

Tentative Program

(as of 16/09/2025)

MONDAY SEPTEMBER 29, 2025

08:00-08:45	Registration	
08:45-09:15	Opening Ceremony	
Chairperson:		
09:15-10:00	Andrea Ferrari (Cambridge Graphene Centre / University of Cambridge, UK) Title to be defined	P
10:00-10:30	Jose A. Garrido (ICN2, Spain) Graphene thin film technology for neural interfaces	K
Coffee Break / Poster Session		
Chairperson:		
11:15-11:45	Martin Pumera (CEITEC, Czech Republic) Nano and microrobots for biomedicine and environment	K
11:45-12:15	Jesús Alberto Escarpa Miguel (University of Alcalá, Spain) Micromotors-based screening biosensing approaches in the frame of the diagnosis of Alzheimer’s disease	K
12:15-12:35	Maria Guix (University of Barcelona, Spain) Animating living robots with compliance and biosensing	I
12:35-13:05	Samuel Sánchez (IBEC, Spain) Biocompatible chemical nanobots and their applications in biomedicine	K
Cocktail Lunch (offered by NanoBalkan2025 organisers)		
Poster Session I		
Chairperson		
14:30-15:00	Suna Timur (Ege University, Türkiye) Smart Nanoplatfoms for Multiplexed Diagnostics and Targeted Therapy	K
15:00-15:30	Mariangela Di Donato (CNR-ICCOM, Italy) Self-assembled nanoparticles for photoinduced and photothermal therapies	K
15:30-16:00	Josep Nogués (ICN2, Spain) Magnetoplasmonic Nanocapsules as Wirelessly Controlled Nanotherapies	K
16:00-16:30	Javier Ramón-Azcón (IBEC, Spain) Organs-on-chip with integrated optical sensors: advanced models for evaluation of potential therapies	K
16:30-17:00	Nunzio Denora (Università degli Studi di Bari Aldo Moro, Italy) Advancing Glioma Therapy through Microfluidic Fabrication of Hybrid Liposomes with Homotypic Targeting	K
Coffee Break / Poster Session		
Chairperson:		
17:30-18:00	Cecilia Jimenez (CSIC, Spain) Smart microsensors for Total Aquatic Process Monitoring and Control	K
18:00-18:30	Fabio Di Francesco (University of Pisa, Italy) Next-Generation Biosensing Technologies for the Detection of Infectious Agents	K
18:30-18:45	Federico Vivaldi (University of Pisa, Italy) Solid state electrochemical sensor for the detection of hydrogen	O
18:45-19:15	Gustau Catalán (ICN2, Spain) The Bending Boost: Polarization Pathways to Enhanced Photostriction and Photovoltaics	K

Chairperson:		
09:00-09:20	Laura Rodriguez-Lorenzo (INL, Portugal) Plasmonic Hybrid Composites as Excellent Nanoplatfrom for Surface-Enhanced Raman Scattering-based Sensors	I
09:20-09:40	Pilar Rivera Gil (Universitat Pompeu Fabra, Spain) A SERS-active plasmonic nanosensor-chemometrics platform reveals a biphasic zinc switch that controls breast-cancer metastasis	I
09:40-09:55	Víctor Ruiz-Valdepeñas Montiel (Universidad Complutense de Madrid, Spain) Electroanalytical Biotools Targeting Globally Non-Canonical G-quadruplex DNA Structures: Towards Accessible Cancer Diagnosis and Therapy	O
09:55-10:10	Marina Serin (EGE university, Turkey) Determination of DAMP Signals from Immunogenic Cell Death Biomarkers for Anticancer Drug Development Studies with Nano Electrochemical Aptasensor	O
10:10-10:30	Marijana Petković (University of Belgrade, Serbia) S-doped carbon dots stimulate overexpression of ribosomal and change expression of proteasomal proteins in HeLa cervical cancer cell line	I
10:30-11:00 Coffee Break / Poster Session		
Chairperson:		
11:00-11:30	Fabiana Arduini (University of Rome "Tor Vergata", Italy) Paper-based electrochemical (bio)sensors: where we are and where we are going	K
11:30-12:00	Arzum Erdem Gürsan (Ege University, Türkiye) Advancing Nucleic Acid Biosensors based on nanomaterials for electrochemical monitoring of Nucleic Acid interactions	K
12:00-12:30	Sibel A. Özkan (Ankara University, Türkiye) Fabrication of Nanomaterial Embedded Molecularly Imprinted Polymer-Based Sensors and its Electrochemical Applications	K
12:30-13:00	Paola Minghetti (Università degli Studi di Milano, Italy) The European Regulatory Framework for Nanomedicines: Is It Suitable for the Future?	K
13:00-14:15 Lunch		
Chairperson:		
14:15-14:45	Winnie Edith Svendsen (DTU, Denmark) Laser-Scribed Graphene Electrodes for Advanced Electrochemical Biosensing: From Material Properties to Real-World Applications	K
14:45-15:05	Alessandro Silvestri (Università Ca' Foscari Venezia, Italy) Nanomaterial-based smart inks for electrochemical sensors	I
15:05-15:25	Mònica Mir Llorente (IBEC, Spain) Integrated sensors in humanized models to study neurodegeneration	I
15:25-15:55	Carsten Sönnichsen (University of Mainz, Germany) Plasmons for sensors implanted under the skin	K
15:55-16:15	Ulku Anik (Mugla Sitki Kocman University, Türkiye) Biosensors Based on Infection Mechanism Mimicry at The Core of Diagnostic Systems	I
16:15-16:35	Alfredo de la Escosura-Muñiz (University of Oviedo, Spain) Use of novel bimetallic nanoparticles as labels in biosensing for applications in clinical diagnostics	I
16:35-17:15 Coffee Break / Poster session		
Chairperson:		
17:15-17:45	Neus Gomez Bastus (ICN2, Spain) Disordering by Design: High-Entropy Alloy Nanocrystals via Galvanic Replacement Reactions for Catalytic Applications	K
17:45-18:15	Fetah Podvorica (University of Prishtina, Republic Kosovo) Functionalization of the surfaces of materials with organic moieties using aryl diazonium salts as a radical source	K
18:15-18:30	Sefer Avdiaj (University of Prishtina, Republic of Kosovo) The Influence of 3D Printing Type and Structure on the Diffusion and Permeability Properties of Polymeric Materials	O

Chairperson:

09:00-09:30	Steven Dunn (London South Bank University, UK) Corona-Boosted Piezocatalysis: Transforming Ferroelectric Materials for Enhanced Water Splitting	K
09:30-09:50	Kledi Xhaxhiu (University of Tirana, Albania) Rapid and low-cost determination of flavonoids and hormones using nanomodified-CPE in combination with ESV	I
09:50-10:20	Francesco Ricci (University of Rome, Tor Vergata, Italy) DNA-Protein Hybrids as Multifunctional Nanodevices	K

10:20-11:00

Coffee Break / Poster session

Chairperson:

11:00-11:30	Fatih Inci (Bilkent University, Türkiye) Delving into Molecular Fingerprints for Biosensing Applications	K
11:30-12:00	Michal Otyepka (RCPTM, Czech Republic) Advancing Biosensing with Graphene Derivatives as Efficient Signal Transducers	K
12:00-12:20	Lorena Dieguez (INL, Portugal) Microfluidic Nanobiosensors for the Analysis of Minimal Residual Disease in Acute Myeloid Leukemia	I
12:20-12:40	Bergoi Ibarlucea Canton (Tecnalia, Spain) Antibody-nanocluster Biohybrids and Multimodal Wearable Biosensors for Cost-Effective and Personalized Health Monitoring	I
12:40-12:55	Hoi Tung Lam (University of Exeter, UK) Sustainable and Scalable 2D Materials for Wearable Self-Powered Sensing	O
12:55-13:10	Albana Veseli (University of Prishtina, Republic of Kosovo) Electro-Sensing of Herbicides Enhanced by Nanomaterials in Environmental Samples	O
13:10-13:25	Toufic El Beaino (CIHEAM BARI, Italy) Development of High-Affinity Aptamers for Xylella fastidiosa Detection Using Comparative SELEX Strategies	O

13:25-14:30

Lunch

Chairperson:

14:30-15:00	Sabato D'Auria (CNR, Italy) The use of proteins as a new avenue for the design of optical biosensors	K
15:00-15:20	Majlinda Vasjari (University of Tirana, Albania) The rGO@Me impact on modified pastes and printed sensors	I
15:20-15:40	Sevinc Kurbanoglu (Ankara University, Türkiye) From Enzymes to Aptamers: The Power of Immobilized Biomaterials in Next-Gen Biosensors	I
15:40-16:10	Mamas Prodromidis (University of Ioannina, Greece) Generation of Nanomaterials via Spark Discharge: A Rapid, Environmentally Friendly, and Versatile Method for In-Situ Modification of Electrochemical (bio)sensing devices	K
16:10-16:25	Antonella Barone (University Magna Graecia of Catanzaro, Italy) Green vesicles, golden opportunities: plant-derived nanovesicles from pharma to cosmetic applications	O
16:25-16:40	Nicola d'Avanzo (Magna Graecia University of Catanzaro, Italy) From Nanovesicles to Fibers: A Hybrid Electrospun Membrane for Enhanced Ketoprofen Skin Delivery	O

16:40-17:10

Coffee Break / Poster Session

Chairperson:

17:10-17:30	Yeseren Saylan Inci (Hacettepe University, Türkiye) Molecularly Imprinted Sensors Targeting Extracellular Vesicles for Cancer Detection	I
17:30-17:50	Acelya Yilmazer (Ankara University, Türkiye) Leveraging Omics for the Advancement of Cancer Nanotherapeutics	I
17:50-18:10	Bashkim Ziberi (University of Tetova, Republic of North Macedonia) Combining Radiotherapy and Immunotherapy using nanoparticle loaded immunogenic biomaterials for cancer treatment	I
18:10-18:30	Gjergj Dodbiba (The University of Tokyo, Japan) Application of Fine Bubbles for Free Radical Reduction: An Experimental Study	I
18:30-18:45	Rebeca Magnolia Torrente Rodríguez (Universidad Complutense de Madrid, Spain) Pioneering Electrochemical Peepholes for Decoding Epigenomic and Epitranscriptomic Oncological Landscapes	O
18:45-19:00	Antonio Lopalco (University of Bari Aldo Moro, Italy) Impact of Different Zwitterionic Surfaces on the Performance of Lipid-Based Nanocarriers	O

19:00-19:15	Rosa Maria Iacobazzi (University of Bari, Italy) Microfluidic-Driven Precision Lipid Nanoparticles for Nucleic Acid Delivery	O
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THURSDAY OCTOBER 02, 2025

Chairperson:		
09:00-09:30	Yasuaki Einaga (Keio University, Japan) Electrochemical Application of Boron-doped Diamond Electrodes	K
09:30-10:00	Jordi Sort Viñas (UAB/ICREA, Spain) Magneto-ionics for Low-power Memory, Data Security and Advanced Computing	K
10:00-10:15	Antonios Makridis (Aristotle University of Thessaloniki, Greece) Magnetite-Gold Hybrid Nanoparticles for Dual-Modality Biosensing and Targeted Therapy in Neurodegenerative Disorders	O
10:15-11:05	Coffee Break / Poster Session	
Chairperson:		
11:05-11:35	Aristides Bakandritsos (Palacky University of Olomouc, Czech Republic) Low-Dimensional Functional Materials for Catalysis and Energy Storage	K
11:35-12:05	Pedro Gómez-Romero (ICN2, Spain) The nano-approach to hybrid energy storage	K
12:05-12:20	Tariq Sajjad (London South Bank University, UK) Mesoporous WO ₃ Nanoplates: Smart Materials for Integrated Photonic Energy Storage and Catalysis	O
12:20-12:40	Hirotomo Nishihara (IMRAM, Tohoku University, Japan) Three-dimensional mesoporous graphene for energy applications	I
12:40-13:00	Kostas Rogdakis (Hellenic Mediterranean University, Greece) Printable memristive solar cells based on Lead-free perovskites for self-powered artificial synapses and neurons	I
13:00-13:15	John Buckeridge (London South Bank University, UK) Determining the thermodynamics of disorder at the nanoscale using quantum computing	O
13:15-14:30	Lunch	
Chairperson:		
14:30-15:00	Francesco Trotta (University of Turin, Italy) The two aspects of cyclodextrin polymers: exploring soluble and insoluble worlds through synthetic routes, characterization and applications.	K
15:00-15:30	Gianluca Fiori (University of Pisa, Italy) Ultra-Conformable Circuits Based on MoS ₂ Transistors and High-Precision Printing Technologies	K
15:30-15:50	Suela Kellici (London South Bank University, UK) Design–Synthesis–Performance Framework for Advanced Nanomaterials using Continuous Flow	I
15:50-16:20	Coen de Graaf (ICREA/URV, Spain) Many-electron band structures based on Non-Orthogonal Configuration Interaction to study exciton dispersion and charge transport	K
16:20-16:40	Sachiko Matsushita (Institute of Science Tokyo, Japan) Redox reaction of thermally excited carriers: Semiconductor-sensitized thermal cell	I
16:40-17:20	Coffee Break / Poster Session	
17:20-17:40	Tomoko Shimizu (Keio University, Japan) Characterization of Organic Porous Thin Films Fabricated at the Air/Liquid Interface Using Atomic Force Microscopy and Nano-FTIR Spectroscopy	I
17:40-18:10	Dritan Siliqi (CNR, Italy) Unveiling Complexity: Small-Angle X-ray Scattering (SAXS) as a Powerful Tool in Bioscience — from Nanomaterials to Biomolecules	K
18:10-18:30	Hiroaki Onoe (Keio University, Japan) Hydrogel-based sealed microwell array for analyzing extracellular vesicles secreted from single cells	I
18:30-19:00	Pinar Kara (Ege University, Türkiye) Electrochemical Aptasensing Approach for Measuring Myelin Basic Protein Levels in Demyelination and Neurological Disorders	

PARALLEL SESSION - PhD Students

Chairperson:

14:30-14:40	Meriem Gouasmi (University of Turin "UNITO", Italy) Controlled Synthesis of Graphitic Carbon Nitride (g-C ₃ N ₄) via Melamine Polymerization Using Experimental Design	O
14:40-14:50	Carla Arroyo Rivera (Institute for Bioengineering of Catalonia, Spain) Development of an Electrochemical Multiparametric Sensor for Continuous Monitoring of Cardiovascular Biomarkers	O
14:50-15:00	Kerem Tok (Ege University, Turkey) Development of CdSe/ZnS-QD protein/peptide coronas from pleural fluids for targeted biomedical use	O
15:00-15:10	Konstantina Kazeli (Aristotle University of Thessaloniki, Greece) DNA aptamer gold-magnetic nanoconjugates for the detection of Alzheimer's disease biomarkers	O
15:10-15:20	Yuki Shimizu (Keio University, Japan) Production of Carbon Monoxide in One-Chamber Reactor Using Boron-Doped Diamond Electrodes	O
15:20-15:30	Kohei Shibano (Keio University, Japan) Fabrication of Metal-Supported Diamond Electrodes for Direct Formic Acid Fuel Cells	O
15:30-15:40	Akant Sengül (Brandenburg University of Technology, Germany) Optical investigation of Polymer-Functionalization of TiN-Nanohole-Arrays for Integrated Biosensor Applications	O
15:40-15:50	Gulsu Keles (Ankara University, Turkey) Fabrication and Characterization of a Bimetallic Nanomaterial Modified Aptasensor for Organophosphorus Pesticide Sensing	O

Chairperson:

09:00-09:30	Giulia Palermo (The University of California Riverside, USA) Deep Learning and Computational Modelling for the Next Generation of CRISPR Technologies	K
09:30-09:50	Marcel Langer (EPFL, Switzerland) Recent developments in machine learning force fields: Foundation models, symmetries, constraints, and long-range interactions	I
09:50-10:10	Chiara Zanardi (Ca' Foscari University of Venice, Italy) Unusual amperometric detection of ions using machine learning applied to hexacyanoferrate and graphene oxide modified electrodes	I

10:10-10:40

Coffee Break

Chairperson:

10:40-11:10	Gianni Ciofani (IIT, Italy) Light-Responsive Biodegradable Nanotransducers for Cellular Modulation: Polydopamine Nanoparticles as a Promising Platform for Healthcare Applications	K
11:10-11:40	Ilaria Fratoddi (Sapienza University of Rome, Italy) Tuneable Interfaces in Single-Metal and Hybrid Nanoparticles: A Toolbox for Adaptive Sensing and Therapeutics	K
11:40-12:00	Genc Basha (University of British Columbia, Canada) Stimulation of morphological changes of Lipid Nanoparticle Formulations of mRNA Leads to Improved Transfection Potency	I
12:00-12:15	Ardian Jusufi (ETH and UZH Institute for NeuroInformatics, Switzerland) Biomimetic Traction-Enhancing Scale Arrays enable Soft Robot Transitions by Offloading Computation into Morphology	O

12:15-13:30

Lunch

Chairperson:

13:30-14:00	Ilaria Ciofini (Chimie ParisTech - PSL, France) Title to be defined	K
14:00-14:30	Raik Grünberg (KAUST, Saudi Arabia) Multi-enzyme MOF nanoreactors transplant a drug biosynthesis pathway into cells	K
14:30-15:00	Mariana Medina Sanchez (CIC nanoGUNE, Spain) Rolled-Up Nanomembrane Sensors: Enabling Multi-Scale Monitoring from Molecules to Embryos	K
15:00-15:20	Filiz Kuralay (Hacettepe University, Türkiye) Nano/Micromaterials for Sensing and Drug Delivery	I
15:20-15:35	Flamur Sopaj (University of Prishtina, Republic of Kosovo) Characterisation of graphite fibre anode used for organic pollutants removal from aqueous media	O

15:35

CLOSING & NANOBAKLAN2026 ANNOUNCEMENT