



## TENTATIVE PROGRAM (as of 15/09/2021)



K: Keynote lecture / I: Invited Lecture / FP: FlashPoster contribution

### Time Zone – Lisbon (GMT+1)



#### Thursday (16/09/2021)

08:50 – 09:00: *Opening - Welcome and Introduction*

**Antonio Correia** (Phantoms foundation, Spain)

**Lars Montelius** (INL, Portugal)

**Vasco Teixeira** (University of Minho, Portugal)

09:00 – 09:30: **Joaquín Fernández-Rossier** (INL, Portugal) K

Organic Chemistry meets quantum magnetism

09:30 – 10:00: **Roser Valenti** (University of Frankfurt, Germany) K

Quantum materials design: challenges and opportunities

10:00– 10:20: *Break*

10:20 – 10:50: **María Varela del Arco** (UCM, Spain) K

Sub-unit cell investigations of nanomaterials through aberration corrected electron microscopy

10:50 – 11:20: **Tito Trindade** (University of Aveiro, Portugal) K

Shining light on metal colloids in the trace detection of water pollutants

11:20 – 11:25: **Efres Belmonte Reche** (INL, Portugal) FP

Xanthan-Fe<sub>3</sub>O<sub>4</sub> Nanoparticle Composite Hydrogels for Non-Invasive Magnetic Resonance Imaging and Magnetically-Assisted Drug Delivery

11:25 – 11:30: **Joana Tavares** (University of Aveiro, Portugal) FP

Humidity and Temperature embedded textile sensor based on Graphene

11:30 – 12:40: Orals // Session I

11:30 – 11:40: **Mazen El Hammadi** (Universidad de Sevilla, Spain) O

Shear-collapsible microscale aggregates of PLGA nanoparticles with the ability to target obstructed blood vessels

11:40 – 11:50: **Bruno Silva** (INL - International Iberian Nanotechnology Laboratory, Portugal) O

Quantitative colocalization between cationic liposomes and DNA revealed by Fluorescence Cross-Correlation Spectroscopy

11:50 – 12:00: **Patrícia Rodrigues** (International Iberian Nanotechnology Laboratory, Portugal) O

Development of microfluidic-based tools to mimic the human gastrointestinal tract

12:00 – 12:10: **Lucia Martin-Navarro** (Universidad de Sevilla, Spain) O

Selective cannabinoid nanoparticles for Atherosclerosis treatment

12:10 – 12:20: **Sérgio Veloso** (Centre of Physics of Minho and Porto Universities, Portugal) O

The interplay of nanocomposites co-assembly with peptide-based gels as a strategy towards on-demand drug release

12:20 – 12:30: **Virginia Albaladejo García** (Inst. de Investigación Sanitaria Gregorio Marañón, Spain) O

Milk exosomes as natural curcumin nanocarriers in liver fibrosis

12:30 – 12:40: **Ana Iglesias-Mejuto** (USC, Spain) O

Biological behaviour of UCNPs loaded aerogel scaffolds

11:30 – 12:40: Orals // Session II

11:30 – 11:40: **Sara Fateixa** (CICECO-University of Aveiro, Portugal) O

Gold loaded textile fibers as substrates for Raman imaging and SERS detection

11:40 – 11:50: <b>Ana Vieira</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
Portable SERS-based detection system for ultra-detection of H <sub>2</sub> S	
11:50 – 12:00: <b>Viviana Sousa</b> (INL - International Iberian Nanotechnology Laboratory, Portugal)	O
Colloidal Synthesis of PbTe and SnSe for Thermoelectric Application	
12:10 – 12:20: <b>Huaijuan Zhou</b> (University of Chemistry and Technology Prague, Czech Republic)	O
Versatile Micromotors for Photocatalytic Environmental Remediation	
12:20 – 12:40: <b>Fernanda Cassio</b> (University of Minho, Portugal)	I
Present and future challenges of nanomaterials for the environment	
12:40 – 13:30: <i>Lunch Break</i>	
13:30 – 15:30: Orals // Session I	
13:30 – 13:50: <b>Pedro Alpuim</b> (INL, Portugal)	I
Biosensing with Graphene Devices	
13:50 – 14:00: <b>Mafalda Abrantes</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
Attomolar label-free dopamine detection with aptamer functionalized graphene field-effect transistors	
14:00 – 14:10: <b>João Fernandes</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
Few-layer hexagonal boron nitride production for high technology	
14:10 – 14:20: <b>Rui Oliveira-Silva</b> (IST - University of Lisbon, Portugal)	O
A Single Particle LSPR Biosensor for Thrombin Activity Determination in Real-time	
14:20 – 14:40: <b>Josep Ingla Aynés</b> (CIC NanoGUNE, Spain)	I
Electrical Control of Valley-Zeeman Spin-Orbit-Coupling-Induced Spin Precession	
14:40 – 14:50: <b>Diogo Aguiam</b> (INL - International Iberian Nanotechnology Laboratory, Portugal)	O
Design and fabrication of surface relief diffractive optical elements	
14:50 – 15:00: <b>Alexandre Chicharo</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
Ultra-transparent broadband terahertz polarizers by nanoimprint lithography	
15:00 – 15:10: <b>Paulo Santos</b> (INESCTEC, Portugal)	O
Refractometric sensitivity comparison between different nanoparticle structures towards optical fiber sensors	
15:10 – 15:20: <b>Marina Alves</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
Development of a magnetron sputtering deposition process for In <sub>2</sub> O <sub>3</sub> :H transparent back contact for Cu(In,Ga)Se <sub>2</sub> -based solar cells	
15:20 – 15:30: <b>Zhipeng Yu</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
Highly Dispersed Noble Metal-Based Carbon Nitride as Efficient Electrocatalytic/Photocatalytic Hydrogen Evolution Reaction Catalysts	
13:30 – 15:30: Orals // Session II	
13:30 – 13:50: <b>Graça Minas</b> (Universidade do Minho, Portugal)	I
Development of thermal microtransducers for integration in Organ-on-a-chips	
13:50 – 14:00: <b>Silvia Soares</b> (ICBAS/U.Vigo/i3S/Biomark-ISEP, Portugal)	O
Gold nanorods as radiosensitizer agents on PC3 cells	
14:00 – 14:10: <b>Sameh El Sayed</b> (University of Birmingham, UK)	O
Enzyme-Degradable Polyion-Complex (PIC) Particles for the delivery of antimicrobial peptide polymyxin B.	
14:10 – 14:20: <b>Maria Enea</b> (UCIBIO, REQUIMTE, Portugal)	O
Improved Gold Nanoparticle Probes for Molecular Detection of Metabolic Diseases	
14:20 – 14:30: <b>Cátia Rocha</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
(Para)magnetic Hybrid Nanocomposites for Dual MRI Detection and Treatment of Solid Tumours	
14:30 – 14:40: <b>Victor Gonçalves</b> (INL - International Iberian Nanotechnology Laboratory, Portugal)	O
Graphene Magnetic Nanoparticles as multifunctional smart drug delivery nanosystems for cancer theranostics	
14:40 – 14:50: <b>Beatriz Brito</b> (International Iberian Nanotechnology Laboratory, Portugal)	O
Redox responsive manganese-based MRI theranostics for cancer therapy	
14:50 – 15:00: <b>Jinhua Li</b> (University of Chemistry and Technology Prague, Czech Republic)	O
Designing Antibiotics-Free Novel Biomaterials That Combat Bacterial Infections	
15:00 – 15:20: <b>Catarina P. Reis</b> (University of Lisbon, Portugal)	I
Proof-of-Concept Study of Gold-based Nanosystem Combined with NIR Laser Irradiation for Melanoma	

15:30 – 15:50: Break

15:50 – 16:20: ePoster Session I

16:20 – 16:50: **Arben Merkoci** (ICREA/ICN2, Spain) K

REASSURED paper-based nanobiosensors for diagnostics

16:50 – 17:00: **David Botequim** (Instituto Superior Técnico, Portugal) O

Photo-induced functionalization of gold nanorods for biosensing of proteins

17:00 – 17:30: **Paulo Freitas** (INL, Portugal) K

From lab to farm: monitoring grape maturation and vine hydric stress with integrated optical sensing and IOT technologies

17:30 – 18:00: **Elvira Fortunato** (Universidade Nova de Lisboa, Portugal) K

Renewable materials applied to electronics

18:00: Closing Day 1



**Friday (17/09/2021)**

09:00 – 09:30: **Danny Porath** (The Hebrew University of Jerusalem, Israel) K

Surprising Charge Transport in DNA and Properties of Novel DNA-Based Molecules

09:30 – 10:00: **Liraz Chai** (The Hebrew University of Jerusalem, Israel) K

A biophysical study of the aggregation of an extracellular matrix bacterial protein.

10:00 – 10:30: **Josep Samitier Martí** (IBEC, Spain) K

Nanopatterning regulates architecture of intercellular communication during mesenchymal cell condensation

10:30– 11:00: ePoster Session II

11:00 – 11:30: **Paulo J. Ferreira** (INL, Portugal) K

Understanding the Structure of LiMn<sub>2</sub>O<sub>4</sub> by Aberration-Corrected HAADF STEM and Differential Phase Contrast

11:30 – 12:00: **Luis Miguel Varela** (Universidad de Santiago de Compostela, Spain) K

Nanostructured electrolyte-electrode systems in next-generation batteries

12:00 – 12:30: **Bernhard Roling** (University of Marburg, Germany) K

Title to be defined

12:30 – 12:40: **Zhixin Tai** (INL, Portugal) O

A carbon layer coated porous silicon anode with high capacity for high energy density lithium ion batteries

12:40 – 12:50: **Lifeng Liu** (International Iberian Nanotechnology Laboratory, Portugal) O

Efficient Saline Water Electrolysis for Green Hydrogen Production without the Interfering Chlorine Evolution

12:50 – 14:00: *Lunch Break*

14:00 – 14:30: **Thomas Heine** (TU Dresden, Germany) K

The potential of 2D polymers for light harvesting applications

14:30 – 15:00: **Artur Ciesielski** (Université de Strasbourg, France) K

Low-dimensional materials as platform for sensing and water purification

15:00 – 15:30: **Francesco Bonaccorso** (BeDimensional, Italy) K

Advances in the large-scale production of 2D crystals

15:30 – 15:40: **Agnes Purwidyantri** (International Iberian Nanotechnology Laboratory, Portugal) O

Mini sensor based on graphene transistor for wine authenticity tracing by DNA detection

15:40 – 15:50: **Siva Sankar Nemala** (International Iberian Nanotechnology Laboratory, Portugal) O

Liquid phase exfoliated graphene nanosheets as laminates for water purification

15:50 – 16:20: **Cinzia Casiraghi** (University of Manchester, UK) K

Defect free and biocompatible 2D material inks for printed electronics

16:20– 16:30: *Break*

- 16:30 – 17:00: **Bruno Sarmiento** (i3S / University of Porto, Portugal) K  
Bioengineered nanomedicines to modulate the local and intracellular pharmacokinetics of anticancer drugs for colorectal cancer
- 17:00 – 17:10: **Paula Soares** (Cenimat/i3N, NOVA School of Science and Technology, Portugal) O  
Development of a new magnetically responsive device for localized cancer theranostics
- 17:10 – 17:20: **Milene Costa da Silva** (International Iberian Nanotechnology Laboratory, Portugal) O  
Self-reporting Nanoparticles for Cancer Immunotherapy
- 17:20 – 17:30: **Matilde Durán-Lobato** (Universidad de Sevilla, Spain) O  
Receptor surface decoration improves the anticancer activity of cannabinoid-loaded nanoparticles through delayed cell internalization
- 17:30 – 18:00: **Pedro Viana Baptista** (Nova University Lisbon, Portugal) K  
Combinatory approaches against cancer based on Gold nanoparticles
- 18:00: Closing