup>, S. Sánchez<sup>2,4</sup><br/><sup>1</sup> <i>Dept. of Electrical and Electronic Engineering, Un. of Cagliari, Italy</i><br/><sup>2</sup> <i>Inst.e for Bioengineering of Catalonia (IBEC), The Barcelona Inst.e of Science and Technology, Spain</i><br/><sup>3</sup> <i>Departament de Ciència dels Materials i Química Física, Inst. de Química Teòrica i Computacional, Un. of Barcelona (UB), 08028 Barcelona, Spain</i><br/><sup>4</sup> <i>Catalan Inst.e for Research and Advanced Studies (ICREA), Spain</i></p> |  |
| <p>16:30-17:00<br/>INVITED</p>  | <p><b>Application of reduced graphene oxide for energy conversion and storage</b><br/>O. Okhay<sup>1</sup>, A. Tkach<sup>2</sup><br/><sup>1</sup> <i>TEMA-Center for Mechanical Technology and Automation, Dept. of Mechanical Engineering, Un. of Aveiro, Portugal</i><br/><sup>2</sup> <i>CICECO – Aveiro Inst.e of Materials, Dept. of Materials and Ceramic Engineering, Un. of Aveiro, Portugal</i></p> | <p>16:30-16:45</p>             | <p><b>WGM Sensors for future diagnostics: identification of small molecules to whole organisms</b><br/>W.E.A. Krames<sup>1,3</sup>, D. I. Dayi<sup>1</sup>, M. Borgolte<sup>1</sup>, L. Kaiser<sup>1</sup>, M. Himmelhaus<sup>2</sup>, R. Csuk<sup>3</sup>, H.-P. Deigner<sup>1,4,5</sup><br/><sup>1</sup> <i>Inst.e of Precision Medicine, Furtwangen Un., Germany</i><br/><sup>2</sup> <i>NanoBioAnalytics, Germany</i><br/><sup>3</sup> <i>Inst.e of Organic Chemistry, Martin-Luther Un., Germany</i><br/><sup>4</sup> <i>EXIM Dept., Fraunhofer Inst.e IZI (Leipzig), Germany</i><br/><sup>5</sup> <i>Faculty of Science, Eberhard Karls Un. Tuebingen, Germany</i></p>  |  |
|   |  | <p>16:45-17:00</p>             | <p><b>In vivo study of bioresorbable nanostructured chemical sensor for monitoring of pH level</b><br/>E. Vandini<sup>1</sup>, M. Corsi<sup>2</sup>, A. Paghi<sup>2</sup>, S. Mariani<sup>2</sup>, G. Golinelli<sup>3</sup>, A. Debrassi<sup>4</sup>, G. Egri<sup>4</sup>, G. Leo<sup>1</sup>, A. Vilella<sup>1</sup>, L. Dähne<sup>4</sup>, D. Giuliani<sup>1</sup>, G. Barillaro<sup>2</sup></p>  |  |
|   |  |                                | <p>16:30-16:45</p>  | <p><b>Organic photovoltaic systems integrated in buildings S. Zygridou<sup>1</sup>, E. Mekeridis<sup>1</sup>, S. Logothetidis<sup>1,2</sup></b><br/><sup>1</sup> <i>Organic Electronic Technologies (OET), 20th KM Thessaloniki - Tagarades, 57001 Thermi Greece</i><br/><sup>2</sup> <i>Nanotechnology Lab LTFN, Physics Dept., Aristotle Un. of Thessaloniki, Greece</i></p> |
|   |  |                                |   | <p><b>Organic and Perovskite Solar Cells: Upscaling Challenges and the Research Revolution via AI-Driven Automatic Experiments</b><br/>L. Sutherland<br/><i>Commonwealth Scientific and Industrial Research Organisation (CSIRO), Melbourne, Australia</i></p>   |

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|             |  | <p><sup>1</sup> Dept. of Biomedical, Metabolic and Neural Sci., Section of Pharmacology and Molecular Medicine, Un. of Modena and Reggio Emilia, Italy</p> <p><sup>2</sup> Dept. of Information Engineering, Un. of Pisa, Italy</p> <p><sup>3</sup> Dept. of Medical and Surgical Science for Children and Adults, Un. Hospital of Modena and Reggio Emilia, Italy.</p> <p><sup>4</sup> SurfRay Nanotec GmbH, Germany</p> |  |  |
| 17:00-17:15 | <p><b>Exploit4InnoMat: An Open Innovation Ecosystem for exploitation of materials for building envelopes towards zero energy buildings</b></p> <p><b>P. Angelopoulos</b>, A. Skaropoulou, C. Panagiotopoulou, A. Peppas, M. Taxiarchou<br/>Laboratory of Metallurgy, School of Mining and Metallurgical Engineering, NTUA, Greece</p>  |   |  |  |
| 17:15-17:30 | <p><b>Sustainable Synthesis Strategies for Nanosolutions with Dual Antibacterial and Photocatalytic Properties</b></p> <p><b>M. Adriana</b><sup>1</sup>, M. Ornelas<sup>1</sup>, R. G. Bárbara<sup>1</sup>, C. Lorena<sup>1</sup>, M. Giuliana<sup>2,3</sup>, D. Francesca<sup>4</sup>, A. Stefano<sup>5</sup>, M. Marco<sup>5</sup></p> <p><sup>1</sup> CeNTItvc - Centre for Nanotechnology and Smart Materials, Portugal</p> <p><sup>2</sup> Dipartimento di Chimica, Università degli Studi di Torino (UNITO), Torino, Italy</p> <p><sup>3</sup> NIS InterDept.al Centre, Università degli Studi di Torino, Torino, Italy</p> <p><sup>4</sup> CNR Istituto per lo Studio dei Materiali Nanostrutturati, Italy</p> <p><sup>5</sup> Consiglio Nazionale delle Ricerche (CNR) Istituto di Ricerca Sulle Acque (IRSA), Italy</p> |   |  |  |

17:00-18:30

**COFFEE BREAK**  
Grand Pietra Exhibition Hall

**NN24 POSTER Session**

**EXPO24 Exhibition & Networking**

|                        |  |  |
|------------------------|--|--|
| 18:30                  | <div style="display: flex; justify-content: space-between; align-items: center;"> <h1 style="margin: 0;">Official Opening Ceremony</h1>  </div> |  |
| 18:30-18:45            |   | <p>Welcome to NANOTECHNOLOGY<br/>                 Prof. S. Logothetidis<br/>                 NANOTECHNOLOGY2024 Chairman</p>   |
| 18:45-19:00            | <p>Official Salutations</p>  |  |
| <p>PLENARY SESSION</p> |  |  |
| 19:00-19:45            |   | <p>Carbon Nanotechnology: A Route for Technology Platforms<br/>                 Prof. S. Ravi P. Silva<br/>                 Director of Advanced Technology Institute (ATI) and Head of NanoElectronics Centre, Un. of Surrey, UK</p>  |
| 19:45-20:45            |   | <p>FUTURISTIC NANOTECH EVENT<br/>                 A unique show for Applied Nanotechnologies in Fashion, Healthcare &amp; Beauty<br/>                 Organized by:</p> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">     </div> |
| 21:00                  | <p>OFFICIAL NANOTECHNOLOGY GALA DINNER<br/>                 PORTO PALACE CONFERENCE CENTRE &amp; HOTEL - ROOF GARDEN</p>   |  |

Wednesday 3 July 2024

|                        |  |                              |  |                        |  |                        |  |
|------------------------|--|------------------------------|--|------------------------|--|------------------------|--|
| 09:00-11:00<br>⬆️DS1   | WS3: Nanomedicine in Cancer<br>Chair: Y. Missirlis   |                              |  | 09:00-11:00<br>⬆️TH1   | Workshop on Artificial Intelligence, Machine Learning, Intelligent Manufacturing and Automation 3 (NN24 & ISFOE24)<br>Chair: X. Rodríguez-Martínez   |                        |  |
| 09:00-09:30<br>KEYNOTE | Hybrid Nanostructures for Combined Therapeutics and Tissue Repair<br>Prof. Pablo Taboada, <i>Un. of Santiago de Compostela, Spain</i>  |                              |  |                        |  |                        |  |
| 09:30-11:00<br>⬆️CH    | WS2: Theoretical Modeling in Nanoscale<br>Chair: V. Harmandaris  | 09:30-11:00<br>⬆️DS1         | WS3: Nanomedicine in Cancer<br>Chair: Y. Missirlis   | 09:00-09:30<br>KEYNOTE | Machine Learning Guided Design of Low-Dimensional Hybrid Lead Halide Perovskites with Enhanced Optical Properties<br>R. Gautier <sup>1</sup> , H. Yuan <sup>1</sup> , F. Massuyeau <sup>1</sup> , R. Laref <sup>1</sup><br><sup>1</sup> Nantes Université, CNRS, Inst. des Matériaux de Nantes Jean Rouxel, France   | 09:30-11:00<br>⬆️DS2   | Bioelectronics 3 (Joined Session of NN24 & ISFOE24)<br>Chair: S. Inal  |
| 09:30-10:00<br>INVITED | Doping of ZnO nanowires grown by chemical bath deposition: the specific case of Ga investigated by X-ray Linear Dichroism and ab-initio calculations<br>E. Sarigiannidou <sup>1</sup> , F. Wilhelm <sup>2</sup> , J. Kioseoglou <sup>3</sup> , P. Gaffuri <sup>1</sup> , E. Appert <sup>1</sup> , V. Consoni <sup>1</sup><br><sup>1</sup> Univ. Grenoble Alpes, CNRS, Grenoble INP, LMGP, F-38000 Grenoble, France<br><sup>2</sup> European Synchrotron Radiation Facility (ESRF), France<br><sup>3</sup> Physics Dept., Aristotle Un. of Thessaloniki, 54124 Thessaloniki, Greece | 09:30-10:00<br>INVITED       | Systems pharmacology and machine learning to advance the development and productivity of targeted therapeutics in the era of precision medicine<br>I S. Vizirianakis <sup>1,2</sup><br><sup>1</sup> Laboratory of Pharmacology, School of Pharmacy, Aristotle Un. of Thessaloniki, Greece<br><sup>2</sup> Dept. of Health Sci., School of Life and Health Sci., Un. of Nicosia, Cyprus   | 09:30-10:00<br>INVITED | Towards explainable, interpretable, and physical-based artificial intelligence for materials science and engineering<br>F. Sofos <sup>1</sup> , T.E. Karakasis <sup>1</sup><br><sup>1</sup> Condensed Matter Physics Laboratory, Dept. of Physics, Un. of Thessaly, Greece   | 09:30-10:00<br>INVITED | Charge Carrier Density in Organic Semiconductors Modulates the Effective Capacitance of Electrolyte Gated Organic Transistors: a Unified View of EGOFET and OECT<br>F. Biscarini<br><i>Italian Inst.e of Technology &amp; Un. of Modena and Reggio Emilia, Italy</i>   |
| 10:00-10:30<br>INVITED | Novel nanometric phases of the monochalcogenides: Theory meets experiment<br>G. Makov <sup>1</sup><br><sup>1</sup> Dept. of Materials Engineering, Ben-Gurion Un. of the Negev Beer Sheva, Israel  | 10:00-10:15<br>YRA CANDIDATE | Up-converting nanostructures with potential magnetic properties for application in photodynamic therapy<br>R. Pasławska <sup>1,2,3</sup> , T. Wojciechowski <sup>1</sup> , K. Sobczak <sup>4</sup> , P. Joshi <sup>1</sup> , W. Lewandowski <sup>3</sup> , B. Sikora <sup>1</sup><br><sup>1</sup> Inst.e of Physics, Polish Ac. of Sci., Poland<br><sup>2</sup> Faculty of Physics, Un. of Warsaw, Poland<br><sup>3</sup> Faculty of Chemistry, Un. of Warsaw, Poland<br><sup>4</sup> Biological and Chemical Research Centre, Un. of Warsaw, Poland | 10:00-10:30<br>INVITED | Machine Learning techniques in microscopy and nanometrology<br>V. Constantoudis <sup>1,2</sup> , E. Giannatou <sup>2</sup> , G. Papavieros <sup>1,2</sup> , M. Chatzigeorgiou <sup>1</sup> , N. Boukos <sup>1</sup> , M. Vrigkas <sup>3</sup> , A. Vekinis <sup>1</sup> , A. Stellas <sup>2</sup> , E. Almpanis <sup>1</sup> , N. Papanikolaou <sup>1</sup><br><sup>1</sup> Inst.e of Nanoscience and Nanotechnology, NCSR Demokritos, Greece<br><sup>2</sup> Nanometris p.c., Greece<br><sup>3</sup> Dept. of Communication and Digital Media, Un. of Western Macedonia, Kastoria, Greece | 10:00-10:15            | Integration of flexible organic force sensors on biohybrid catheters for endoscopic applications<br>G. Casula <sup>1</sup> , U. Mahmood <sup>1</sup> , A. Bartolucci <sup>2</sup> , P. Cosseddu <sup>1</sup> , L. Vannozzi <sup>2</sup> , L. Ricotti <sup>2</sup> , S. Lai <sup>1</sup><br><sup>1</sup> Dept. of Electrical and Electronic Engineering, Un. of Cagliari, Italy<br><sup>2</sup> The Biorobotic Inst.e, Scuola di Studi Superiori Sant'Anna, Italy |

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|             |  | 10:15-10:30 |  |             |   | 10:15-10:30<br>YRA<br>CANDIDATE | <b>A flexible electrochemical platform for health status monitoring in diabetic patients</b><br>F. Ceccardi <sup>1</sup> , F. Mariani <sup>1</sup> , S. Lai <sup>2</sup> , G. Casula <sup>2</sup> , I. Gualandi <sup>1</sup> , A. Bonfiglio <sup>2</sup> , E. Scavetta <sup>1</sup><br><sup>1</sup> Dept. of Industrial Chemistry "Toso Montanari", Un. of Bologna, Italy<br><sup>2</sup> Dept. of Electronic Engineering, Cagliari, Italy   |
| 10:30-10:45 | <b>Molecular Dynamics Study of Nanoribbon Formation by Encapsulating Cyclic Hydrocarbon Molecules inside Single-Walled Carbon Nanotube</b><br>S. Eskandari <sup>1</sup> , J. Koltai <sup>1</sup> , I. László <sup>2</sup> and J. Kürti <sup>1</sup><br><sup>1</sup> Dept. of Biological Physics, Eötvös Un., Hungary<br><sup>2</sup> Dept. of Theoretical Physics, Budapest Un. of Technology and Economics, 1111 Budapest, Hungary                    | 10:30-10:45 |  | 10:30-10:45 | <b>Optimizing Inks and Paste Formulations for the Printed Electronics Industry:Advancements in Additive Manufacturing Materials</b><br>L. Schneider, A. Motyka, M. Łysień, S. Drozdek<br>XTPL SA; Stabłowicka 147, 54 066 Wrocław, Poland | 10:30-10:45                     | <b>A printed organic transistor-based ion sensor towards on-skin monitoring of calcium concentration</b><br>S. Lai <sup>1</sup> , G. Casula <sup>1</sup> , F. Mariani <sup>2</sup> , F. Ceccardi <sup>2</sup> , P. Cosseddu <sup>1</sup> , I. Gualandi <sup>2</sup> , E. Scavetta <sup>2</sup> , A. Bonfiglio <sup>1</sup><br><sup>1</sup> Dept. of Electronic Engineering, Cagliari, Piazza d'Armi, 09123, Cagliari, Italy<br><sup>2</sup> Dept. of Industrial Chemistry "Toso Montanari", Un. of Bologna, Italy  |
| 10:45-11:00 | <b>Molecular dynamics simulation of the formation of W-centers in silicon by Ga ion irradiation</b><br>C. Gennetidis <sup>1</sup> , P. Chantrenne <sup>1</sup> , T. Wood <sup>2</sup><br><sup>1</sup> INSA-Lyon, Université Claude Bernard Lyon 1, CNRS, MATEIS, UMR 5510, 69621 Villeurbanne, France1<br><sup>2</sup> INSA-Lyon, Ecole Centrale de Lyon, Université Claude Bernard Lyon 1, CPE Lyon, CNRS, INL, UMR 5270, 69621 Villeurbanne, France2 | 10:45-11:00 |  | 10:45-11:00 | <b>AI guided materials discovery of two-dimensional magnets</b><br>T. D. Rhone<br>Department of Physics, Applied Physics and Astronomy, Rensselaer Polytechnic Institute, USA   | 10:45-11:00                     | <b>Potentiodynamic sensing with Organic Electrochemical Transistors</b><br>F. Mariani <sup>1</sup> , I. Gualandi <sup>1</sup> , D. Arcangeli <sup>2</sup> , F. Ceccardi <sup>1</sup> , L. Salvigni <sup>2</sup> , F. Decataldo <sup>3</sup> , M. Tessarolo <sup>3</sup> , D. Tonelli <sup>1</sup> , B. Fraboni <sup>3</sup> , E. Scavetta <sup>1</sup><br><sup>1</sup> Dept. of Industrial Chemistry "Toso Montanari", Un. of Bologna, Italy<br><sup>2</sup> Organic Bioelectronics Lab, Biol. Environmental Science and Engineering Division (BESE), KAUST, Saudi Arabia<br><sup>3</sup> Dept. of Physics and Astronomy, Univ. Bologna, Italy |

11:00-11:30

**COFFEE BREAK**  
Grand Pietra Exhibition Hall

NN24 POSTER Session

EXPO24 Exhibition & Networking

|                        |   |                     |   |
|------------------------|---|---------------------|---|
| 11:30-13:30<br>📍CH     | <b>WS2: Theoretical Modeling in Nanoscale</b><br>Chair: E. Sarigiannidou  |                     |   |
| 11:30-12:00<br>KEYNOTE | <b>Obstructed limits in Q1D and Q2D crystals</b><br>M. Damnjanović<br>Serbian Academy of Sci. and Arts, Belgrade, Serbia, NanoLab, Faculty of Physics, Uni Belgrade, Belgrade, Serbia | 12:00-13:30<br>📍DS1 | <b>WS3: Special Session for I-SMarD</b><br>Chair: A Jha |

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| 12:00-12:30<br>INVITED | <b>Structure-Property Relationships of Nanostructured Materials via Simulations Across Scales and Machine-Learning Algorithms</b><br>V. Harmandaris<br><i>Computation-based Science and Technology Research Center, The Cyprus Institute, Cyprus, &amp; Dept. of Mathematics and App. Mathematics, Un. of Crete, Greece</i>  | 12:00-12:30<br>INVITED | <b>Pulsed Laser based Deposition for Adhesive bonding of Micro-to-Nanoscale Glass, Ceramic, and Polymer Composite Thin Films for Medical Device Applications</b><br>S Loganathan, G Sharma, E Kumi-Barimah, E Daskalakis, and A Jha*<br><i>School of Chemical and Process Engineering, Engineering Building, Woodhouse Lane, Un. of Leeds, Leeds LS2 9JT, UK</i> |
| 12:30-13:00<br>INVITED | <b>An Effective Algebraic Method for Determining the Existence of Flat Bands in Crystal Lattices</b><br>I. Damnjanović <sup>1,2,3</sup> , M. Damnjanović <sup>4,5</sup> , I. Milošević <sup>4</sup> , D. Stevanović <sup>6,7</sup><br><sup>1</sup> Faculty of Electronic Engineering, Un. of Niš, Serbia<br><sup>2</sup> Diffine LLC, San Diego, CA, USA<br><sup>3</sup> Faculty of Mathematics, Natural Sci. & Information Technology, Uni of Primorska, Koper, Slovenia<br><sup>4</sup> Faculty of Physics, Un. of Belgrade, Serbia<br><sup>5</sup> Serbian Academy of Sci. and Arts, Belgrade, Serbia<br><sup>6</sup> College of Integrative Studies, Abdullah Al-Salem Un., Kuwait<br><sup>7</sup> Mathematical Inst.e of Serbian Academy of Sci. and Arts, Belgrade, Serbia | 12:30-13:00<br>INVITED | <b>Silica-based mesoporous nanoparticles in tissue engineering applications</b><br>E. Kontonasaki<br><i>Aristotle Un. of Thessaloniki, Greece</i>  |
| 13:00-13:15            | <b>Structuring magnetic fields for greener microfabrication.</b><br>N. Ntallis <sup>1</sup> , S. Sadewasser <sup>2</sup> , D. Colombara <sup>3</sup> , T. Böhnert <sup>2</sup> , K.N. Trohidou <sup>1</sup><br><sup>1</sup> Inst.e of Nanoscience and Nanotechnology, NCSR "Demokritos", Greece<br><sup>2</sup> InterNat. Iberian Nanotechnology Laboratory, Portugal<br><sup>3</sup> Dept. of Chemistry and Industrial Chemistry Università degli Studi di Genova, Italy  | 13:00-13:30<br>INVITED | <b>Microfluidics for sustainable development of bio and nano- materials</b><br>A. Anastasiou<br><i>Un. of Manchester, UK</i>   |
| 13:15-13:30            | <b>A twist for tunable electronic and thermal transport properties of nanodevices</b><br>A. Ostovan <sup>1</sup> , K.Z. Milowska <sup>2,3</sup> , C.J. Garcia-Cervera <sup>1,4</sup><br><sup>1</sup> Mathematics Dept., Un. of California, USA<br><sup>2</sup> CIC nanoGUNE, Tolosa Hiribidea 76, 20018 Donostia-San Sebastián, Spain<br><sup>3</sup> Ikerbasque, Basque Foundation for Science, Bilbao, Spain<br><sup>4</sup> Basque Center for App. Mathematics, Bilbao, Spain   |                        |  |

13:30-15:00 **LUNCH BREAK** Grand Pietra Exhibition Hall **NN24 POSTER Session** **EXPO24 Exhibition & Networking**

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| 15:00-15:30<br>KEYNOTE<br>Chair: A. Guinault<br>Room: CH | <b>Development of Superhydrophobic Polymer Nanocomposite Coatings with Antimicrobial Properties</b><br>S. Anastasiadis<br><i>Un. of Crete &amp; FORTH IESL, Greece</i>  | 15:00-17:00<br>TH1     | <b>Workshop on Artificial Intelligence, Machine Learning, Intelligent Manufacturing and Automation 4 (NN24 &amp; ISFOE24)</b><br>Chair: R. Gautier   |
| 15:30-17:00<br>CH  | <b>WS2: Thin Films</b><br>Chair: A. Guinault  | 16:00-17:00<br>DS11    | <b>WS3: Nanoparticles for Clinical Applications II</b><br>Chair: I S. Vizirianakis   |
| 15:30-16:00<br>INVITED                                   | <b>Hydrogenation of graphene on Ni (111) by H2 under Near Ambient pressure conditions</b><br>Luca Vattuone<br><i>DIFI, Un. of Genoa, Italy</i>  | 15:30-16:00<br>INVITED | <b>Electrospinning for biomedical applications: tissue engineering scaffolds, sensors and vascular grafts</b><br>V. Koutsos<br><i>School of Engineering, Inst.e for Materials and Processes, The Un. of Edinburgh, Robert Stevenson Road, EH9 3FB Edinburgh, United Kingdom)</i> |
| 16:00-16:15<br>YRA CANDIDATE                             | <b>Characteristics of optical properties in chiral liquid crystalline thin films with laser patterning capability</b><br>M. Zarzecny <sup>1</sup> , D. Szepke <sup>1</sup> , P. Roszkowski <sup>1</sup> , M. Kotkowiak <sup>2</sup> , W. Lewandowski <sup>1</sup> | 16:00-16:30<br>INVITED | <b>N-isopropyl acrylamide-based nanogels for drug delivery to the brain</b><br>M. Resmini  |
|  |   | 15:00-15:30<br>INVITED | <b>Organic Photovoltaic Material and Device Insights from High-Throughput Experiments, Data Science and Machine-Learning Methods</b><br>X. Rodríguez-Martínez<br><i>Universidade da Coruña, Spain</i>  |
|  |   | 15:30-16:00<br>INVITED | <b>An Experimentally validated Numerical Approach for Predicting Adsorption Processes on Membrane-Coated Adsorbents in the Field of Water Remediation</b><br>Aron Kneer<br><i>TinnIT Technologies GmbH, Germany</i>  |
|  |   | 16:00-16:15            | <b>Enhancing plasma etching efficiency, repeatability, and environmental footprint via AI-based modeling and optimization (plasmAI)</b>  |



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|             | <p><sup>1</sup>Faculty of Chemistry, Un. of Warsaw, Ludwika Pasteura 1, 02-093 Warsaw, Poland</p> <p><sup>2</sup>Inst.e of Physics, Poznan Un. of Technology, Piotrowo 3, 60-965 Poznan, Poland</p>   |             | <p>Dept. of Chemistry, SPCS, Queen Mary Un. of London, London E1 4NS, UK</p>   |             | <p>V. Constantoudis<sup>1,3</sup>, E. Gogolides<sup>1,3</sup>, T.Giannakopoulos<sup>2</sup>, S. Konstantopoulos<sup>2</sup>, A. Armaou<sup>4</sup>, G. Kokkoris<sup>5</sup></p> <p><sup>1</sup> Inst.e of Nanoscience and Nanotechnology, NCSR Demokritos, Greece</p> <p><sup>2</sup> Inst.e of Informatics and Telecommunication, NCSR Demokritos, Greece</p> <p><sup>3</sup> Nanometrisis p.c., Neapoleos 27, Greece</p> <p><sup>4</sup> School of Chemical Engineering, NTUA Greece</p>   |
| 16:15-16:30 | <p><b>Filtration of nanoparticle with different morphology on fibrous filters</b></p> <p>F. Furgieuele<sup>1</sup>, L. Boskovic<sup>2</sup> and I.E. Agranovski<sup>1</sup></p> <p><sup>1</sup>School of Engineering and Built Environment, Griffith Un., Nathan, 4111, Queensland, Australia</p> <p><sup>2</sup>Torrens Un., Queensland, Australia</p> |             |  | 16:15-16:30 | <p><b>Advancing Additive Manufacturing: A Data-Driven Strategy for Integrated L-PBF Process Optimization</b></p> <p>P. Stavroulakis<sup>1</sup>, P. Kolozis<sup>1</sup>, L. Gargalis<sup>2</sup>, L. Karavias<sup>2</sup>, E. Karaxi<sup>2</sup>, E. P. Koumoulos<sup>1</sup></p> <p><sup>1</sup>IRES - Innovation in Research Engineering Solutions, Bluepoint, Schaerbeek, Belgium</p> <p><sup>2</sup>Conify P.C., Greece</p>  |
|             |   | 16:30-16:45 | <p><b>Impact of crystalline structure on the magnetic properties of Co-based iron spinels</b></p> <p>Balan V.<sup>1,3</sup>, Nistor M.<sup>1,2</sup>, Pui A.<sup>2</sup>, Zara-Danceanu C.-M.<sup>1,4</sup>, Stiufiuc, R.-I.<sup>1,5</sup>, Dragoi B.<sup>1,2</sup></p> <p><sup>1</sup>Nanotechnology Laboratory, TRANSCEND Research Center, Regional Inst.e of Oncology, Romania</p> <p><sup>2</sup>Faculty of Chemistry, Alexandru Ioan Cuza Un. of Iasi, Romania</p> <p><sup>3</sup> Biomedical Sci. Dept., Faculty of Medical Bioengineering, Grigore T. Popa Un. of Medicine and Pharmacy of Iasi, Romania</p> <p><sup>4</sup>Nat. Inst.e of Research and Development for Technical Physics, 700050, Iasi, Romania</p> <p><sup>5</sup>Dept. of Nanobiophysics, MedFuture Research Center for Advanced Medicine, "Iuliu Hatieganu" Un. of Medicine and Pharmacy, Romania</p> | 16:30-16:45 | <p><b>Real Time &amp; Digital controlling of high precision electrode deposition by Spectroscopic Ellipsometry Tool for Electronic Devices fabrication on OVPD Cluster PPL</b></p> <p>M. Chatzidis<sup>1</sup>, A. Zachariadis<sup>1</sup>, P.K. Baumann<sup>2</sup>, A. Laskarakis<sup>1</sup>, M. Gioti<sup>1</sup>, S. Logothetidis<sup>1</sup></p> <p><sup>1</sup> Nanotechnology Lab LTFN, Aristotle Un. of Thessaloniki, Thessaloniki, Greece</p> <p><sup>2</sup> AIXTRON SE, Dornkaulstr. 2, 52134 Herzogenrath, Germany</p>  |
|             |   | 16:45-17:00 | <p><b>Cell cultivation in dynamic patterning conditions for tissue regeneration applications</b></p> <p>K. Tsimenidis<sup>1</sup>, A. Orfanos<sup>1</sup>, V. Karagkiozaki<sup>1</sup></p> <p><sup>1</sup>BL Nanobiomed P.C., Greece</p>   | 16:45-17:00 | <p><b>3D printing of Luminescent Solar Concentrators</b></p> <p>R. Capener, J. Manning, P. Itrych, S. Baldock, L. Danos</p> <p>Department of Chemistry, Energy Lancaster, Lancaster University, Lancaster, LA1 4YB, UK</p>   |
|             |   |             |  | 17:00-17:15 | <p><b>Optimization of perovskite solar cells using data science analysis and machine learning predictions</b></p> <p>M. M. Elsenety<sup>1,2</sup>, C. Falaras<sup>3</sup>, E. Stathatos<sup>3</sup>, Y. Niu<sup>4</sup>, L. Hu<sup>4</sup></p> <p><sup>1</sup> Inst.e of Nanoscience &amp; Nanotechnology, Nat. Center for Scientific Research "Demokritos", Greece</p> <p><sup>2</sup> Dept Chemistry, Al-Azhar Un., Cairo, Egypt</p> <p><sup>3</sup> Electrical and Computer Engineering Dept., Univ. of the Peloponnese, Patras, Greece</p> <p><sup>4</sup> Inst.e of Solid State Physics, Hefei Inst.es of Physical Science, Chinese Academy of Sci., P.R. China</p> |

19:00

**NANOTECHNOLOGY 2024 Beach Party**

Please ensure that you have your Beach Party tickets for the dinner and drinks  
Boarding to buses at Porto Palace Hotel entrance for transfer to the Beach Bar  
Departure from Hotel will start at 18:00

**Thursday 4 July 2024**

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| 09:00-9:30<br>KEYNOTE<br>Chair: N. Kalfagiannis<br>TH2 | <b>Solar Hydrogen Innovation with Flux-Grown Photocatalytic Crystals</b><br>K. Teshima <sup>1,2,3,4</sup> , T. Yamada <sup>1,2</sup> , F. Hayashi <sup>2</sup> , M. Tipplook <sup>1</sup> , C. Terashima <sup>1,4</sup><br><sup>1</sup> Research Initiative for Supra-Materials, <sup>2</sup> Dept. of Materials Chemistry, Shinshu Un.,<br><sup>3</sup> Verne Crystal Inc., <sup>4</sup> Research Center for Space System Innovation, Tokyo Un. of Science, Japan  | 09:00-11:00<br>TH1     | <b>Workshop on Artificial Intelligence, Machine Learning, Intelligent Manufacturing and Automation 5 (NN24 &amp; ISFOE24)</b><br>Chair: S. Kassavetis  |
| 09:30-11:00<br>TH2                                     | <b>WS1: Nanoenergy</b><br>Chair: N. Kalfagiannis  | 09:00-09:30<br>INVITED | <b>Laser Induced Forward Transfer as a bioprinting method and applications</b><br>I. Zergioti <sup>1,2</sup><br><sup>1</sup> School of App. Mathematical and Physical Sci., Nat. Technical Un. of Greece<br><sup>2</sup> PhosPrint P.C., Attika Technology Park Lefkippas, Agia Paraskevi, Greece  |
| 9:30-10:00<br>INVITED                                  | <b>High Performance Bioderived Triboelectric Nanogenerators (TENGs) for Sustainable and Green Electronics</b><br>C. Pitsalidis<br>Khalifa Un., Abu Dhabi, UAE   | 09:30-10:00<br>INVITED | <b>Exosome Enhanced Bioprinting: Promises and Challenges</b><br>A. Sendemir <sup>1-5</sup> , P. İlhan <sup>2</sup> , E. M. Namli <sup>3</sup> , Z. Morcimen <sup>1</sup> , D. Sabirtas <sup>5</sup> , S. Tasdemir <sup>5</sup><br><sup>1</sup> Dept. of Bioengineering, Faculty of Engineering, Ege Un., Izmir, Türkiye<br><sup>2</sup> PA Biotechnology, Ege Technopark, Izmir, Türkiye<br><sup>3</sup> Dept. of Stem Cell, Graduate School of Health Sci., Ege Un., Izmir, Türkiye<br><sup>4</sup> Dept. of Biomedical Technologies, Graduate School of Natural and App. Sci., Ege Un., Izmir, Türkiye<br><sup>5</sup> Dept. of Bioengineering, Faculty of Engineering, Celal Bayar Un., Manisa, Türkiye |
| 10:00-10:15  | <b>Towards sustainable plasmonics: shapes and optical properties of magnesium nanoparticles</b><br>C. Boukouvala <sup>1,2</sup> , J. Asselin <sup>1,2</sup> , C. A. West <sup>1,2</sup> , A. Ten <sup>1,2</sup> , E. R. Hopper <sup>1,2</sup> , Q. M. Ramasse <sup>3,4,5</sup> , J. S. Biggins <sup>6</sup> and E. Ringe <sup>1,2</sup><br><sup>1</sup> Dept. of Materials Science and Metallurgy, Un. of Cambridge, UK<br><sup>2</sup> Dept. of Earth Sci., Un. of Cambridge, Cambridge<br><sup>3</sup> School of Chemical and Process Engineering, Un. of Leeds, UK<br><sup>4</sup> School of Physics and Astronomy, Un. of Leeds, UK<br><sup>5</sup> SuperSTEM, SciTech Daresbury Science and Innovation Campus, UK<br><sup>6</sup> Dept. of Engineering, Un. of Cambridge, Trumpington Street, UK   | 10:00-10:15            | <b>Itaconic acid: a versatile biobased building block for the replacement of (meth)acrylic acid in photocurable formulations for 3D printing</b><br>M. Maturi <sup>1,2</sup> , A. Sanz de Leon <sup>1</sup> , M. Comes Franchini <sup>2</sup> and S. I. Molina <sup>1</sup><br><sup>1</sup> Dept. of Materials Science, Metallurgic Engineering, and Inorganic Chemistry, Un. of Cadiz, Avda. Universidad de Cádiz 10, Campus Universitario de Puerto Real (Spain)<br><sup>2</sup> Dept. of Industrial Chemistry, Un. of Bologna, Via Gobetti 85, Bologna (Italy)  |
| 10:15-10:30  | <b>Energy transfer between tunneling electrons and excitons in van der Waals light sources and photodetectors</b><br>S. Papadopoulos <sup>1</sup> , L. Wang <sup>1</sup> , F. Iyikanat <sup>2</sup> , Y. Koyaz <sup>3</sup> , S. Shan <sup>1</sup> , J. Huang <sup>1</sup> , R. Khelifa <sup>1</sup> , T. Taniguchi <sup>4</sup> , K. Watanabe <sup>5</sup> , F. Javier García de Abajo <sup>2</sup> , L. Novotny <sup>1</sup><br><sup>1</sup> Photonics Laboratory, ETH Zürich, Zürich, Switzerland.<br><sup>2</sup> Inst. de Ciències Fotòniques (ICFO), The Barcelona Inst.e of Science and Technology, Castelldefels, Spain<br><sup>3</sup> Photonic Systems Laboratory, EPFL, Switzerland<br><sup>4</sup> InterNat. Center for Materials Nanoarchitectonics, Nat. Inst.e for Materials Science, Tsukuba, Japan.<br><sup>5</sup> Research Center for Functional Materials, Nat. Inst.e for Materials Science, Tsukuba, Japan. | 10:15-10:30            | <b>Design of a Novel Printed Matrix for Composite Graft Using 3D Printing Techniques</b><br>A. Orfanos <sup>1</sup> , K. Tsimenidis <sup>1</sup> , V. Karagkiozaki <sup>1</sup><br><sup>1</sup> BL Nanobiomed P.C., 20th Km Thessaloniki – Tagarades Road, Thessaloniki, Greece, 57001   |
| 10:30-10:45  | <b>Development of light harvesting structures for photovoltaic applications</b><br>H. Banks, B. Wood, J. Manning, M. Coogan and L. Danos<br>Dept. of Chemistry, Lancaster Un., UK.  | 10:30-10:45            | <b>Rheological analysis of bioinks used for Laser Induced Forward Transfer</b><br>S. Elezoglou <sup>1</sup> , K. Giannakopoulos <sup>1</sup> , A. Hatzia Apostolou <sup>3</sup> , A. Klinakis <sup>2,3</sup> , I. Zergioti <sup>1,3</sup><br><sup>1</sup> Nat. Technical Un. of School of App. Mathematical and Physical Sci., Greece<br><sup>2</sup> Biomedical Research Foundation of the Academy of Greece<br><sup>3</sup> Dept. of Naval Architecture, School of Engineering, Un. of West Attica, Greece<br><sup>4</sup> PhosPrint P.C., Attika Technology Park Lefkippas, Agia Paraskevi, Greece  |

11:00-11:30

**COFFEE BREAK**  
Grand Pietra Exhibition Hall

**NN24 POSTER Session**
**EXPO24 Exhibition & Networking**

|                        |  |                        |   |                    |  |
|------------------------|--|------------------------|---|--------------------|--|
| 11:30-13:30<br>DS1     | <b>WS3: Special Session for Bio2Brain MCS Project</b><br>Chair: M. Calamai   | 11:30-13:30<br>TH2     | <b>WS1: Nanoelectronics</b><br>Chair: A. Christou   | 11:30-13:30<br>DS2 | <b>Workshop on Centers of Excellence (NN24 &amp; ISFOE24)</b><br>Chair: G. Hadziioannou, Un. of Bordeaux, A. Laskarakis, LTFN, AUTH  |
| 11:30-12:00<br>INVITED | Single molecule imaging to track cellular proteins, increase diagnosis sensitivity and follow drug release from nanoparticles<br>Dr. Martino Calamai, <i>LENS, Un. of Florence, Italy</i>  | 11:30-12:00<br>INVITED | Low Dimensional Materials and Devices for Neuromorphic Computing<br>D. G. Georgiadou <sup>1</sup><br><i>Electronics and Computer Science &amp; Optoelectronics Research Centre, Un. of Southampton, UK</i>  | 11:30-12:00        | Centre of Excellence for Organic, Printed Electronics & Nano-Technologies (COPE-Nano)<br>S. Logothetidis<br><i>Nanotechnology Lab LTFN, Aristotle Un. of Thessaloniki, Greece</i>  |
| 12:00-12:30<br>INVITED | Unleashing Innovative Pharmaceuticals: Technology Transfer and Scale-Up for GMP Compliance<br>N. Günday-Türeli<br><i>MyBiotech GmbH, Germany</i>   | 12:00-12:30<br>INVITED | How to Enhance the Sensing Performance of Chemiresistive Gas Sensors<br>Sang Sub Kim<br><i>Dept. of Materials Science and Engineering, Inha Un., Incheon 22212, Republic of Korea</i>   | 12:00-12:15        | Excellence Centre of Advanced Material Research and Technology Transfer (CAMART2)<br>T. Safiulins<br><i>Inst.e of Solid State Physics, Un. of Latvia, Latvia</i>   |
| 12:30-12:45            | Nose-to-Brain Delivery of Biopharmaceuticals for the Therapy of Central Nervous System Diseases – Bio2Brain<br>C. Gruber-Traub<br><i>Dept. of Functional Surfaces and Materials, Fraunhofer Inst.e for Interfacial Engineering and Biotechnology IGB, Nobelstraße 12, 70569 Stuttgart</i>  | 12:30-12:45            | Enhancing Electrical Transport in Hybrid Carbon Nanotube–Graphene Networks for Advanced Electronic Applications<br>A. Lekawa-Raus <sup>1</sup> , K. Milowska <sup>2</sup> , S. Lepak-Kuc <sup>3,1</sup><br><sup>1</sup> Centre for Advanced Materials and Technologies, CEZAMAT, Warsaw Un. of Technology, Poland<br><sup>2</sup> CIC nanoGUNE, Spain<br><sup>3</sup> Fac. of Mechanical and Industrial Engineering, Warsaw   | 12:15-12:30        | Exploring Collaboration Opportunities with Baltic Biomaterials Centre of Excellence<br>A. Dubnika <sup>1,2</sup> , D. Loca <sup>1,2</sup> , J. Locs <sup>1,2</sup><br><sup>1</sup> <i>Institute of Biomaterials and Bioengineering, Faculty of Natural Sciences and Technology, Riga Technical University, Pulka 3, Riga, LV-1007, Latvia.</i><br><sup>2</sup> <i>Baltic Biomaterials Centre of Excellence, Headquarters at Riga Technical University, Riga, Latvia.</i> |
| 12:45-13:00            | Mucoadhesive microgels for nose-to-brain drug delivery of neurotherapeutics<br>G. Rath, D. Mazzali, A. Zarbakhsh, M. Resmini<br><i>School of Physical and Chemical Sci., Queen Mary Un. of London, Mile End Road, E1 4NS London, UK</i>  | 12:45-13:00            | Improved Carrier Extraction via HTL variation leads to increased Efficiency in planar Antimony Sulfide (Sb <sub>2</sub> S <sub>3</sub> ) solar cells<br>L.Theofylaktos <sup>1,2</sup> , A. Kalafatis <sup>1</sup> , P. Harlaftis <sup>1</sup> , S. Orfanoudakis <sup>1</sup> , E. Symeonidou <sup>1,2</sup> , M. Karnachoriti <sup>3</sup> , P. Dimitrakis <sup>1</sup> , A. G. Kontos <sup>3</sup> and T. Stergiopoulos <sup>1,*</sup><br><sup>1</sup> <i>Inst.e of Nanoscience and Nanotechnology, N.C.S.R. Demokritos, Greece</i><br><sup>2</sup> <i>Dept. of Chemistry, Aristotle Un. of Thessaloniki, Greece</i><br><sup>3</sup> <i>School of App. Mathematical and Physical Sci., Nat. Technical Un. Greece</i> | 12:30-12:45        | InnoRenew CoE - Renewable Materials and Healthy Environments Research and Innovation Centre of Excellence<br>A. Kutnar <sup>1,2</sup> , W. Pajerski <sup>1</sup> , A. Sandak <sup>1,2</sup><br><sup>1</sup> <i>InnoRenew CoE, Livade 6a, 6310 Izola, Slovenia</i><br><sup>2</sup> <i>Un. of Primorska, Titov trg 4, 6000 Koper, Slovenia</i>   |
| 13:00-13:15            | Rational Design of Nanobodies Targeting LINGO-1<br>A. Röntgen <sup>1</sup> , V. Roy Chowdhury <sup>1</sup> , A. Ramon <sup>1</sup> , M. Rojas-Rodríguez <sup>2</sup> , M. Greenig <sup>1</sup> , X. Xu <sup>1</sup> , M. Calamai <sup>2,3</sup> , P. Sormanni <sup>1</sup> , M. Vendruscolo <sup>1</sup><br><sup>1</sup> <i>Yusuf Hamied Dept. of Chemistry, Un. of Cambridge, UK</i><br><sup>2</sup> <i>European Laboratory for Non-Linear Spectroscopy, Un. of Florence, Italy</i><br><sup>3</sup> <i>Nat. Inst.e of Optics – Nat. Research Council (CNR-INO), Italy</i> | 13:00-13:30<br>INVITED | Light-based processing of solution-processable materials for future electronic applications<br>N. Kalfagiannis <sup>1</sup><br><i>Un. of Ioannina, Dept. of Materials Science and Engineering, 45110, Ioannina, Greece</i>  | 12:45-13:00        | Hellenic Robotics Center of Excellence (HERON)<br>E. Papadopoulos<br><i>Institute of Robotics, ATHENA Research Center, Greece</i>  |
| 13:15-13:30            | Sustainable and Surfactant-Free Synthesis of Negatively Charged Acrylamide Nanogels for Biomedical Applications<br>D. Mazzali <sup>1</sup> , G. Ra <sup>1</sup> , A. Roentgen <sup>2</sup> , V. Roy Chowdhury <sup>2</sup> , M. Vendruscolo <sup>2</sup> , M. Resmini <sup>1</sup><br><sup>1</sup> <i>Dept. of Chemistry, Queen Mary Un. of London, UK</i><br><sup>2</sup> <i>Centre for Misfolding Diseases, Yusuf Hamied Dept. of Chemistry, Un. of Cambridge, Cambridge, UK</i>   |                        |   | 13:00-13:15        | Round Table Discussion:<br><b>Building and Governing a successful CoE</b><br>- CoE Establishment and Complementary Funding<br>- Challenges during the expansion of Centers<br>- Business Models of CoE and Best Practices<br>- Discussion on Future Collaboration  |

13:30-15:00

LUNCH BREAK  
Grand Pietra Exhibition Hall

**NN24 POSTER Session**

**EXPO24 Exhibition & Networking**

| 15:00-17:00<br>TH2     | WS2: Nanoparticles-Nanocomposites<br>Chair: C. Gravalidis   | 15:00-17:30<br>DS1 | WS3: Special Session for Bio2Brain MSC Project<br>Chair: N. Günday-Türelı   | 15:00-17:30<br>TH1     | Bioelectronics 4 (NN24 & ISFOE24)<br>Chair: C. Pitsalidis   |
|------------------------|---|--------------------|---|------------------------|---|
| 15:00-15:30<br>INVITED | Enhancing Nanoscience and Nanotechnology: The Role of ESRF-EBS in Advanced Nanomaterials Research<br>E. Capria <sup>1</sup><br><i>The European Synchrotron (ESRF), - Grenoble, France</i>                                     | 15:00-15:15        | Role of Fc receptors for transmucosal drug delivery of therapeutic antibodies<br>N. Ruggeri, D. Abdeldaim, I. Shrimo, M. Sickinger, K. Mayer, K. Schindowski<br><i>Inst.App. Biotechnology, Biberach Un. of App. Sci., Biberach an der Riss, Germany</i>  | 15:00-15:30<br>INVITED | Combining SPR and Organic field effect detection in a low cost, high performance monitoring system for thin molecular layers deposition<br>D. Hatami <sup>1</sup> , A. Spanu <sup>2</sup> , A. Bonfiglio <sup>2</sup><br><sup>1</sup> <i>Dept. of Electrical and Electronic Engineering, Un. of Cagliari Piazza d'Armi, Italy</i><br><sup>2</sup> <i>Scuola Universitaria Superiore IUSS, Italy</i> |
|                        |   | 15:15-15:30        | Spray-dried microparticles based on thiolated chitosan for nose-to-brain drug delivery<br>B. Di Lelio <sup>1,2</sup> , G. M. Tovar <sup>1,2</sup> , C. Gruber-Traub <sup>2</sup><br><sup>1</sup> <i>Dept. of Functional Surfaces and Materials, *Fraunhofer Inst.e for Interfacial Engineering and Biotechnology IGB, Germany -</i><br><sup>2</sup> <i>Inst.e of Interfacial Process Engineering and Plasma Technology, Un. of Stuttgart, Germany</i>   |                        |   |
| 15:30-16:00<br>INVITED | Bio-Based Photo-Initiators for UV-Nano-Imprint Resins<br>D. Nees, S. Ruttloff, J. Götz, U. Palfinger, A. Haase. P. Melchior and B. Stadlober<br><i>MATERIALS, JOANNEUM RESEARCH Forschungsgesellschaft mbH, Weiz, Austria</i> | 15:30-15:45        | Cell biocompatibility, Trafficking, and Release of Fluorescent PLGA Nanoparticles for Nose to Brain Delivery (N2B-delivery)<br>M. Rojas-Rodriguez <sup>1</sup> , S. Akpınar <sup>2,3</sup> , N. Günday-Türelı <sup>2</sup> , A. E. Türelı <sup>2</sup> , M. Schneider <sup>3</sup> , M. Calamai <sup>1,4</sup><br><sup>1</sup> <i>European Laboratory for Non-linear Spectroscopy, Italy</i><br><sup>2</sup> <i>MyBiotech GmbH, Überherrn, Germany</i><br><sup>3</sup> <i>Dept Pharmacy, Biopharmaceutics and Pharmaceutical Technology, Saarland Un., Germany.</i><br><sup>4</sup> <i>Nat. Inst.e of Optics, CNR-INO, Italy.</i>   | 15:30-16:00<br>INVITED | Conducting hydrogel electrodes for epidermal electronics and sensing<br>A. M. Pappa<br><i>Khalifa Un., Abu Dhabi, UAE</i>   |
|                        |   | 15:45-16:00        | Rational Design of Single-Domain Antibodies Targeting the Central Nervous System Neurite Outgrowth Inhibitor Nogo-A<br>V. Roy Chowdhury <sup>1</sup> , A. Röntgen <sup>1</sup> , M. Greenig <sup>1</sup> , Y. Méndez Gómez <sup>1</sup> , M. Nowinska <sup>1</sup> , S. Spiegel <sup>2</sup> , R. Taylor <sup>1</sup> , P. Sormanni <sup>1</sup> , V. Pernet <sup>2</sup> , M. E. Schwab <sup>3</sup> , M. Vendruscolo <sup>1</sup><br><sup>1</sup> <i>Centre for Misfolding Diseases, Yusuf Hamied Dept. of Chemistry, Un. of Cambridge, UK</i><br><sup>2</sup> <i>Dept. for Biomedical Research, Un. Hospital Inselspital Bern, Un. of Bern, Switzerland</i><br><sup>3</sup> <i>Dept. of Health Sci. and Technology, Inst.e for Regenerative Medicine, Un. of Zurich, Switzerland</i> |                        |   |

|             |  |   |   |
|-------------|--|---|---|
| 16:00-16:15 | <p><b>Synthesis of Starch Nanocrystals from Pearl Millet Varieties with Different Amylose Content and its Mathematical Modelling</b><br/> <b>D. Chandra Saxena</b><br/> <i>Dept. of Food Engineering &amp; Technology, Sant Longowal Inst.e of Engineering &amp; Technology Longowal - 148 106. District Sangrur (Punjab), India</i></p> | <p><b>16:00-16:15</b></p> <p><b>Advanced imaging approaches for studying biopharmaceuticals and membrane proteins dynamics and their trafficking.</b><br/> <b>A. Gomez-Navarro<sup>1</sup>, V.R. Chowdhury<sup>3</sup>, A. Röntgen<sup>3</sup>, M. Vendruscolo<sup>3</sup>, M. Calamai<sup>1,2</sup></b><br/> <sup>1</sup><i>LENS- European Laboratory for Non-Linear Spectroscopy, Un. of Florence, Sesto Fiorentino (Firenze), Italy</i><br/> <sup>2</sup><i>Nat. Inst.e of Optics - Nat. Research Council (CNR-INO), Sesto Fiorentino, Italy</i><br/> <sup>3</sup><i>Centre for Misfolding Diseases, Yusuf Hamied Dept. of Chemistry, Un. of Cambridge, UK</i></p> | <p><b>16:00-16:15</b></p> <p><b>Combining reduced-graphene oxide transistor and CRISPR/Cas13a ribonucleic particles as a tool for amplification-free RNA detection</b><br/> <b>P. Gueronprez<sup>1</sup>, T.A. Le<sup>2</sup>, P. Nioche<sup>3</sup>, E. Krejci<sup>4</sup>, V.T. Thu<sup>2</sup>, L. Renaud<sup>5</sup>, S. Sanaur<sup>6</sup>, B. Piro<sup>1</sup></b><br/> <sup>1</sup><i>Un. Paris Cité, ITODYS, CNRS, Paris, France</i><br/> <sup>2</sup><i>Un. of Science and Technology of Hanoi (USTH) and Academy of Science &amp; Technology (VAST), Vietnam</i><br/> <sup>3</sup><i>INSERM U1124, Un. Paris Cité, Paris, France</i><br/> <sup>4</sup><i>CNRS, Un. Paris Cité, ENS Paris Saclay, France</i><br/> <sup>5</sup><i>Université de Lyon, Inst. des Nanotechnologies de Lyon INL-UMR5270, Université Lyon 1, France</i><br/> <sup>6</sup><i>Inst. Mines-Telecom, Mines Saint-Étienne, Departement of Flexible Electronics, France</i></p> |
| 16:15-16:30 | <p><b>Microwave plasma activated direct synthesis of the graphene on Si (100) and SiO<sub>2</sub> substrates for photovoltaic and biosensor applications</b><br/> <b>S. Meskinis, S. Jankauskas, A. Guobiene, A. Vasiliauskas, R. Gudaitis</b><br/> <i>Inst.e of Materials Science, Kaunas Un. of Technology, Kaunas, Lithuania</i></p>  | <p><b>16:15-16:30</b></p> <p><b>Photocrosslinked mucoadhesive hyaluronic acid hydrogels for transmucosal drug delivery</b><br/> <b>S. Asamoah<sup>1,2</sup>, M. Pravda<sup>1</sup>, E. Šnejdrová<sup>2</sup></b><br/> <sup>1</sup><i>Contipro a.s., Dolní Dobrouč 401, 561 02 Dolní Dobrouč, Czech Republic</i><br/> <sup>2</sup><i>Dept. of Pharmaceutical Technology, Faculty of Pharmacy in Hradec Králové, Charles Un., Heyrovského 1203, 500 05 Hradec Králové, Czech Republic</i></p>   | <p><b>16:15-16:30</b></p> <p><b>Plasmonics-based strategy for concentration of analytes</b><br/> <b>M.P. Carmo<sup>1</sup>, D. Mack<sup>2</sup>, D. J. Roth<sup>1</sup>, F. J. Rodríguez-Fortuño<sup>1</sup>, P.A. Huidobro<sup>3</sup>, A. Rakovich<sup>1</sup></b><br/> <sup>1</sup><i>Physics Dept., King's College London, UK</i><br/> <sup>2</sup><i>Physics Dept., Imperial College London, UK</i><br/> <sup>3</sup><i>IFIMAC, Universidad Autónoma de Madrid, Spain</i></p>  |
| 16:30-16:45 |  | <p><b>16:30-16:45</b></p> <p><b>Enzymatically crosslinked gelatin as a drug delivery system for the intranasal transmucosal pathway of active pharmaceutical ingredient</b><br/> <b>A. M. Mihailescu, C. Gruber-Traub</b><br/> <i>Dept. of Functional Surfaces and Materials, Fraunhofer Inst.e for Interfacial Engineering and Biotechnology IGB, Germany</i></p>  |   |
| 16:45-17:00 |  | <p><b>16:45-17:00</b></p> <p><b>Safe-by-Design Strategies for Intranasal Drug Delivery Systems: Machine Learning solutions to differentiate Epithelial Tissues via ATR FTIR Spectroscopy</b><br/> <b>R. Topalian<sup>1,2</sup>, L. Kavallaris<sup>1</sup>, C. Mavoungou<sup>1</sup></b><br/> <sup>1</sup><i>Inst.e for App. Biotechnology, Biberach Un. of App. Sci., Germany</i><br/> <sup>2</sup><i>Ulm Un., Helmholtzstraße 16, 89081 Ulm, Germany</i></p>   |   |

17:00-18:30

**COFFEE BREAK**  
 Grand Pietra Exhibition Hall

**NN24 POSTER Session**

**EXPO24 Exhibition & Networking**

Friday 5 July 2024

|  |   |                                 |  |
|--|---|---------------------------------|--|
| 09:00-09:30<br>KEYNOTE<br>Chair: Y. Missirlis<br>🏠CH | Technology for Bioelectronic Medicine<br>G. Malliaras<br>Dept. of Engineering, Un. of Cambridge, Cambridge, UK  |                                 |  |
| 09:30-11:00<br>🏠TH2                                  | WS2: Graphene & Other 2D NanoMaterials<br>Chair: E. Capria  | 09:30-11:00<br>🏠CH              | WS3: Nanoparticles in Medicine<br>Chair: Y. Missirlis  |
| 09:30-10:00<br>INVITED                               | <b>The conundrum of Carbon nanodots: a chemical perspective</b><br>M. Bartoli <sup>1,2</sup> , A. Tagliaferro <sup>2,3</sup><br><sup>1</sup> Center for Sustainable Future Technologies, Italian Institute of Technology, Italy<br><sup>2</sup> Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali (INSTM), Italy<br><sup>3</sup> Dept. of App. Science and Technology, Politecnico di Torino, Italy  | 09:30-10:00<br>INVITED          | <b>Calcium phosphates as drug delivery vehicles</b><br>D. Loca <sup>1,2</sup> , I. Kovrlija <sup>1,2</sup> , O. Demir <sup>1,2</sup> , A. Pyllostomou <sup>1,2</sup> , E. Pańcyszyn <sup>3</sup> , M. Corazzari <sup>3,4</sup> , J. Locs <sup>1,2</sup><br><sup>1</sup> Inst. e of Biomaterials and Bioengineering, Faculty of Natural Sci. and Technology, Riga Technical Un., Latvia.<br><sup>2</sup> Baltic Biomaterials Centre of Excellence, Headquarters at Riga Technical Un., Riga, Latvia.<br><sup>3</sup> Dept. of Health Science & Center for Translational Research on Autoimmune and Allergic Disease (CAAD), Un. of Piemonte Orientale, 28100 Novara, Italy<br><sup>4</sup> Interdisciplinary Research Center of Autoimmune Diseases (IRCAD), Un. of Piemonte Orientale, Novara, Italy   |
| 10:00-10:30<br>INVITED                               | <b>Tuning the optoelectronic properties of two-dimensional materials</b><br>G. Kourmoulakis <sup>1,2</sup> , A. Michail <sup>3,4</sup> , I. Paradisanos <sup>1</sup> , X. Marie <sup>5</sup> , M.M. Glazov <sup>6</sup> , L. Covaci <sup>7</sup> , E. Stratakis <sup>1,8</sup> , K. Papagelis <sup>4,9</sup> , J. Parthenios <sup>4</sup> , and G. Kioseoglou <sup>1,2</sup><br><sup>1</sup> Inst. e of Electronic Structure and Laser, FORTH, Heraklion, Greece<br><sup>2</sup> Dept. of Materials Science and Technology, Un. of Crete, Heraklion, Greece<br><sup>3</sup> Dept. of Physics, Un. of Patras, Patras, Greece<br><sup>4</sup> Inst. e of Chemical Engineering Sci., FORTH, Stadiou str Platani, Patras, Greece<br><sup>5</sup> Universite de Toulouse, INSA-CNRS-UPS, LPCNO, France<br><sup>6</sup> Ioffe Inst. e, St.-Petersburg, Russia<br><sup>7</sup> Un. of Antwerp, Belgium<br><sup>8</sup> Dept. of Physics, Un. of Crete, Greece<br><sup>9</sup> School of Physics, Dept. of Solid-State Physics, Aristotle Un. of Thessaloniki, Thessaloniki, Greece | 10:00-10:15                     | <b>Silicon nanoneedles for long-term, sustained treatment of eye neovascularization</b><br>Y.M. Paulus <sup>1,2</sup> , V.P. Nguyen <sup>1</sup> , J. Jeong <sup>3</sup> , J. Lee <sup>3</sup> , C.H. Lee <sup>3,4,5</sup><br><sup>1</sup> Dept. of Ophthalmology and Visual Sci., Un. of Michigan, Ann Arbor, MI 48105, USA<br><sup>2</sup> Dept. of Biomedical Engineering, Un. of Michigan, Ann Arbor, MI, USA<br><sup>3</sup> School of Mechanical Engineering, Purdue Un., West Lafayette, IN 47907, USA<br><sup>4</sup> Weldon School of Biomedical Engineering, Purdue Un., West Lafayette, IN 47907, USA<br><sup>5</sup> Dept. of Materials Engineering, Purdue Un., West Lafayette, IN 47907, USA   |
|  |   | 10:15-10:30<br>YRA<br>CANDIDATE | <b>Biocompatibility Assessment of Titanium Nitride Nanoparticles</b><br>T. Odutola <sup>1</sup> , N. Pliatsikas <sup>1</sup> , S. Panos <sup>1</sup> , I. Tsamesidis <sup>2</sup> , S. Kassavetis <sup>1</sup> , E. Kontonasaki <sup>2</sup> , J. Arvanitidis <sup>1</sup> , D. Christofilos <sup>3</sup> , M. Tziritidou <sup>4</sup> , M. Gioti <sup>1</sup> , P. Patsalas <sup>1</sup><br><sup>1</sup> Dept. of Physics, Aristotle Un. of Thessaloniki, GR-54124 Thessaloniki, Greece<br><sup>2</sup> School of Dentistry, Aristotle Un. of Thessaloniki, Greece<br><sup>3</sup> School of Chemical Engineering and Physics Laboratory, Faculty of Engineering, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece<br><sup>4</sup> Department of Midwifery, University of Western Macedonia, GR-50200 Ptolemaida, Greece |
| 10:30-10:45  | <b>Functional materials based on wood, carbon nanotubes, and graphene</b><br>A. Lekawa-Raus <sup>1</sup> , D. Lukawski <sup>2</sup><br><sup>1</sup> Centre for Advanced Materials and Technologies, CEZAMAT, Warsaw Un. of Technology, Warsaw, Poland<br><sup>2</sup> Faculty of Materials Engineering and Technical Physics, Poznan Un. of Technology, Poznan, Poland  | 10:30-10:45                     | <b>Evaluation of Anticancer Properties of Polymeric Nanoparticles Loaded with Resveratrol or Crithmum maritimum L. Extract</b><br>K. Meliopoulos <sup>1</sup> , K. Tsimenidis <sup>2</sup> , A. Orfanos <sup>2</sup> , A. Laskarakis <sup>1</sup> , V. Karagkiozaki <sup>2</sup> , S. Logothetidis <sup>1</sup><br><sup>1</sup> Nanotechnology Lab LTFN, Physics Department, Aristotle University of Thessaloniki, Greece<br><sup>2</sup> BL Nanobiomed P.C., 20th Km Thessaloniki – Tagarades Road, Thessaloniki, Greece  |
| 10:45-11:00  | <b>0D + 1D = 2D Graphene-Like Heterostructures by Supramolecular Assembly of MWCNT</b><br>J. Texter <sup>1,2,3</sup> , Q. Li <sup>1</sup> , and F. Yan <sup>1</sup><br><sup>1</sup> Dept. of Polymer Science and Engineering, College of Chemistry, Chemical Engineering and Materials Science, Soochow Un. Suzhou, China<br><sup>2</sup> Coating Research Inst. e, School of Engineering, Eastern Michigan Un., Ypsilanti, MI 48197 USA<br><sup>3</sup> Strider Research Corporation, Rochester, USA   | 10:45-11:00                     |  |

11:00-11:30

COFFEE BREAK  
Grand Pietra Exhibition Hall

NN24 POSTER Session


EXPO24 Exhibition & Networking

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|--------------------|--|------------------------|--|
| 11:30-13:30<br>🏠CH | <b>WS3: Nanoparticles for Clinical Applications III</b><br>Chair: I. Feitshans   | 11:30-13:30<br>🏠TH1    | <b>WS2: Nanocomposites</b><br>Chair: D. Georgiadou   |
| 11:30-12:00        | <b>Legal Frameworks for Reducing Maternal Mortality: Nanomedicine Meets the Greatest Challenge in Global Health Law</b><br>Dr ilise Feitshans<br><i>JD and ScM and DIR, (Chair of the Session) President-Elect Virginia Mountain Valley Lawyers Alliance and LLM Candidate Georgetown Un. Law Center</i> | 11:30-12:00<br>KEYNOTE | <b>Heterogenous Integration of Superconductor With GaN Epitaxy</b><br>A. Christou<br><i>Un. of Maryland, USA</i>   |
| 12:00-12:15        | <b>Nanomedicine: Technology challenges the old ways, but does it challenge traditional ethics?</b><br>Cagri Zeybek Unsal<br><i>Medical Ethics and History of Medicine- Bioethics Center, Hacettepe Un., Faculty of Medicine, Ankara, Türkiye</i>   | 12:00-12:30<br>INVITED | <b>Ultrafast photo-magnetic toggle switching without relying on heat in ferrimagnetic dielectrics</b><br>A. Stupakiewicz<br><i>Faculty of Physics, Un. of Bialystok, Poland</i>  |
| 12:15-12:45        | <b>Nanomedicine Transforming Disability into Health</b><br>Chrisa Vassara<br><i>G. Gennimatas General Hospital Thessaloniki, Greece</i>  | 12:30-12:45            | <b>Dielectric behavior of stretchable silicone rubberbarium titanate composites</b><br>A. Drymiskianaki <sup>1,2</sup> , K. Katsara <sup>2,3</sup> , A. Manousaki <sup>2</sup> , Z. Viskadourakis <sup>2</sup> and G. Kenanakis <sup>2</sup><br><sup>1</sup> Dept. of Materials Science and Technology, Un. of Crete, Greece<br><sup>2</sup> Inst.e of Electronic Structure and Laser (IESL)-Foundation for Research and Technology-Hellas (FORTH), 100 N. Plastira, Vassilika Vouton, Greece;<br><sup>3</sup> Dept. of Agriculture, Hellenic Mediterranean Un., Greece  |
| 12:45-13:00        | <b>You're Going to Court (and How You Could Have Avoided It) The Research Entrepreneur's Guide to Litigation Worldwide</b><br>John S. Koehler<br><i>Virginia Mountain/Valley Lawyers' Alliance, USA</i>  | 12:45-13:00            | <b>Thermal scanning probe lithography accelerated.</b><br>V. Theofylaktopoulos, F. Könemann, S. Bonanni, K. Buddha, E. Cagin<br><i>Heidelberg Instruments Nano AG, Bändliweg 30, 8048 Zürich, Switzerland</i>  |
| 13:00-13:15        | <b>Returning to Life: Nanomedicine Developments that May Upend Guardianship and End of Life Directives</b><br>Hyatt Browning Shirkey<br><i>Hyatt Browning Shirkey Law Firm &amp; The Virginia Mountain Valley Lawyer Alliance 333 Church Ave., S.W.Roanoke, Virginia, 24016, USA</i>                     | 13:00-13:15            | <b>Roll-to-Roll Processing of Silicate-based Nanocomposite Barrier Lacquers - Challenges and Chances</b><br>S. Schiesl*, E. Kucukpinar<br><i>Fraunhofer Inst.e for Process Engineering and Packaging, Material Development, Freising, Germany</i>  |
| 13:15-13:30        | Discussion   | 13:15-13:30            | <b>The Origin of Amphipathic Nature of Short and Thin Pristine Carbon Nanotubes—Fully Recyclable 1D Water-in-Oil Emulsion Stabilizers</b><br>A.W. Blacha <sup>1</sup> , K.Z. Milowska <sup>2,3,4</sup> , M.C. Payne <sup>2</sup> , H.F. Greer <sup>5</sup> , A.P. Terzyk <sup>6</sup> , E. Korczeniewski <sup>6</sup> , A. Cyganiuk <sup>6</sup> , S. Boncel <sup>1</sup><br><sup>1</sup> Faculty of Chemistry, Sil. Univ Technology, Poland<br><sup>2</sup> Cavendish Laboratory, Un. of Cambridge, UK<br><sup>3</sup> CIC nanoGUNE, Spain<br><sup>4</sup> Ikerbasque, Basque Foundation for Science, Spain<br><sup>5</sup> Yusuf Hamied Dept Chemistry, Univ. Cambridge, UK<br><sup>6</sup> Faculty of Chem, N. Copernicus Univ. Toruń, Poland |

 13:30-15:00 **LUNCH BREAK**  
Grand Pietra Exhibition Hall

**NN24 POSTER Session**
**EXPO24 Exhibition & Networking**

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|------------------------|--|------------------------|--|
| 15:00-17:00<br>🏠CH     | <b>WS3: Latest Advances in Nanomedicine</b><br>Chair: C. Gravalidis  | 15:00-17:00<br>🏠TH1    | <b>WS2: Nanocharacterization</b><br>Chair: M. Bartoli  |
| 15:00-15:30<br>INVITED | <b>From the "organ-on-chip" to the "body-on-chip": Minuscule, but very efficient devices revolutionizing the medical field</b><br>T. Mitsiadis<br><i>Un. of Zurich, Inst.e of Oral Biology, Zurich, Switzerland</i>  | 15:00-15:30<br>INVITED | <b>SOLARIS synchrotron: a state-of-the-art large-scale facility in CEE countries</b><br>A.Maximenko, M.Gofuński, M.Sikora, J.Szlachetko<br><i>SOLARIS Nat. Synchrotron Radiation Centre, Jagiellonian Un., Czerwone Maki 98 Street, 30-392 Krakow, Poland</i>  |
| 15:30-16:00<br>INVITED | <b>Synthesis of functionalized nanoparticles and their antibacterial activity</b><br>P. Das <sup>1</sup> , M. Christodoulides <sup>2</sup> , and A. G. Kanaras <sup>1</sup><br><sup>1</sup> School of Physics and Astronomy, Un. of Southampton, United Kingdom. | 15:30-15:45            | <b>Carrier concentration effects on (Cd,Mn)Te QW's ODMR signal studied in the microscale</b><br>Dydniański A. *, Lopion A., Raczynski M., Połczynska K.E., Kazimierzczuk T., Pacuski W. and Kossacki P.<br><i>Inst.e of Experimental Physics, Faculty of Physics, Faculty of Physics, Un. of Warsaw Poland</i> |

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|                               | <sup>2</sup> School of Clinical and Experimental Sci., Un. of Southampton, UK   | <b>15:45-16:00</b><br>YRA<br>CANDIDATE | <b>Stabilizer Effects on Flow Synthesis of Iron Oxide Nanoparticles in Polyol Medium: Towards a Comprehensive Understanding of Formation Mechanisms</b><br>L. Van Leuven <sup>1</sup> , T. Vangijzegem <sup>1</sup> , D. Stanicki <sup>1</sup> , S. Laurent <sup>1,2</sup><br><sup>1</sup> General, Organic and Biomedical Chemistry Unit, NMR and Molecular Imaging Laboratory, Un. of Mons (UMONS), 7000 Mons, BELGIUM<br><sup>2</sup> Center for Microscopy and Molecular Imaging (CMMI), 6041 Gosselies, BELGIUM   |
| <b>16:00-16:30</b><br>INVITED | <b>Nanoparticles and Blood Mixing in Microfluidic Reactors using Computational Fluid Dynamics</b><br>T. Karakasidis <sup>1</sup> , E. Karvelas <sup>1</sup> , G. Sofiadis <sup>2</sup> , C. Liosis <sup>3</sup> , I. Sarris <sup>4</sup><br><sup>1</sup> Condensed Matter Physics Laboratory, Dept. of Physics, Un. of Thessaly, Greece<br><sup>2</sup> Hydromechanics and Environmental Engineering Laboratory, Dept. of Civil Engineering, Un. of Thessaly, Pedion Areos, 38334 Volos, Greece<br><sup>3</sup> Dept. of Biomedical Engineering, Un. of West Attica, 12241 Greece<br><sup>4</sup> Dept. of Mechanical Engineering, Un. of West Attica, 12241 Greece | <b>16:00-16:15</b><br>YRA<br>CANDIDATE | <b>Molecular half-cages in the synthesis of intrinsically chiral anisotropic gold nanoparticles</b><br>A. Le Hoang <sup>1</sup> , N. Kowalska <sup>1</sup> , F. Bandalewicz <sup>1</sup> , W. Drożdż <sup>2</sup> , A. Stefankiewicz <sup>2</sup> , W. Lewandowski <sup>1</sup><br><sup>1</sup> Faculty of Chemistry, Un. of Warsaw, Poland<br><sup>2</sup> Faculty of Chemistry, Adam Mickiewicz Un., Poland  |
|                               |   | <b>16:15-16:30</b>                     | <b>Ionic liquid/polar solvent carbon-based ionogel composites for electromagnetic interference shielding by microwave absorption.</b><br>P. Al Malak <sup>1,2</sup> , C. Vancaeyzeele <sup>2</sup> , G. T. M. Nguyen <sup>2</sup> , P.-H. Aubert <sup>2</sup> , F. Vidal <sup>2</sup> , C. Galindo <sup>1</sup> , P. Bondavalli <sup>1</sup> , C. Plesse <sup>2</sup><br><sup>1</sup> Thales Research & Technology, 1 Avenue Augustin Fresnel, 91767, Palaiseau, France<br><sup>2</sup> Laboratory of Physicochemistry of Polymers and Interfaces (EA 2528), CY Cergy-Paris Un., France                          |
| <b>16:30-17:00</b><br>INVITED | <b>Information flow in cells, tissues and tissue engineering</b><br>Y. Missirlis<br>Uni. of Patras, Greece  | <b>16:30-16:45</b><br>YRA<br>CANDIDATE | <b>Colloidal nitride nanoparticles by Nanosecond Laser Ablation</b><br>S. Panos <sup>1</sup> , N. Pliatsikas <sup>1</sup> , T. Odutola <sup>1</sup> , S. Kassavetis <sup>1</sup> , C. Papouli <sup>1</sup> , J. Arvanitidis <sup>1</sup> , D. Christofilos <sup>2</sup> , M. Gioti <sup>1</sup> , E. Pavlidou <sup>1</sup> , P. Patsalas <sup>1</sup><br><sup>1</sup> Dept. of Physics, Aristotle Un. of Thessaloniki, GR-54124 Thessaloniki, Greece<br><sup>2</sup> School of Chemical Engineering and Physics Laboratory, Faculty of Engineering, Aristotle Un. of Thessaloniki, GR-54124 Thessaloniki, Greece |
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| <b>17:00-17:30</b>            | <div style="text-align: center;">  <h2 style="margin: 0;">Closing Ceremony</h2> <p style="margin: 0;">Closing Remarks and Discussion<br/>                     Ceremony for NN24 Awards<br/>                     Farewell comments &amp; End of NN24</p> </div>   |  |  |



## WS1 POSTER SESSION

Tuesday 2 July to Friday 5 July: Poster Display

Thursday 4 (17:30-20:00): Poster Presentation

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| P1-1<br>YRA<br>CANDIDATE | <b>Tunable polarization degeneracy points in a perovskite-filled open cavity</b><br>Woyciechowska A.* <sup>1</sup> , Kędziora M. <sup>1</sup> , Opala A. <sup>1,2</sup> , Sigurðsson H. <sup>1,3</sup> , Król M. <sup>1</sup> , Mazur R. <sup>4</sup> , Piecek W. <sup>4</sup> , Szczytko J. <sup>1</sup> , Piętka B. <sup>1</sup><br><sup>1</sup> <i>Inst.e of Experimental Physics, Faculty of Physics, Un. of Warsaw, Poland</i><br><sup>2</sup> <i>Inst.e of Physics, Polish Academy of Sci., Warsaw, Poland</i><br><sup>3</sup> <i>Science Inst.e, Un. of Iceland, Reykjavik, Iceland</i><br><sup>4</sup> <i>Faculty of New Technologies and Chemistry, Military Un. of Technology, Warsaw, Poland</i> |
| P1-2                     | <b>Photoelectrochemical characterisation of solar cell absorber materials</b><br>L. Mitchell, B. Griffin, D. Smith and L. Danos<br><i>Dept. of Chemistry, Lancaster Un., Lancaster, LA1 4YB, UK</i>   |
| P1-3                     | <b>Efficient light harvesting in dye-polymer mixtures</b><br>S. Doyle, H. Chintakuntla, R. Manning and L. Danos<br><i>Dept. of Chemistry, Lancaster Un., Lancaster, LA1 4YB, UK</i>   |
| P1-4                     | <b>Multiplication of laser repetition rate exploiting Fabry-Perot resonator</b><br>G. Właź*, M. Kobecki, T. Jakubczyk, P. Kossacki<br><i>Inst.e of Experimental Physics, Faculty of Physics, Un. of Warsaw, Poland</i>  |
| P1-5                     | <b>3D-Nanopores tailored for optical and electrical applications</b><br>Lanzavecchia G.* <sup>1,2</sup> , Sapunova A. <sup>1,3</sup> , Douaki A. <sup>1</sup> , Garoli D. <sup>1,4</sup> , Krahe R. <sup>1</sup><br><sup>1</sup> <i>Italian Institute of Technology, Via Morego 30, 16163, Genoa, Italy.</i><br><sup>2</sup> <i>Dept. of Physics, Università di Genova, Via Dodecaneso 33, 16146, Genoa, Italy</i><br><sup>3</sup> <i>Università degli Studi di Milano-Bicocca, Piazza dell'Ateneo Nuovo 1, 20126, Milan, Italy</i><br><sup>4</sup> <i>Dipartimento di Scienze e Metodi dell'Ingegneria, Università degli Studi di Modena e Reggio Emilia, Via Amendola 2, 43122, Reggio Emilia, Italy</i>  |
| P1-6<br>YRA<br>CANDIDATE | <b>Nanofabrication of tailorable Titanium Nitride plasmonic nanostructures</b><br>P. Rampota, S. Panos, N. Pliatsikas, D. Tselekidou, P. Patsalas, S. Kassavetis<br><i>Nanotechnology Lab LTFN, Physics Dept., Aristotle Un. of Thessaloniki, Thessaloniki, GR-54124, Greece</i>  |

## WS2 POSTER SESSION

Tuesday 2 July to Friday 5 July: Poster Display

Thursday 4 (17:30-20:00): Poster Presentation

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| P2-1 | <b>Photocatalytic Activity of TiO<sub>2</sub> Aerogels Prepared by Sol-Gel Synthesis and Different Drying Methods</b><br>J. Doneliene <sup>1,2</sup> , E. Fataraitė-Urbonienė <sup>2,3</sup> , S. Pakalka <sup>1,2</sup> , J. Ulbikas <sup>1,2</sup><br><sup>1</sup> <i>App. Research Inst.e for Prospective Technologies, Lithuania</i><br><sup>2</sup> <i>JSC Modernios E-Technologijos, Lithuania</i><br><sup>3</sup> <i>Kaunas Un. of Technology, Lithuania</i>   |
| P2-2 | <b>Green, eco-friendly reagents in the flotation of pyrite</b><br>P. Angelopoulos <sup>1</sup> , G. Anastassakis <sup>1</sup> , N. Kountouris <sup>1</sup> , M. Taxiarchou <sup>1</sup><br><sup>1</sup> <i>School of Mining and Metallurgical Engineering, Nat. Technical Un. of Athens (NTUA), 9 Heroon Polytechniou Street, NTUA Zografou Campus, GR 15780, Greece</i>  |
| P2-3 | <b>Au NPs-coated ZrO<sub>2</sub> multilayer nanofibers as label-free SERS-active substrate for trace detection of analytes with varying sizes</b><br>J.-D. Liao <sup>1,*</sup> , H. Lee <sup>1</sup> , H.-P. Tsai <sup>2,3</sup> , W.-E. Fu <sup>4</sup><br><sup>1</sup> <i>Dept. of Materials Science and Engineering, Nat. Cheng Kung Un., Tainan, Taiwan</i><br><sup>2</sup> <i>Dept. of Pathology, Nat. Cheng Kung Un. Hospital, Tainan, Taiwan</i><br><sup>3</sup> <i>Dept. of Medical Laboratory Science and Biotechnology, Nat. Cheng Kung Un., Tainan, Taiwan</i><br><sup>4</sup> <i>Center for Measurement Standards, Industrial Technology Research Inst.e, Hsinchu, Taiwan</i> |

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| P2-4  | <p><b>Unveiling the Synergistic Effect of Nickel Phosphide/Nickel Oxide on Siloxene Nanosheets for Robust Lithium Sulfur Batteries</b><br/>K. W. Seo<sup>1</sup>, T. T. Nguyen<sup>1</sup>, H. Song<sup>1</sup>, N. H. Kim<sup>1*</sup>, J. H. Lee<sup>1,2*</sup><br/><sup>1</sup>Dept. of Nano convergence Engineering, Jeonbuk Nat. Un., Jeonju, Jeonbuk, 54896, Republic of Korea<br/><sup>2</sup>Carbon Composite Research Center, Dept. of Polymer and Nano Science and Technology, Jeonbuk Nat. Un., Jeonju, Jeonbuk, 54896, Republic of Korea</p>   |
| P2-5  | <p><b>Atomic heterointerface Engineering of NiCoRuP Nanosheets-Coupled V<sub>2</sub>CT<sub>x</sub> Mxene for High-Efficiency Overall Water Electrolysis</b><br/>D. Malhotra<sup>1</sup>, D. T. Tran<sup>1</sup>, Nam Hoon Kim<sup>1*</sup>, Joong Hee Lee<sup>1,2*</sup><br/><sup>1</sup>Dept. of Nano convergence Engineering, Jeonbuk Nat. Un., Jeonju, Jeonbuk, 54896, Republic of Korea.<br/><sup>2</sup>Carbon Composite Research Center, Dept. of Polymer and Nano Science and Technology, Jeonbuk Nat. Un., Jeonju, Jeonbuk, 54896, Republic of Korea</p>   |
| P2-6  | <p><b>Nanocomposite membranes based on AB-PBI with embedded TiO<sub>2</sub> green synthesized particles – photocatalytic properties</b><br/>H. Penchev<sup>1</sup>, K. Zaharieva<sup>2</sup>, I. Tsacheva<sup>1</sup>, S. Dimova<sup>1</sup>, O. Dimitrov<sup>3</sup> D. Stoyanova<sup>4</sup>, Stambolova<sup>4</sup><br/><sup>1</sup>Inst.e of Polymers, Bulgarian Academy of Sci., "Acad. G. Bonchev" St., Bl.103A, 1113 Sofia, Bulgaria<br/><sup>2</sup>Inst.e of Mineralogy and Crystallography "Acad. I. Kostov", Bulgarian Academy of Sci., "Acad. G. Bonchev" St., Bl. 107, 1113 Sofia, Bulgaria<br/><sup>3</sup>Inst.e of Electrochemistry and Energy Systems "Acad. Evgeni Budevski", Bulgarian Academy of Sci., "Acad. G. Bonchev" St., Bl. 10, 1113 Sofia, Bulgaria<br/><sup>4</sup>Inst.e of General and Inorganic Chemistry, Bulgarian Academy of Sci., "Acad. G. Bonchev" St., Bl. 11, 1113 Sofia, Bulgaria</p> |
| P2-7  | <p><b>Preparation and photocatalytic activity of meta- Polybenzimidazole/green synthesized Zinc oxide hybrid nanocomposites</b><br/>K. Zaharieva<sup>1</sup>, S. Dimova<sup>2</sup>, O. Dimitrov<sup>3</sup>, H. Penchev<sup>2</sup><br/><sup>1</sup>Inst.e of Mineralogy and Crystallography "Acad. I. Kostov", Bulgarian Academy of Sci., "Acad. G. Bonchev" St., Bl. 107, 1113 Sofia, Bulgaria<br/><sup>2</sup>Inst.e of Polymers, Bulgarian Academy of Sci., "Acad. G. Bonchev" St., Bl.103A, 1113 Sofia, Bulgaria<br/><sup>3</sup>Inst.e of Electrochemistry and Energy Systems, Bulgarian Academy of Sci., "Acad. G. Bonchev" St., Bl. 10, 1113 Sofia, Bulgaria</p>  |
| P2-8  | <p><b>Use of electrical impedance spectroscopy (EIS) for opal-based nanostructures identification</b><br/>M. Cedeno Mata<sup>1</sup>, A. Palomas<sup>1</sup>, R. Bragos<sup>1</sup>, J. Villar<sup>2</sup>, M. Dominguez-Pumar<sup>1</sup>, S. Bermejo<sup>1</sup><br/><sup>1</sup>Dept. of Electrical Engineering, Polytechnic Un. of Catalonia, Jordi Girona 1-3, Spain<br/><sup>2</sup>Dept. of Mathematics, Polytechnic Un. of Catalonia, Jordi Girona 1-3, Spain)</p>   |
| P2-9  | <p><b>Electrothermal study of nanostructured humidity sensor</b><br/>A. Palomas Jimenez<sup>1</sup>, M. Cedeno Mata<sup>1</sup>, R. Bragos<sup>1</sup>, M. Dominguez-Pumar<sup>1</sup>, J. L. Villar<sup>2</sup>, S. Bermejo<sup>1</sup><br/><sup>1</sup>Dept. of Electrical Engineering, Polytechnic Un. of Catalonia, Jordi Girona 1-3, Spain<br/><sup>2</sup>Dept. of Mathematics, Polytechnic Un. of Catalonia, Jordi Girona 1-3, Spain</p>  |
| P2-10 | <p><b>Comparison of Zn-doped mesoporous bioactive glasses produced via three different modifications of sol-gel synthesis</b><br/>A. Beketova<sup>1</sup>, R. Choudhary<sup>1</sup>, I. Tsamesidis<sup>2</sup>, K. Rubenis<sup>1</sup>, V. Stepanova<sup>1</sup>, K. Smits<sup>1</sup>, G. K. Pouroutzidou<sup>2</sup>, D. Loca<sup>1</sup>, E. Kontonasaki<sup>2</sup>, J. Locs<sup>3</sup><br/><sup>1</sup>Riga Technical Un., Pulka 3, Riga, LV-1007, Latvia, anastasiabeketova@yahoo.com<br/><sup>2</sup>Aristotle Un. of Thessaloniki, Greece<br/><sup>3</sup>Baltic Biomaterials Centre of Excellence, Latvia</p>  |
| P2-11 | <p><b>Electrical and Optical Properties of Anodic Column-like WTi Oxide on the Glass</b><br/>A. Hoha<sup>1</sup>, U. Turavets<sup>1</sup>, S. Granko<sup>2</sup>, A. Pligovka<sup>1</sup><br/><sup>1</sup>Research and Development Laboratory 4.10 "Nanotechnologies", Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Republic of Belarus<br/><sup>2</sup>Dept. of Micro- and Nanoelectronics, Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Republic of Belarus</p>  |
| P2-12 | <p><b>Biomimetic Tarantula Hair-Inspired Washing Machine Filters for Enhanced Microplastics Capture</b><br/>J.R. Kim<br/>Advanced Textile R&amp;D Dept., Korea Inst.e of Industrial Technology (KITECH), Ansan-si 15588</p>  |
| P2-13 | <p><b>Improving Indoor Air Quality: MIL-100(Fe) Growth on Polyacrylonitrile@TiO<sub>2</sub> Nanofiber Webs for VOCs Adsorption and Photocatalytic effects</b><br/>J. R. Kim<br/>Advanced Textile R&amp;D Dept., Korea Inst.e of Industrial Technology (KITECH), Ansan-si 15588</p>   |

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| P2-14 | <p><b>Bioinspired structural coloration with melanin nanoparticles for architectural materials</b><br/>W. Pajerski<sup>1</sup>, A. Černoša<sup>1</sup>, A. Gubenšek<sup>1,2</sup>, V. Hribljan<sup>1</sup>, A. Sandak<sup>1,2,3</sup><br/><sup>1</sup> <i>InnoRenew CoE, Livade 6a, 6310 Izola, Slovenia</i><br/><sup>2</sup> <i>Andrej Marušič Inst.e, Un. of Primorska, Titov trg 4, 6000 Koper, Slovenia</i><br/><sup>3</sup> <i>Faculty of Mathematics, Natural Sci. and Information Technologies, Un. of Primorska, Glagoljaška 8, 6000 Koper, Slovenia</i></p>  |
| P2-15 | <p><b>Nanoengineering of anodic aluminum oxide templates for photonic applications</b><br/>U. Malecka, Gałan S., Pietrusińska K., Stefaniuk T.<br/><i>Inst.e of Geophysics, Faculty of Physics, Un. of Warsaw, Poland</i></p>   |
| P2-16 | <p><b>Nanostructured Thin Films Fabricated by Anodizing of Three-Layer Systems</b><br/>A. Hoha<sup>1</sup>, U. Turavets<sup>1</sup>, S. Zavadski<sup>2</sup>, D. Golosov<sup>2</sup>, S. Granko<sup>3</sup>, A. Pligovka<sup>1</sup><br/><sup>1</sup> <i>Research and Development Laboratory 4.10 "Nanotechnologies", Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Republic of Belarus</i><br/><sup>2</sup> <i>Center 2.1 "Ion Plasma Systems and Technologies", Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Republic of Belarus</i><br/><sup>3</sup> <i>Dept. of Micro- and Nanoelectronics, Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Belarus</i></p> |
| P2-17 | <p><b>Bismuth Nanowires Fabricated on Porous Al<sub>2</sub>O<sub>3</sub> Assisted Niobia Arrays</b><br/>Pligovka A.<sup>1</sup>, Zavadski S.<sup>2</sup>, Golosov D.<sup>2</sup> and Granko S.<sup>3</sup><br/><sup>1</sup> <i>Research and Development Laboratory 4.10 "Nanotechnologies", Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Belarus</i><br/><sup>2</sup> <i>Center 2.1 "Ion Plasma Systems and Technologies", Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Belarus</i><br/><sup>3</sup> <i>Dept. of Micro- and Nanoelectronics, Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., Minsk 220013, Belarus</i></p>   |
| P2-18 | <p><b>Detecting potential single photon emitters in C-doped GaN</b><br/>J. Misiak<sup>1</sup>, K. Kliczewska<sup>1</sup>, P. Kulboka<sup>1</sup>, N. Dalla<sup>1</sup>, M. Kobecki<sup>1</sup>, P. Kossacki<sup>1</sup>, P. Prystawko<sup>2</sup>, H. Turski<sup>2</sup>, and T. Jakubczyk<sup>1</sup><br/><sup>1</sup> <i>Faculty of Physics, Un. of Warsaw, Warsaw, Poland</i><br/><sup>2</sup> <i>Inst.e of High Pressure Physics "Unipress", Polish Academy of Sci., 01-142, Warsaw</i></p>   |
| P2-19 | <p><b>Electrochemical Lead Sensing Based on Patterned Nanoclusters Made of a Mixture of PMMA and NTPH Ink Using Dip Pen Nanolithography</b><br/>M. Zohar<sup>1</sup>, K. K. Yadav<sup>2</sup>, D. Shamir<sup>3</sup>, H. Kornweitz<sup>4</sup>, Y. Peled<sup>3</sup>, and A. Burg<sup>2</sup><br/><sup>1</sup> <i>Electrical and Electronics Engineering, Shamoon College of Engineering, Be'er Sheva, Israel 56 Bialik St., Be'er Sheva, 8410802, Israel</i><br/><sup>2</sup> <i>Chemical Engineering, Shamoon College of Engineering, Be'er Sheva, Israel</i><br/><sup>3</sup> <i>Analytical Chemistry, NRCN, Be'er Sheva, Israel 4Chemical Sci. Dept., Ariel Un., Ariel, Israel</i></p>  |
| P2-20 | <p><b>High-efficiency All-Solid-State Sodium Battery Enabled by Novel Polyanionic Carbonophosphate-Based Electrolyte</b><br/>H. Kim<sup>1</sup>, S. Jena<sup>1</sup>, D. T. Tran<sup>1†</sup>, N. H. Kim<sup>1</sup>, J. H. Lee<sup>1,2†</sup><br/><sup>1</sup> <i>Dept. of Nano Convergence Engineering, Jeonbuk Nat. Un., Jeonju-si, Jeollabuk-do, 54896, Republic of Korea.</i><br/><sup>2</sup> <i>Carbon Composite Research Center, Dept. of Polymer and Nano Science and Technology, Jeonbuk Nat. Un., Jeonju-si, Jeollabuk-do, 54896, Republic of Korea</i></p>  |
| P2-21 | <p><b>Core-shell Nanofiber Positrodes Derived by Na-Zn-HCF/Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> for Flexible Sodium-ion Battery</b><br/>Sehwi Park<sup>1</sup>, Sambedan Jena<sup>1</sup>, Duy Thanh Tran<sup>1†</sup>, Nam Hoon Kim<sup>1</sup>, Joong Hee Lee<sup>1,2†</sup><br/><sup>1</sup> <i>Dept. of Nano convergence Engineering, Jeonbuk Nat. Un., Jeonju-si, Jeollabuk-do, 54896, Republic of Korea.</i><br/><sup>2</sup> <i>Carbon Composite Research Center, Dept. of Polymer and Nano Science and Technology, Jeonbuk Nat. Un., Jeonju-si, Jeollabuk-do, 54896, Republic of Korea</i></p>  |
| P2-22 | <p><b>Magnetic Polaron States in Photoluminescent Carbon Dots Enable Hydrogen Peroxide Photoproduction</b><br/>H. Kmentova<sup>1</sup>, L. Zdrzil<sup>1,2</sup>, S. Kment<sup>1,2</sup>, R. Zboril<sup>1,2</sup><br/><sup>1</sup> <i>RCPTM/CATRIN, Palacky Un. Olomouc, Slechtitelu 27, 78371 Olomouc, Czech Republic</i> <sup>2</sup> <i>Nanotechnology Centre, VSB-TUO, 17. listopadu 2172/15, 70800 Ostrava, Czech Republic</i></p>  |
| P2-23 | <p><b>Synthesis of Nitrogen-doped Carbon Layer Encapsulated Iron Oxide/Graphene Decorated Hollow Carbon Nanofibers for High-performance Supercapacitor</b><br/>OK-Kyung Park<sup>1</sup>, Joong Hee Lee<sup>1,2</sup><br/><sup>1</sup> <i>Dept. of Nano Convergence Engineering, Jeonbuk Nat. Un., Jeonju-si, Jeollabuk-do, 54686, Republic of Korea</i><br/><sup>2</sup> <i>Carbon Composite Research Center, Dept. of Polymer and Nano Science and Technology, Jeonbuk Nat. Un., Jeonju-si, Jeollabuk-do, 54896, Republic of Korea</i></p>  |
| P2-24 | <p><b>Optical properties of Eu<sup>3+</sup>-doped 13X luminescent zeolite for environment and sensing</b><br/>A. Safonova<sup>1</sup>, G. Mariotto<sup>2</sup>, N. Dalbosso<sup>2</sup>, F. Enrichi<sup>2</sup><br/><sup>1</sup> <i>Dept. of Diagnostics and Public Health, Un. of Verona</i><br/><sup>2</sup> <i>Dept. of Engineering for Innovation Medicine, Un. of Verona, Strada le Grazie 15, Italy</i></p>   |

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| P2-25 | <p><b>Anelasticity of Nanocomposites of Multiwalled Carbon Nanotubes and Polymers, SiO<sub>2</sub></b><br/>A. Onanko<sup>1</sup>, D. Charnyi, Y. Onanko, O. Dmytrenko, M. Kulish, T. Pinchuk-Rugal, M. Yatsiuk, E. Matselyuk, A. Gaponov, L. Kurochka, P. Il'in, S. Marysyk<br/><i>Physical Dept., Kyiv Nat. Un., Volodymyrs'ka str., 64/13, Kyiv, 01601, Ukraine</i></p>  |
| P2-26 | <p><b>Improving Nanoparticle Stability and Performance with Multidentate Surfactants</b><br/>M. Giustra<sup>1</sup>, B. Novati<sup>1</sup>, F. Arrigoni<sup>1</sup>, S. Garbujo<sup>1</sup>, A. Colombo<sup>1</sup>, L. Bertini<sup>1</sup>, L. De Gioia<sup>1</sup>, M. Colombo<sup>1</sup> and D. Prosperi<sup>1</sup><br/><i><sup>1</sup>Dept. of Biotechnology and Bioscience, Un. of Milano-Bicocca, Milano, Italy</i></p>  |
| P2-27 | <p><b>Thermochromic V<sub>1-x</sub>Re<sub>x</sub>O<sub>2</sub> thin films for smart windows</b><br/>B. Polyakov, T. Tsebriienko, J. Butikova, E. Butanovs, T. Safiulins, J. Purans<br/><i>Inst.e of Solid State Physics, Un. of Latvia, Kengaraga 8, LV-1063 Riga, Latvia</i></p>  |
| P2-28 | <p><b>On-surface molecular recognition driven by chalcogen bonding</b><br/>Caporale A.<sup>1</sup>, Hogan C.<sup>2</sup>, Bonifazi D.<sup>3</sup>, Romito D.<sup>3</sup>, Persichetti L.<sup>1</sup>, Palumbo M.<sup>1</sup>, Di Giovannantonio M.<sup>2</sup>, and Camilli L.<sup>1</sup><br/><i><sup>1</sup> Dept. of Physics, Un. of Rome "Tor Vergata", Via della Ricerca Scientifica 1 (00133, Roma, Italy)</i><br/><i><sup>2</sup> Inst.e of Structure of Matter, Consiglio Nazionale delle Ricerche, Via del Fosso del Cavaliere 100 (00133, Roma, Italy)</i><br/><i><sup>3</sup> Dept. of Organic Chemistry, Faculty of Chemistry, Un. of Vienna, Währinger Straße 38, (1090, Vienna, Austria)</i></p>   |
| P2-29 | <p><b>Photocurrent studies of epitaxial MoSe<sub>2</sub> multilayers</b><br/>Kuna M.* , Raczyński M., Pacuski W., Kossacki P.,<br/><i>Faculty of Physics, Inst.e of Experimental Physics, Un. of Warsaw, Poland</i></p>  |
| P2-30 | <p><b>Hexagonal Moiré patterns in nylon mesh nanoporous structures: computational and experimental study</b><br/>E.M. Papia<sup>1,2</sup>, V. Constantoudis<sup>2,3</sup>, D. Nioras<sup>4</sup>, E. Gogolides<sup>2,3</sup><br/><i><sup>1</sup> Dept. of Physics, School of Science, Un. of 15784 Greece</i><br/><i><sup>2</sup> Inst.e of Nanoscience and Nanotechnology, NCSR Demokritos, Agia Paraskevi, 15341, Greece</i><br/><i><sup>3</sup> Nanometrisis p.c., Agia Paraskevi, 15341, Greece</i><br/><i><sup>4</sup> Physics Dept., Nat. Technical Un. of Zografou Campus, Greece</i></p>   |
| P2-31 | <p><b>Phase change behavior of Poly(vinylidene fluoride) and PVDF with ZnO nanoparticle composite thin films monitoring by Micro-Raman spectroscopy</b><br/>M. Purica<sup>1</sup>, F. Comanescu<sup>1</sup>, V. Dediu<sup>1</sup><br/><i><sup>1</sup> Inst.e for Research and Development in Microtechnologies – IMT Bucharest, 126A Erou Iancu Nicolae Street, R-077190, Voluntari, Ilfov, Romania</i></p>  |
| P2-32 | <p><b>Synthesis and characterization of Carbon Dots (CDs)-CuFe<sub>2</sub>O<sub>4</sub> nanohybrid material as an adsorbent for the removal of Congo Red azo dye from water</b><br/>A. Zourou<sup>1</sup>, A. Ntziouni<sup>1</sup>, T. Roman<sup>2,3</sup>, C. Tampaxis<sup>4</sup>, T. Steriotis<sup>4</sup>, G. Gkouzia<sup>5</sup>, L. Alff<sup>5</sup>, D. E. Sanchez<sup>6</sup>, M. Terrones<sup>6,7,8</sup>, K. V. Kordatos<sup>1</sup><br/><i><sup>1</sup>School of Chemical Engineering, Nat. Technical Un. of Zographou Campus, 15772, Greece</i><br/><i><sup>2</sup>Nat. Inst.e of Research &amp; Development for Technical Physics, Iasi, 700050, Romania</i><br/><i><sup>3</sup>Integrated Center of Environmental Science Studies in the North Eastern Region, "Alexandru Ioan Cuza" Un. of Iasi, Iasi, 700517, Romania</i><br/><i><sup>4</sup>Inst.e of Nanoscience and Nanotechnology, NCSR "Demokritos", Agia Paraskevi, 15310, Greece</i><br/><i><sup>5</sup>Inst.e of Materials Science, Technical Un. of Darmstadt, Darmstadt, 64289, Germany</i><br/><i><sup>6</sup>Dept. of Materials Science and Engineering and Center for 2-Dimensional and Layered Materials, The Pennsylvania State Un., Un. Park, 16802, USA</i><br/><i><sup>7</sup>Dept. of Physics, The Pennsylvania State Un., Un. Park, 16802, USA</i><br/><i><sup>8</sup>Dept. of Chemistry and Materials Research Inst.e, The Pennsylvania State Un., Un. Park, 16802, USA</i></p> |
| P2-33 | <p><b>Shining a Light on Innovation: Harnessing Core-Shell Nanostructures for Enhanced Photocatalytic Applications</b><br/>I. Kitsou<sup>1</sup>, A. A. Alivisatou<sup>1</sup>, M. Papageorgiou<sup>1</sup>, N. Demetzos<sup>1</sup>, E. Roussi<sup>1</sup>, P. Gkomoza<sup>1</sup>, D. Katerinopoulou<sup>2</sup>, Ch. Charalampidis<sup>2</sup>, A. Stoumpidi<sup>2</sup>, V. Binas<sup>2,3</sup>, G. Kiriakidis<sup>2</sup>, A. Tsetsekou<sup>1</sup><br/><i><sup>1</sup>School Of Mining and Metallurgical Engineering, Nat. Technical Un. of Iroon Polytechniou 9 str. GR15773 Zografou Campus, Greece.</i><br/><i><sup>2</sup>PCN Materials IKE, Craftsmen Industrial Park of Heraklion (VIOPAN) in Anopolis, Hersonissos,70008, Crete, Greece</i><br/><i><sup>3</sup>School of Chemistry, Aristotle Un. of Thessaloniki, 54124, Thessaloniki, Greece</i></p>  |

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| P2-34 | <p><b>Effect of Silicon Precursor on Physicochemical Properties of Doped Mesoporous Silica-Based Nanoparticles MCM-41 Type</b><br/> G. K. Pouroutzidou<sup>1,2</sup>, D. Gkiliopoulos<sup>3</sup>, K. Tsachouridis<sup>4</sup>, K. S. Triantafyllidis<sup>3</sup>, A. D. Anastasiou<sup>4</sup>, and E. Kontonasaki<sup>2</sup><br/> <sup>1</sup> School of Physics, Aristotle Un. of Thessaloniki, Thessaloniki, Greece<br/> <sup>2</sup> School of Dentistry, Aristotle Un. of Thessaloniki, Thessaloniki, Greece;<br/> <sup>3</sup> School of Chemistry, Aristotle Un. of Thessaloniki, Thessaloniki, Greece;<br/> <sup>4</sup> Dept. of Chemical Engineering and Analytical Science, Un. of Manchester, Manchester M1 3AL, UK</p>   |
| P2-35 | <p><b>Innovative fabrication of metal oxide nanoparticles by Laser Ablation in solvents</b><br/> E. Karkadaki, S. Panos, N. Pliatsikas, S. Kassavetis, P. Patsalas.<br/> Dept. of Physics, Aristotle Un. of Thessaloniki, GR-54124 Thessaloniki, Greece</p>   |
| P2-36 | <p><b>Development of Hall measurements in nanomaterials</b><br/> E. Koutantou<sup>1,2</sup>, G. Veisakis<sup>2</sup>, G. Makris<sup>2</sup>, D. Kosmidis<sup>2</sup> and G. Deligeorgis<sup>2,1</sup><br/> <sup>1</sup> Physics Dpt, Un. of Crete, 71203 Heraklion, Greece<br/> <sup>2</sup> Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology Hellas (FORTH), 70013 Heraklion, Greece</p>   |
| P2-37 | <p><b>Poly(maleic anhydride-<i>alt</i>-styrene) film modified with amino acid and divinylsulfone: Immobilized covalently multipoint laccase enzyme</b><br/> M. Urzúa<sup>1</sup>, N. González<sup>1</sup>, J.M. Blamey<sup>2</sup>, V. Guixé<sup>3</sup>, R. Fernández-Lafuente<sup>4</sup>, J.M Lázaro-Martínez<sup>5</sup>, V. Villalobos<sup>1</sup><br/> <sup>1</sup>Departament of Chemistry, Faculty of Sci. Un. of Chile Las Palmeras N°3425.Ñuñoa Santiago Chile.<br/> <sup>2</sup>Departament of Biology, Faculty of Chemistry and Biology, Un. of Santiago, Av. Libertador Bernardo O'Higgins N° 3363 Estación Central Santiago, Chile<br/> <sup>3</sup>Departament of Biology, Faculty of Sci. Un. of Chile Las Palmeras N°3425.Ñuñoa Santiago Chile.<br/> <sup>4</sup>Dept. of Biocatalysis, Institute of Catalysis, CSIC, Campus Un. Autónoma, 28049 Madrid, Spain<br/> <sup>5</sup>Dept. of Chemistry Sci. Faculty of Pharmacy and Biochemistry, Institute of Chemistry and Drug Metabolism, Un. of Buenos Aires. Argentina</p> |
| P2-38 | <p><b>Enhancement of Antifouling Properties in Polymeric Films via Hyperbranched Polymer Functionalization</b><br/> V. Villalobos<sup>1</sup>, N. González<sup>1</sup>, J.M. Lazaro<sup>2</sup>, M. Urzúa<sup>1</sup>.<br/> <sup>1</sup>Dept. of Chemistry, Sci. Faculty, Un. of Chile. Las Palmeras 3425, Ñuñoa, Santiago, R.M., Chile.<br/> <sup>2</sup> Dept. of Chemical Sci. Faculty of Pharmacy and Biochemistry, Institute of Chemistry and Drug Metabolism, Un. of Buenos Aires. Argentina</p>  |
| P2-39 | <p><b>Fabrication and characterization of FeCo/Cu multilayered nanowires</b><br/> R. Grigore<sup>1,2</sup>, E. Matei<sup>2</sup>, C. Bran<sup>3</sup>, V. Kuncser<sup>2</sup>, G. Schinteie<sup>2</sup>, C. Ghica<sup>2</sup>, I. Enculescu<sup>2</sup><br/> <sup>1</sup>Faculty of Physics, Un. of Bucharest, 077125 Magurele, Ilfov, Romania<br/> <sup>2</sup>National Institute of Materials Physics, Atomistilor 405A, 077125 Magurele, Ilfov, Romania<br/> <sup>3</sup>Instituto de Nanociencia y Materiales de Aragón (INMA-CSIC), C/ Mariano Esquillor, s/n, Campus Río Ebro - 50018 Zaragoza, Spain</p>   |

WS3 POSTER SESSION

Tuesday 2 July to Friday 5 July: Poster Display

Thursday 4 (17:30-20:00): Poster Presentation

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| P3-1<br>YRA<br>CANDIDATE | <p><b>Green synthesis of magnetic bio-MOFs for combined cancer therapy via magnetic hyperthermia and drug delivery</b><br/> J. Barman<sup>1</sup>, T. Pellegrino<sup>2</sup><br/> <sup>1,2</sup>Italian Inst.e of Technology, Via Morego, 30, Genoa, 16163, Italy<br/> <sup>1</sup>Un. of Genoa, Via Balbi, 5, Genoa, 16126, Italy</p>   |
| P3-2                     | <p><b>The potential of Mg alloys with Nano/sub-micron structure to serve as bioabsorbable implants</b><br/> E. Aghion and A. Arnon<br/> Dept. of Materials Engineering, Ben-Gurion Un. of the Negev, Beer-Sheva, Israel</p>  |
| P3-3                     | <p><b>Preparation and investigation of 52Mn labelled beta cyclodextrin derivative using positron emission tomography</b><br/> I. Hajdu<sup>1</sup>, I. Kalman-Szabo<sup>1,2</sup>, L. A. Komor<sup>1</sup>, I. Kertesz<sup>1</sup>, Z. Kepes<sup>1</sup>, G. Trencsenyi<sup>1</sup>,<br/> <sup>1</sup>Division of Nuclear Medicine and Translational Imaging, Medical Imaging Dept., Un. of Debrecen, Debrecen, Hungary<br/> <sup>2</sup>Gyula Petranyi Doctoral School of Allergy and Clinical Immunology, Un. of Debrecen, Debrecen, Hungary</p> |

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| P3-4  | <p><b>Multi-Drug Delivery System Based on Porous Fibers Grafted with Metal Organic Frameworks</b><br/>J. Kim<br/><i>Advanced Textile R&amp;D Dept., Korea Inst.e of Industrial Technology (KITECH), Ansan-si 15588, jkim0106@kitech.re.kr</i></p>   |
| P3-5  | <p><b>Rational control of magnetic and relaxation properties of magneto-plasmonic nanoparticles</b><br/>Nistor M.*<sup>1,2</sup>, Balan V.<sup>1,3</sup>, Pui A.<sup>2</sup>, Uritu C. M.<sup>4</sup>, Stiufluic R.-I.<sup>1,5</sup>, Dragoi B.<sup>1,2</sup><br/><sup>1</sup><i>Nanotechnology Laboratory, TRANSCEND Research Center, Regional Inst.e of Oncology, 2-4 General Henri Mathias Berthelot Street, 700483 Iasi, Romania</i><br/><sup>2</sup><i>Faculty of Chemistry, Alexandru Ioan Cuza Un. of Iasi, 11 Carol I Boulevard, 700506 Iasi, Romania</i><br/><sup>3</sup><i>Biomedical Sci. Dept., Faculty of Medical Bioengineering, Grigore T. Popa Un. of Medicine and Pharmacy of Iasi, 9-13 Kogalniceanu Street, 700454 Iasi, Romania</i><br/><sup>4</sup><i>Advanced Centre for Research-Development in Experimental Medicine, Grigore T. Popa Un. of Medicine and Pharmacy, 9-13 Mihail Kogalniceanu, 700259 Iasi, Romania</i><br/><sup>5</sup><i>Dept. of Nanobiophysics, MedFuture Research Center for Advanced Medicine, "Iuliu Hatieganu" Un. of Medicine and Pharmacy, 4-6 Pasteur Street, 400337 Cluj-Napoca, Romania</i></p> |
| P3-6  | <p><b>Development of Magnetic Layered Double Hydroxides - Iron Oxide hybrid materials with high potential for theranostic applications</b><br/>Ibanescu A.*<sup>1</sup>, Nistor M.<sup>1,2</sup>, Balan V.<sup>1,3</sup>, Grigoras M.<sup>4</sup>, Stiufluic R.-I.<sup>1,5</sup>, Dragoi B.<sup>1,2</sup><br/><sup>1</sup><i>Nanotechnology Laboratory, TRANSCEND Research Center, Regional Inst.e of Oncology, 2-4 General Henri Mathias Berthelot Street, 700483 Iasi, Romania</i><br/><sup>2</sup><i>Faculty of Chemistry, Alexandru Ioan Cuza Un. of Iasi, 11 Carol I Boulevard, 700506 Iasi, Romania</i><br/><sup>3</sup><i>Dept. of Biomedical Sci., Faculty of Medical Bioengineering, "Grigore T. Popa" Un. of Medicine and Pharmacy, 9-13 Kogalniceanu Street, 700454 Iasi, Romania</i><br/><sup>4</sup><i>Nat. Inst.e of Research and Development for Technical Physics, 700050, Iasi, Romania</i><br/><sup>5</sup><i>Dept. of NanoBioPhysics, MedFuture Research Center for Advanced Medicine, Iuliu Hatieganu Un. of Medicine and Pharmacy, 4-6 Pasteur Street, 400337 Cluj-Napoca, Romania</i></p>                                     |
| P3-7  | <p><b>Temperature dependent morphologic and surface charge properties of Au plasmonic NPs and impact on RAMAN signal enhancement</b><br/>Mairean C.-P.*<sup>1,2</sup>, Olariu D.-I.<sup>1,2</sup>, Dragoi B.<sup>1,2</sup>, Stiufluic, R.-I.<sup>1,2,3</sup><br/><sup>1</sup><i>Nanotechnology Laboratory, TRANSCEND Research Center, Regional Inst.e of Oncology, 2-4 General Henri Mathias Berthelot Street, 700483 Iasi, Romania</i><br/><sup>2</sup><i>Faculty of Chemistry, Alexandru Ioan Cuza Un. of Iasi, 11 Carol I Boulevard, 700506 Iasi, Romania</i><br/><sup>3</sup><i>Dept. of NanoBioPhysics, MedFuture Research Center for Advanced Medicine, "Iuliu Hatieganu" Un. of Medicine and Pharmacy, 4-6 Pasteur Street, 400337 Cluj-Napoca, Romania</i></p>   |
| P3-8  | <p><b>Dynamic hydrogels based on selectively functionalized polysaccharides for anticancer controlled drug delivery</b><br/>Duceac I.A.*<sup>1,2</sup>, Stiufluic R.I.<sup>2,3</sup>, Dragoi B.<sup>2,4</sup>, Coseri S.<sup>1</sup><br/><sup>1</sup><i>Polyaddition and Photochemistry Dept., "Petru Poni" Inst.e of Macromolecular Chemistry, 700487 Iasi, Romania</i><br/><sup>2</sup><i>Nanotechnology Laboratory, TRANSCEND Research Center, Regional Inst.e of Oncology, 700483 Iasi, Romania</i><br/><sup>3</sup><i>Dept. of Nanobiophysics, MedFuture Research Center for Advanced Medicine, "Iuliu Hatieganu" Un. of Medicine and Pharmacy, 4-6 Pasteur Street, 400337 Cluj-Napoca, Romania</i><br/><sup>4</sup><i>Faculty of Chemistry, Alexandru Ioan Cuza Un. of Iasi, 11 Carol I Boulevard, 700506 Iasi, Romania</i></p>   |
| P3-9  | <p><b>Comparative Study of Silver and Copper Nanoparticles Synthesized from Cistus Ladanifer Extract: Physicochemical Study and Biological Activities</b><br/>Chaikali C.*<sup>1</sup>, Stola N.<sup>1</sup>, Strataki A.<sup>1</sup>, Lampropoulou P.<sup>2</sup>, Papoulis D.<sup>2</sup>, Lamari F.<sup>1</sup>, Avgoustakis K.<sup>1</sup> and <u>Hatziantoniou S.<sup>1</sup></u><br/><sup>1</sup><i>Dept. of Pharmacy, Un. of Patras, Patras GR-26504, Greece</i><br/><sup>2</sup><i>Dept. of Geology, Un. of Patras, Patras GR-26504, Greece</i></p>   |
| P3-10 | <p><b>Unveiling the Potential of Photothermal Therapy: NIR-797-Loaded PLGA Nanoparticles for Enhanced Cancer Treatment</b><br/>Borlan R.*<sup>1</sup>, Tudor M.<sup>1</sup>, Soritau O.<sup>2</sup>, Florea A.<sup>3</sup>, Astilean S.<sup>1,4</sup>, Focsan M.<sup>1,4</sup><br/><sup>1</sup><i>Nanobiophotonics and Laser Microspectroscopy Centre, Interdisciplinary Research Inst.e on Bio-Nano-Sci., Babes-Bolyai Un., 42 Treboniu Laurian Street, Cluj-Napoca, Romania</i><br/><sup>2</sup><i>Dept. of Radiobiology and Tumor Biology, Oncology Inst.e Prof. Dr. Ion Chiricuta, 34-36 Republicii Street, Cluj-Napoca, Romania</i><br/><sup>3</sup><i>Dept. of Cell and Molecular Biology, Faculty of Medicine, Iuliu Hatieganu Un. of Medicine and Pharmacy, 8 Victor Babes Street, Cluj-Napoca, Romania</i><br/><sup>4</sup><i>Biomolecular Physics Dept., Faculty of Physics, Babes-Bolyai Un., 1 Mihail Kogalniceanu Street, Cluj-Napoca, Romania</i></p>   |
| P3-11 | <p><b>Tailored Therapeutics: BSA-Coated SPIONs Grafted with Curcumin for Advanced Cancer Therapy</b><br/>Lapusan R.*<sup>1,2</sup>, Borlan R.<sup>1</sup>, Balmus A.<sup>2</sup>, Muntean M.<sup>3</sup>, Focsan M.<sup>1,2</sup><br/><sup>1</sup><i>Nanobiophotonics and Laser Microspectroscopy Centre, Interdisciplinary Research Inst.e on Bio-Nano-Sci., Babes-Bolyai Un., 42 Treboniu Laurian Street, Cluj-Napoca, Romania</i><br/><sup>2</sup><i>Biomolecular Physics Dept., Faculty of Physics, Babes-Bolyai Un., 1 Mihail Kogalniceanu Street, Cluj-Napoca, Romania</i><br/><sup>3</sup><i>Dept. of Cell and Molecular Biology, Faculty of Medicine, Iuliu Hatieganu Un. of Medicine and Pharmacy, 8 Victor Babes Street, Cluj-Napoca, Romania</i></p>   |

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| P3-12                     | <p><b>Laser induced photothermal effect of anisotropic nanoparticles for oncologic therapy: Preliminary results</b><br/>Novati B.*<sup>1</sup>, Giustra M.<sup>1</sup>, De Vita E.<sup>2</sup>, Salvioni L.<sup>1</sup>, Bianconi F.<sup>3</sup>, Lo Presti D.<sup>3,4</sup>, Gizzi A.<sup>3</sup>, Iadicicco A.<sup>2</sup>, Massaroni C.<sup>3,4</sup>, Schena E.<sup>3,4</sup>, Campopiano S.<sup>2</sup>, Prospero D.<sup>1</sup></p> <p><sup>1</sup>Dept. of Biotechnology and Bioscience, Un. of Milano Bicocca, Milan, Italy<br/><sup>2</sup>Dept. of Engineering, Un. of Naples "Parthenope", Naples, Italy<br/><sup>3</sup>Research Unit of Measurements and Biomedical Instrumentation, Dept. of Engineering, Università Campus Bio-Medico di Roma, Roma, Italy<br/><sup>4</sup>Fondazione Policlinico Universitario Campus Bio-Medico, Roma, Italy</p>      |
| P3-13                     | <p><b>Advanced Freeze-Dried Hydrogel Films for Combatting Bacterial Infections in Chronic Wounds</b><br/>E. Cerna, J. Brtnikova<sup>1</sup>, B. Lipovy<sup>2</sup>, Z. Fohlerova<sup>1,3</sup>, L. Vacek<sup>4</sup>, L. Vojtova<sup>1</sup></p> <p>Advanced Biomaterials, Central European Inst.e of Technology, Brno Un. of Technology, Purkynova 656/123, Brno, Czech Republic<sup>1</sup>, Dept. of Burns and Plastic Surgery, Un. Hospital Brno and Faculty of Medicine, Masaryk Un., Jihlavská 20, Brno, Czech Republic<sup>2</sup>, Faculty of Electrician Engineering and Communications, Brno Un. of Technology, Technická 10, Brno, Czech Republic<sup>3</sup>, Dept. of Microbiology, St. Anne's Hospital Brno and Faculty of Medicine, Masaryk Un., Pekarska 53, Brno, Czech Republic<sup>4</sup></p>  |
| P3-14                     | <p><b>Synthetic Hydrogels as Cartilage Models for Biomimetic Tribological Testing</b><br/>I. Chamradova<sup>1</sup>, K. Lysakova<sup>1</sup>, D. Rebenda<sup>2,3</sup>, P. Cipek<sup>2</sup>, M. Vrbka<sup>2</sup>, L. Vojtova<sup>1</sup></p> <p>Advanced Biomaterials, Central European Inst.e of Technology, Brno Un. of Technology, Purkynova 656/123, Brno, Czech Republic<sup>1</sup>, Faculty of Mechanical Engineering, Brno Un. of Technology, Technická 2896/2, Brno, Czech Republic<sup>2</sup>, Footware Research Centre Un. Inst.e, Tomas Bata Un. in Zlin, Nad Ovcirnou IV 3685, Zlin, Czech Republic<sup>3</sup></p>  |
| P3-15                     | <p><b>A Comparative Study on Physicochemical Properties and In Vitro Biocompatibility of Sr-Substituted and Sr Ranelate-Loaded Hydroxyapatite Nanoparticles</b><br/>L.Stipniece<sup>1,2</sup>, A. Ramata-Stunda<sup>3</sup>, J. Vecstaudza<sup>1,2</sup>, I. Kreicberga<sup>1,2</sup>, D. Livkisa<sup>3</sup>, A. Rubina<sup>1,2</sup>, A. Scegljovs<sup>1,2</sup>, K. Salma-Ancane<sup>1,2</sup></p> <p><sup>1</sup>Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Inst.e of General Chemical Engineering, Faculty of Materials Science and App. Chemistry, Riga Technical Un., Latvia<br/><sup>2</sup>Baltic Biomaterials Centre of Excellence, Headquarters at Riga Technical Un., Riga, Latvia<br/><sup>3</sup>Dept. of Microbiology and Biotechnology, Faculty of Biology, Un. of Latvia, Jelgavas St. 1, Riga, LV-1004, Latvia</p> |
| P3-16                     | <p><b>Smart Albumin-Based Nanoparticle Delivery System for the Treatment of Infected Burn Wounds</b><br/>V. Polakova<sup>1</sup>, Z. Fohlerova<sup>1</sup>, Jan Pribyl<sup>2</sup>, Radka Oborilova<sup>2</sup>, Simon Klimovic<sup>2</sup>, L. Vojtova<sup>1</sup></p> <p><sup>1</sup>CEITEC BUT, Central European Inst.e of Technology, Advanced biomaterials, Brno Un. of Technology<br/><sup>2</sup>CEITEC MUNI, Central European Inst.e of Technology, Nanobiotechnology Core Facility, Masaryk Un., Purkynova 123, 621 00 Brno, Czech Republic</p>   |
| P3-17                     | <p><b>Antibiotic and silver loaded hydroxyapatite for bone tissue healing</b><br/>S.I. Buștiucel, G. Ciobanu</p> <p>Faculty of Chemical Engineering and Environmental Protection "Cristofor Simionescu", „Gheorghe Asachi" Technical Un. of Iași, 73 Prof. Dimitrie Mangeron Blvd., Iași, 700050, Romania</p>  |
| P3-18                     | <p><b>Plasmonic nanoparticles for the Early-Stage Cancer diagnosis</b><br/>P. Astafeva<sup>1,2</sup>, Chloé Gervasoni<sup>2</sup>, Richard Decréau<sup>3</sup>, Jeremy Paris<sup>2</sup>, Aymeric Leray<sup>1</sup>.</p> <p><sup>1</sup>Laboratory ICB, UMR 6303 CNRS, Un. of Burgundy, 9 Avenue Alain Savary, 21000, Dijon, France<br/><sup>2</sup>SONSAS company, 9 Avenue Alain Savary, 21000, Dijon, France<br/><sup>3</sup>Laboratory ICMUB, UMR 6302 CNRS, Un. of Burgundy, 9 Avenue Alain Savary, 21000, Dijon, France</p>  |
| P3-19                     | <p><b>Zinc / Manganese Doped Iron Oxide Nanoparticles to Control Radical Generation and Magnetic Hyperthermia</b><br/>Morales O. M.*<sup>1,2,3,4</sup>, Lima Jr. E.<sup>2</sup>, Vasquez, M.<sup>2</sup> and Goya R. G.<sup>3,4</sup></p> <p><sup>1</sup>Balseiro Inst.e, Bariloche Atomic Centre, Bustillo Av. 9500, 8400 S. C. de Bariloche, Argentina<br/><sup>2</sup>Nanoscience and Nanotechnology Inst.e, CNEA, CONICET, CAB, Bustillo Av. 9500, 8400 Bariloche, Argentina<br/><sup>3</sup>Un. of Zaragoza, Condensed Matter Dept., C/Pedro Cerbuna 12, 50009 Zaragoza, Spain<br/><sup>4</sup>Aragon Nanoscience and Materials Inst.e, CSIC-UNIZAR, C/Mariana Esquillos S/N, 50018 Zaragoza, Spain</p>   |
| P3-20<br>YRA<br>CANDIDATE | <p><b>Development and Preclinical Validation of Curcumin Nanoparticles and biofunctionalized Curcumin Nanoparticles for targeted delivery of antithrombotic and antiinflammation factors towards the Atherosclerosis treatment</b><br/>K. Meliopoulos<sup>1</sup>, M. Kioutsouki<sup>1</sup>, M. Pitou<sup>3</sup>, K. Tsimenidis<sup>2</sup>, A. Orfanos<sup>2</sup>, C. Gravalidis<sup>1</sup>, V. Karagkiozaki<sup>2</sup>, T. Choli-Papadopoulou<sup>3</sup>, S. Logothetidis<sup>1</sup></p> <p><sup>1</sup> Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki Greece<br/><sup>2</sup> BL Nanobiomed, Thermi, Greece<br/><sup>3</sup> Chemistry Department, Aristotle University of Thessaloniki, Greece</p>  |

- P3-21** **Antibacterial, biocompatibility and antioxidant properties of cerium oxide nanoparticles incorporated in chitosan materials**  
I. Tsamesidis<sup>1</sup>, G.P. Pouroutzidou<sup>1</sup>, A. Christodoulou<sup>1</sup>, G. Konstantinidis<sup>1</sup>, M. Bousnaki<sup>1</sup>, E. Stalika<sup>1</sup>, I. Koumentakou<sup>1</sup>, R. Bikiaris<sup>1</sup>, D. Bikiaris<sup>1</sup>, E. Kontonasaki<sup>1</sup>  
<sup>1</sup>Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece

## WS4 Biosensors &amp; Bioelectronics (Common POSTER Session in ISFOE24 &amp; NN24)

Tuesday 2 to Thursday 4 July: Poster Display &amp; Presentations

Tuesday 2 July (17:00-20:00): Poster Presentation

- P4-1** **Fabrication of label-free immunoprobe for monkeypox A29 detection using one-step electrodeposited molybdenum oxide-graphene quantum rods**  
M. Chandran<sup>1</sup>, K. Yun<sup>1</sup>, J. Kim<sup>2</sup>, C.-H. Jang<sup>3</sup>  
<sup>1</sup>Dept. of Bionanotechnology, Gachon Un., Gyeonggi-do 13120, Republic of Korea  
<sup>2</sup>Dept. of Chemical & Biological Engineering, Gachon Un., Gyeonggi-do 13120, Republic of Korea  
<sup>3</sup>Dept. of Chemistry, Gachon Un., Gyeonggi-do 13120, Republic of Korea
- P4-2** **Effective Self-Assembled Multilayer-Based Electrode Passivation for Operationally Stable Electrolyte-Gated Transistor Biosensors**  
Y.-G. Ha  
Dept. of Chemistry, Kyonggi University, Suwon, Gyeonggi-Do, Republic of Korea
- P4-3** **Single-Nanoparticle-Based Digital SERS Sensor for Accurate, Quantitative, and Simultaneous Detection of Various Disease Biomarkers**  
E.-A. You<sup>1</sup>, J.-E. Shim<sup>1</sup>, Y. J. Kim<sup>1</sup>, E. Hahm<sup>1</sup>, J.-H. Choe<sup>2</sup>, and A. Baek<sup>1</sup>  
<sup>1</sup>Korea Research Inst.e of Standards and Science (Division of Biomedical Metrology), Daejeon 34113, Republic of Korea  
<sup>2</sup>Korea Un. (Dept. of Physics) Seoul 02841, Republic of Korea
- P4-4** **Glucose Sensing Based on Glucose Oxidase Meta-Chemical Surface (MCS) Electrode Fabricated Using Dip-Pen Nanolithography**  
M. Zohar<sup>1</sup>, D. Shamir<sup>2</sup>, A. Burg<sup>3</sup>  
<sup>1</sup>Electrical and Electronics Engineering, Shamoon College of Engineering, Be'er Sheva, Israel  
<sup>2</sup>Analytical Chemistry, NRCN, Be'er Sheva, Israel  
<sup>3</sup>Chemical Engineering, Shamoon College of Engineering, Be'er Sheva, Israel
- P4-5** **Comparison of SPEs sensors based on various carbon nanostructure for monitoring of anticancer doxorubicin**  
A. Grozdanov<sup>1</sup>, Perica Paunovic<sup>1</sup>, Iva Dimitrievska<sup>1</sup>,  
Un. Ss Cyril and Methodius in Skopje, Faculty of Technology and Metallurgy, Rugjer Boskovic 16, 1000 Skopje, R.N. Macedonia
- P4-6** **Anodic Niobia and Tantalum Nanocolumn-like Surface Functionalization for Click Coupling**  
B. Ranishenka<sup>1</sup>, A. Hoha<sup>2</sup>, A. Poznyak<sup>2</sup>, V. Shmanai<sup>1</sup>, A. Pligovka<sup>2</sup>  
<sup>1</sup>Inst.e of Physical Organic Chemistry, Nat. Academy of Sci. of Belarus, 13 Surganova Str., Minsk, 220072, Belarus  
<sup>2</sup>Research and Development Laboratory 4.10 "Nanotechnologies", Belarusian State Un. of Informatics and Radioelectronics, 6 Brovki Str., 220013 Minsk, Belarus
- P4-7** **Innovative gold nanoparticles-based biosensors for point of care (POC) pathogen detection**  
Colombo A.\*<sup>1</sup>, Giustra M.<sup>1</sup>, Salvioni L.<sup>1</sup>, Tomaino G.<sup>1</sup>, Barbieri L.<sup>1</sup>, Colombo M.<sup>1</sup>,  
NanoBioLab, Dept. of Biotechnology and Bioscience, Un. of Milano-Bicocca, Italy
- P4-8** **In vitro culture platform based on electroconductive BSA/PEDOT: PSS hydrogel**  
Z. Fohlerova, V. Polakova  
Central European Inst.e of Technology, Purkynova 123, 612 00 Brno, Czech Republic
- P4-9** **Multifunctional Wireless BTO@PEDOT Core@shell Nanobioelectronic Systems for Cancer Therapy**  
C. F. Jones\*<sup>1,2</sup>, Frederico Castelo Ferreira<sup>1,2</sup>, Paola Sanjuan- Alberte<sup>1,2</sup>, Teresa Esteves<sup>1,2</sup>  
<sup>1</sup>Dept. of Bioengineering, Inst.e for Bioengineering and BioSci., Inst.o Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, 1049-001 Lisbon, Portugal  
<sup>2</sup>Associate Laboratory i4HB—Inst.e for Health and Bioeconomy, Inst.o Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais, 1049-001 Lisbon, Portugal
- P4-10** **Calibration and Characterization of Biohybrid Catheters integrating organic transistor-based strain sensors**  
U. Mahmood<sup>1</sup>, G. Casula<sup>1</sup>, A. Bartolucci<sup>2</sup>, P. Cosseddu<sup>1</sup>, L. Ricotti<sup>2</sup>, L. Vannozzi<sup>2</sup>, S. Lai<sup>1</sup>  
<sup>1</sup>Dept. of Electrical and Electronic Engineering, Un. of Cagliari, Piazza d'Armi, 09123 Cagliari, Italy  
<sup>2</sup>The Biorobotic Inst.e, Scuola di Studi Superiori Sant'Anna, Viale Rinaldo Piaggio 34, 56025 Pontedera, Italy

P4-9  
YRA  
CANDIDATE



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| P4-11 | <b>A textile-based filtering antenna for wearable applications</b><br>A. K Stavrakis <sup>1</sup> , G. M. Stojanović <sup>1</sup><br><i>Faculty of Technical Sci., Un. of Novi Sad, Novi Sad, Serbia</i>  |
| P4-12 | <b>Novel bio-functionalization routes for the detection of D-Glucose</b><br>A. Batsi <sup>1</sup> , V. Karagkiozaki <sup>2</sup> , K. Tsimenidis <sup>2</sup> , A. Orfanos <sup>2</sup> , S. Logothetidis <sup>1,2</sup><br><sup>1</sup> <i>Nanotechnology Lab LTFN, Aristotle University of Thessaloniki, Thessaloniki Greece</i><br><sup>2</sup> <i>BL Nanobiomed, Thermi, Greece</i> |
| P4-13 | <b>Safe-by-Design of DNA origami based biosensors - moving towards safer nano-innovations</b><br>J. Voglhuber-Höller <sup>1</sup> , S. Resch <sup>1</sup> , S. Tahiraj <sup>1</sup> , M. Reinfelds <sup>1</sup> , JK. Scheper <sup>1</sup> ; A. Falk <sup>1</sup><br><sup>1</sup> <i>BioNanoNet Forschungsgesellschaft mbH (BNN), Kaiser-Josef-Platz 9, 8010 Graz, AUSTRIA</i>          |

**Workshop on Artificial Intelligence, Machine Learning, Intelligent Manufacturing and Automation**

Tuesday 2 to Thursday 4 July: Poster Display &amp; Presentations

Tuesday 2 July (17:00-20:00): Poster Presentation

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| I3D-1<br>YRA<br>CANDIDATE | <b>Isocyanate-free urethanediol itaconates as biobased liquid monomers in photopolymerization-based 3D printing</b><br>R. Carmenini, C. Spanu, E. Locatelli, L. Sambri, M. Comes Franchini* and M. Maturi*<br><i>Dept. of Industrial Chemistry "Toso Montanari", Un. of Bologna, Viale Risorgimento 4, 40136 Bologna, Italy</i>  |
| I3D-2                     | <b>Lightweight mineral particles/ABS composite filaments for Fused Filament Fabrication (FFF); physical and mechanical properties, and printability</b><br>P. Angelopoulos <sup>1</sup> , N. Kountouris <sup>1</sup> , Z. Viskadourakis <sup>2</sup> , A. Skaropoulou <sup>1</sup> , C. Panagiotopoulou <sup>1</sup> , A. Peppas <sup>1</sup> , G. Kenanakis <sup>2</sup> , M. Taxiarchou <sup>1</sup><br><sup>1</sup> <i>Laboratory of Metallurgy, School of Mining and Metallurgical Engineering, National Technical Un. of Athens (NTUA), Greece</i><br><sup>2</sup> <i>Institute of Electronic Structure and Laser, Foundation for Research &amp; Technology-Hellas, N. Plastira 100, Heraklion, Crete, GR 70013, Greece</i> |
| I3D-3                     | <b>Tandem FFF Printing using High-Load Composite Polymeric Filaments for Rapid Manufacturing of Dielectric and Electrochemical Energy Storage Devices</b><br>A. Tiliakos <sup>1,2</sup> , R.-Valentin Rabuga <sup>1</sup> , G.-Rainer Gillich <sup>2</sup><br><sup>1</sup> <i>National R&amp;D Institute for Cryogenic and Isotopic Technologies (ICSI), ICSI Energy Dept., Rm. Vâlcea, 240050, Romania</i><br><sup>2</sup> <i>Babeş-Bolyai Un., Dept. of Engineering Science, Centre for Vibrodiagnostics for Equipment Testing and Automation (CVDTEA), Cluj-Napoca, 400084, Romania</i>   |
| I3D-4<br>YRA<br>CANDIDATE | <b>Functionalized red emitting carbon dots as fluorescent additives for 3D printing photopolymerization</b><br>S. Maturi, <sup>1</sup> A. Baschieri, <sup>2</sup> E. Locatelli, <sup>1</sup> M. Comes Franchini <sup>1</sup> and L. Sambri <sup>1</sup><br><sup>1</sup> <i>Dept. of Industrial Chemistry "Toso Montanari", Un. of Bologna, via P. Gobetti 85, Bologna, 40129, Italy</i><br><sup>2</sup> <i>ISOF, CNR, via P. Gobetti 101, Bologna, 40129, Italy</i>  |
| I3D-5                     | <b>Bipolar Plates for Hydrogen Fuel Cells Manufactured by Fused Filament Fabrication using High-Load Metal-Polymer Composites</b><br>A. Tiliakos <sup>1,2</sup> , R.-V. Răbuga <sup>1</sup> , G.-Rainer Gillich <sup>2</sup><br><sup>1</sup> <i>National R&amp;D Institute for Cryogenic and Isotopic Technologies (ICSI), ICSI Energy Dept., Rm. Vâlcea, 240050, Romania</i><br><sup>2</sup> <i>Babeş-Bolyai Un., Dept. of Engineering Science, Centre for Vibrodiagnostics for Equipment Testing and Automation (CVDTEA), Cluj-Napoca, 400084, Romania</i>   |
| I3D-6                     | <b>Extending the Aerodynamic Shape Optimization of a Solar Car to 3D Printing</b><br>G. Tzionas <sup>1</sup> , An. Moissiadis <sup>1</sup> , N. Ntinias <sup>2</sup> , I. Tzionas <sup>1</sup><br><sup>1</sup> <i>Dept. of Mechanical Engineering, International Hellenic Un., Serres, Greece</i><br><sup>2</sup> <i>Dept. of Mechanical Engineering, Un. of Western Macedonia, Kozani, Greece</i>   |
| I3D-7                     | <b>3D printed materials for healing of bone defects</b><br>J. Frankova <sup>1</sup> , R. Novotna <sup>1</sup> , R. Novotny <sup>1</sup> , J. Janusz <sup>2</sup> and A. Jabłoński <sup>2</sup> , I. Rajzer <sup>2</sup><br><sup>1</sup> <i>Dept. of Medical Chemistry and Biochemistry, Hnevotinska 3, Palacky Un. Olomouc, 775 15, Czech Republic</i><br><sup>2</sup> <i>Faculty of Mechanical Engineering and Computer Science, Un. of Bielsko-Biala, Willowa 2, 43-309 Poland</i>   |
| I3D-8                     | <b>Advanced 3D collagen-based scaffolds enriched with vasculogenic compound for enhanced vascularization and wound healing</b><br>D. Izsak <sup>1</sup> , V. Pavliňáková <sup>1</sup> , Z. Fohlerová <sup>1</sup> , T. Szotkowská <sup>2</sup> , M. Buchtová <sup>2</sup> , L. Vojtová <sup>1</sup><br><sup>1</sup> <i>CEITEC BUT, Central European Institute of Technology, Brno Un. of Technology, Czech Republic</i><br><sup>2</sup> <i>Institute of Animal Physiology and Genetics, The Czech Academie of Science, Czech Republic</i>  |

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| I3D-9                      | <p><b>Finite Element Analysis and Topology Optimization of Additive Manufactured Orthodontic Twin Brackets for Enhanced Performance and Mass Reduction</b><br/>T. Profitiliotis<sup>1</sup>, N. Kladovasilakis<sup>1,2</sup>, E. M. Pechlivani<sup>1</sup>, D. Tzetzis<sup>1</sup><br/><sup>1</sup> Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic Un., Thessaloniki, 57001, Greece<br/><sup>2</sup> Center for Research and Technology Hellas, Information Technologies Institute, 57001 Thessaloniki, Greece</p>   |
| I3D-10                     | <p><b>Development and Numerical Evaluation of a Topologically Optimized Helmet with Advanced Architected Materials</b><br/>N. Kladovasilakis<sup>1,2</sup>, K. Tsongas<sup>2</sup>, E.M. Pechlivani<sup>1</sup>, D. Tzetzis<br/><sup>1</sup>Center for Research and Technology Hellas, Information Technologies Institute, 57001 Thessaloniki, Greece<br/><sup>2</sup>Digital Manufacturing and Materials Characterization Laboratory, School of Science and Technology, International Hellenic Un., Thessaloniki, 57001, Greece</p>  |
| I3D-11                     | <p><b>A refractometry sensor for the detection of pathogens in bioreactor samples</b><br/>M. Chatzipetrou<sup>1</sup>, E. Damianidou<sup>2</sup>, M. Dimadi<sup>2</sup>, A. Bokski<sup>3</sup>, E. Schreuder<sup>3</sup>, A. Klinakis<sup>2</sup> and I. Zergioti<sup>1</sup>.<br/><sup>1</sup> School of App. Mathematics and Physical Sci., National Technical Un. of Athens, Zografou 15780, Greece.<br/><sup>2</sup> PhosPrint P. C. Lefkippos Technology Park, NCSR Demokritos, Patriarchou Grigoriou 5<sup>th</sup> &amp; Neapoleos 27, 15341, Agia Paraskevi, Athens, Greece.<br/><sup>3</sup> Lionix International B.V., Hengelosestraat 500, 7521 AN Enschede, The Netherlands</p>   |
| I3D-12                     | <p><b>Multilayer laser printing of cells with hydrogels</b><br/>S. Elezoglou<sup>1</sup>, A. Hatzia Apostolou<sup>2</sup>, A. Chalari<sup>3</sup>, A. Rufino<sup>4</sup>, C. Chandrinou<sup>1</sup>, C. Custodio<sup>4</sup>, A. Klinakis<sup>3,5</sup>, and I. Zergioti<sup>1,5</sup><br/><sup>1</sup>National Technical Un. of Athens, School of App. Mathematical and Physical Sci., Athens, Greece<br/><sup>2</sup>Dept. of Naval Architecture, School of Engineering, Un. of West Attica, Athens, Greece<br/><sup>3</sup>Biomedical Research Foundation of the Academy of Athens, Athens, Greece<br/><sup>4</sup>Metatissue Edificio Central, PCI - Creative Science Park Aveiro Region, Via do Conhecimento, 3830-352 Ílhavo, Portugal<br/><sup>5</sup>PhosPrint P.C., Attika Technology Park Lefkippos, Agia Paraskevi, Athens, Greece</p> |
| I3D-13<br>YRA<br>CANDIDATE | <p><b>Surrogate model for exciton-polariton condensation</b><br/>K. Kuba<sup>1</sup>, M. Matuszewski<sup>2,3</sup>, B. Piętko<sup>1</sup>, A. Opala<sup>1,2</sup><br/><sup>1</sup>Institute of Experimental Physics, Faculty of Physics, Un. of Warsaw, ul. Pasteura 5, PL-02-093 Warsaw, Poland<br/><sup>2</sup>Institute of Physics, Polish Academy of Sci., Aleja Lotników 32/46, PL-02-668 Warsaw, Poland<br/><sup>3</sup>Center for Theoretical Physics, Polish Academy of Sci. Aleja Lotników 32/46, 02-668 Warsaw, Poland</p>  |
| I3D-14                     | <p><b>Compensating for Errors in a Gas Sensor Array Using Machine Learning and a Custom Laboratory Test System</b><br/>F. Gerhat<sup>1</sup>, M. Micjan<sup>1</sup>, V. Rezo<sup>1</sup>,<br/><sup>1</sup>Institute of Electronics and Photonics, Faculty of Electrical Engineering and Information Technology, Slovak Un. of Technology in Bratislava, Slovak Republic</p>   |
| I3D-15                     | <p><b>High Secure Process Automation Framework to Improve Production Quality and Scalability</b><br/>A. Takaluoma<sup>1</sup>, Janne Rosberg<sup>2</sup><br/>Offcode Oy, Finland</p>  |
| I3D-16                     | <p><b>From CHADA to CHAMEO:<br/>A reference system for characterisation data management</b><br/>O. M. Roscioni<sup>1</sup>, G. Goldbeck<sup>1</sup>, P. Del Nostro<sup>1</sup>, D. Toti<sup>1</sup><br/><sup>1</sup> Goldbeck Consulting LTD, CB4 0WS Cambridge, United Kingdom.</p>  |