

# Tentative Program

(as of 10/10/2023)

MONDAY OCTOBER 16, 2023

08:00-08:45	<b>Registration</b>	
08:45-09:10	<b>Opening Ceremony</b>	
	1. Celebration of the Master Programme in Nanoscience and Nanotechnology. The Cooperation Protocol between NanoAlb-ASH and Western Balkan University will be signed.	
	2. Honoring the contribution to nanoBalkan of Prof. K. Novoselov.	
	3. Celebration of Prof. J. Wang as an Honorary Member of Academy of Science of Albania.	
	Chairperson: Arben Merkoci (ICREA - ICN2 - BIST, Spain)	
09:10-09:50	<b>Kostya Novoselov</b> (NUS, Singapore)	P
	2D materials and van der Waals heterostructures: research and applications	
09:50-10:20	<b>Jürgen Brugger</b> (EPFL, Switzerland)	K
	Thermal scanning probe-based greyscale nanopatterning applied to 2D materials	
10:20-10:50	Coffee Break / Poster Session	
	Chairperson: Jesús Alberto Escarpa Miguel (University of Alcalá, Spain)	
10:50-11:20	<b>Francesco Trotta</b> (University of Turin, Italy)	K
	Cyclodextrin-based Nanosponges: Smart Nanocarriers for Various Applications	
11:20-11:40	<b>Giovanni Valenti</b> (University of Bologna, Italy)	I
	Electrochemiluminescence-based biosensor: from academic curiosity to an industrial success	
11:40-12:00	<b>Eda Mehmeti</b> (University for Business and Technology - UBT, Republic of Kosovo)	I
	Some New Trends in the Development of Electrochemical Sensors and Biosensors	
12:00-12:30	<b>Francesco De Angelis</b> (IIT, Italy)	K
	Plasmonic Solid State Nanopores for single biomolecule identification	
12:30-12:40	<b>Jules Coleman</b> (Constructor, Germany)	O
	Era of Functional Intelligent Materials with the use of AI	
12:40-13:30	Cocktail Lunch (offered by NanoBalkan2023 organisers)	
13:30-14:00	Poster Session I	
	<b>JOE WANG PLENARY SESSION</b>	
	Chairperson: Arben Merkoci (ICREA - ICN2 - BIST, Spain)	
14:00-14:40	<b>Joseph Wang</b> (University California San Diego (UCSD), USA)	P
	Micromotors Go In-Vivo: From Test Tubes to Live Animals	
14:40-15:00	<b>Filiz Kuralay</b> (Hacettepe University, Turkey)	I
	Smart Drug Delivery and Diagnosis Applications with Micro/Nanomotors in Breast Cancer	
15:00-15:20	<b>Rodolfo Mundaca Uribe</b> (University of Concepcion, Chile)	I
	Active Oral Drug Delivery Micromotor-based Systems	
15:20-15:50	<b>Jesús Alberto Escarpa Miguel</b> (University of Alcalá, Spain)	K
	Micro swimmers-based collective biosensing for in vitro diagnosis: what is next?	
15:50-16:20	<b>Wei Gao</b> (Caltech, USA)	K
	Skin-Interfaced Wearable Biosensors	
16:20-16:50	Coffee Break / Poster Session	
	Chairperson: Arben Merkoci (ICREA - ICN2 - BIST, Spain)	
16:50-17:20	<b>Gustavo Adolfo Rivas</b> (Universidad Nacional de Córdoba, Argentina)	K
	Two birds with one stone: integrating exfoliation and biorecognition in multi-walled carbon nanotubes by functionalization with biomolecules	
17:20-17:50	<b>Susana Campuzano</b> (UCM, Spain)	K
	Empowering the genome, methylome and immune response with modern electrochemical biosensing: a new journey towards precision medicine	
17:50-18:10	<b>María Jesús Lobo Castañón</b> (University of Oviedo, Spain)	I
	Exploring Long Noncoding RNA Dysregulation in Cancer Using Electrochemical Sensing Platforms	

18:10-18:40	<b>Arzum Erdem Gürsan</b> (Ege University, Turkey) Nanomaterials enriched biosensors for electrochemical monitoring of nucleic acid interactions	K
18:40-19:00	<b>Samo Hocevar</b> (National Institute of Chemistry, Slovenia) Designing Trace Metal Sensors, Immunosensors, Genosensors, and Gas Sensors Using Screen-Printed Electrodes Modified with Various (Nano)Materials	I

## TUESDAY OCTOBER 17, 2023

### PLENARY SESSION AI for Advanced Materials

Chairperson: Stephan Roche (ICREA / ICN2, Spain)

09:00-09:15	Welcome	
09:15-10:00	<b>Kostya Novoselov</b> (NUS, Singapore) AI for materials design	P
10:00-10:30	<b>Andrey Ustyuzhanin</b> (NUS, Singapore) AI for material science: from data-driven to interpretable models of physical systems	K

10:30-11:00 Coffee Break / Poster Session

Chairperson: Andrey Ustyuzhanin (NUS, Singapore)

11:00-11:30	<b>Stephan Roche</b> (ICREA / ICN2, Spain) The gigantic energy consumption problem of our IT technologies...Artificial Intelligence at rescue?	K
11:30-12:00	Round table	
12:00-12:15	<b>Egor Alekseev</b> (Constructor Tech, UK) Title to be defined	O

12:15-14:00 Lunch

### PLENARY SESSION

Chairperson: Majlinda Vasjari (University of Tirana, Albania)

14:00-14:20	<b>Alessandro Bertucci</b> (University of Parma, Italy) Harnessing the Power of DNA Nanotechnology for Activity-Driven Protein Detection	I
14:20-14:40	<b>Simona Ranallo</b> (University of Rome Tor Vergata, Italy) The bridge between DNA nanotechnology and Synthetic Biology as innovative biosensing approach	I
14:40-14:55	<b>Victor Ruiz-Valdepeñas Montiel</b> (Universidad Complutense de Madrid, Spain) Organelle-derived genome electroanalysis applicable to low-resource settings for foodomics support	O
14:55-15:15	<b>Cagri Cirak</b> (Erzincan Binali Yildirim University, Turkey) Recent advances in preparation, characterization and applications of titanium oxide nanotube arrays	I

15:15-15:45 Coffee Break / Poster session

Chairperson: Simona Ranallo (University of Rome Tor Vergata, Italy)

15:45-16:15	<b>Ivan Cole</b> (RMIT University School Of Engineering, Australia) Carbons dots as sensors, carriers and catalysts	K
16:15-16:35	<b>Majlinda Vasjari</b> (University of Tirana, Albania) Modification of carbon-based sensors with rGO doped with metal nanoparticles	I
16:35-16:55	<b>Maksym Plakhonuyk</b> (ATLANT 3D, Denmark) Nanofabrication Synergy: Revolutionizing Optics, Photonics, Materials, and Sensors	I
16:55-17:10	<b>Tania Pomili</b> (Istituto Italiano di Tecnologia, Italy) Colorimetric point-of-care devices for rapid detection of salivary biomarkers and drugs	O
17:10-17:25	<b>ilker Polatoğlu</b> (Manisa Celal Bayar University, Turkey) Practical Detection of COVID-19 by Personal Glucose Meter and Signal Nanoplatfom	O
17:25-17:40	<b>María Pedrero</b> (Universidad Complutense de Madrid, Spain) Dual electrochemical immunoplatfom for the determination of epithelial glycoproteins associated with colorectal cancer aggressiveness	O
17:40-18:10	<b>Fetah Podvorica</b> (University of Prishtina, Republic Kosovo) Indirect electrochemical grafting of organic molecules	K

## WEDNESDAY OCTOBER 18, 2023

Chairperson: Takeshi Watanabe (Aoyama Gakuin University, Japan)

09:00-09:20	<b>Marc González Cuxart</b> (ICN2, Spain) Fabrication of 2D materials-based nanoarchitectures via innovative CVD processes	I
09:20-09:40	<b>Konstantinos Rogdakis</b> (Hellenic Mediterranean University, Greece) Perovskites meet 2D materials: A novel materials platform for efficient energy harvesting and neuromorphics	I
09:40-09:55	<b>Albert Rigosi</b> (National Institute of Standards and Technology, USA) Advancing Electrical Metrology with Graphene and Topological Insulators	O
09:55-10:15	<b>Yuta Nishina</b> (Okayama University, Japan) Surface Functionalization of Graphene Materials and Their Applications	I
10:15-10:35	<b>Juan Sierra</b> (ICN2, Spain) Spin transport proximity phenomena in van der Waals heterostructures	I

10:35-11:00 Coffee Break / Poster session

Chairperson: Marc González Cuxart (ICN2, Spain)

11:00-11:20	<b>Ivan Bobrinetskiy</b> (BioSense Institute, Serbia) 1D and 2D Carbon Bioconjugates in Bio-Molecular Electronics and Biosensors	I
11:20-11:40	<b>Takeshi Watanabe</b> (Aoyama Gakuin University, Japan) Graphene transparent electrodes for POCT devices based on ECL immunoassay	I
11:40-11:55	<b>Emine Kayhan</b> (Usak University, Turkey) Graphene quantum dots based optical biosensor system for rapid detection of Salmonella spp	O
11:55-12:10	<b>Michal Otyepka</b> (Palacky University Olomouc-CATRIN, Czech Republic) Graphene Functionalization for Sensing	O

12:10-13:00 Cocktail Lunch (offered by NanoBalkan2023 organisers)

13:00-13:30 Poster Session II

Chairperson Yasuaki Einaga (Keio University, Japan)

13:30-14:00	<b>Lucia Curri</b> (IPCF CNR, Italy) Photocatalytic nanostructures and nanocomposites: sustainable solutions for tackling environmental challenges	K
14:00-14:30	<b>Nik Qafoku</b> (Pacific Northwest National Laboratory (PNNL), USA) A nanometer scale perspective of soil reactions and processes occurring at mineral surfaces: Implications for contaminant fate and transport and carbon cycling	K
14:30-14:50	<b>Albana Veseli</b> (University of Prishtina, Republic of Kosovo) Different Approaches for Antibiotic Quantification using Electrochemical Sensors and Nanomaterial's	I
14:50-15:20	<b>Rodrigo Martins</b> (Universidade NOVA de Lisboa, Portugal) Functional Materials for a Sustainable Innovative Industry	K
15:20-15:50	<b>Il-Doo Kim</b> (KAIST, South Korea) Innovation in Nanomaterials Synthesis: from Lab to Commercialization	K

15:50-16:15 Coffee Break / Poster Session

Chairperson: Nik Qafoku (Pacific Northwest National Laboratory (PNNL), USA)

16:15-16:45	<b>Lluis F. Marsal</b> (URV, Spain) SERS platform based on annealed gold nanoparticles on nanostructured aluminum substrates	K
16:45-17:15	<b>Yasuaki Einaga</b> (Keio University, Japan) Electrochemical application of boron-doped diamond electrodes: Electrochemical sensors and CO2 reduction	K
17:15-17:45	<b>Johan Bobacka</b> (Åbo Akademi University, Finland) Electrochemical Control of Solid-Contact Ion-Selective Electrodes	K
17:45-18:05	<b>Sahika Inal</b> (KAUST, Saudi Arabia) Organic Electrochemical Transistors for Biochemical Sensing Applications	I
18:05-18:25	<b>Kledi Xhaxhiu</b> (University of Tirana, Albania) The Ex-situ Electrochemical Determination of Bioactive Compounds: The Influence of Surface and Nano-modifiers	I
18:25-18:40	<b>Sevinc Kurbanoglu</b> (Ankara University, Turkey) First PEDOT NPs based electrochemical MIPs sensor for the sensitive determination of Milrinone	O

18:40-19:10	<b>Jordi Sort Viñas</b> (UAB/ICREA, Spain)	K
Magneto-ionics for low-power memory and neuromorphic applications		

Chairperson: Ece Eksin (Izmir Democracy University, Turkey)

09:00-09:20	<b>Barbara Stadlober</b> (Joanneum Research, Germany)	I
Roll-to-Roll UV-imprinting - a powerful mean for large-area fabrication of microoptical and microfluidic devices		
09:20-09:35	<b>Fatma Rabia Karaduman</b> (Izmir Katip Çelebi University, Turkey)	O
Fabrication and Effective Sorption Behavior of Electrospun Cystoseira barbata/PAN fibers		
09:35-09:50	<b>Aleksei Emelianov</b> (University of Jyväskylä, Finland)	O
Area-selective atomic-molecular layer deposition of lanthanide thin films on graphene		
09:50-10:05	<b>Deniz Dogan</b> (Kirikkale University, Turkey)	O
Biopolymer Coated Magnetic Nanoparticles as a Carrier for Controlled Drug Delivery Systems		
10:05-10:35	<b>Anja Boisen</b> (DTU, Denmark)	K
Micro/nano engineering and medico devices		

10:35-11:20 Coffee Break / Poster Session

Chairperson: Barbara Stadlober (Joanneum Research, Germany)

11:20-11:40	<b>Kazuya Nakata</b> (Tokyo University of Agriculture and Technology, Japan)	I
Applications of Photocatalysis from Earth to Space		
11:40-11:55	<b>Vojtech Kupka</b> (Palacký University CATRIN, Czech Republic)	O
Crucial Parameters to Obtain a High-Performance Supercapacitor from Plastic Waste		
11:55-12:10	<b>Ece Eksin</b> (Izmir Democracy University, Turkey)	O
Carbon Coated Magnetic Nanoparticles Based Assay for Electrochemical Detection of Hepatitis B virus DNA		

12:10-13:45 Lunch

Chairperson: Anja Boisen (DTU, Denmark)

13:45-14:25	<b>Aydogan Ozcan</b> (UCLA, USA)	P
Virtual Staining of Label-free Tissue Using Deep Learning		
14:25-14:45	<b>Albana Halili</b> (Western Balkans University, Albania)	I
3D Bioprinting and Nanotechnology Applications for Tissue Engineering: State of the Art		
14:45-15:05	<b>Raik Grunberg</b> (KAUST, Saudi Arabia)	I
From Nanobody Forests to Drug-producing MOFs: Designer Proteins for Designer Materials		
15:05-15:20	<b>Artur M. Pinto</b> (LEPABE – University of Porto, Portugal)	O
Biomedical applications of graphene and 2D-nanomaterials		
15:20-15:50	<b>Alireza Dolatshahi-Pirouz</b> (DTU, Denmark)	K
Soft and Compliant Digital Materials for Wearable Healthcare Monitoring		
15:50-16:20	<b>Khaled Nabil Salama</b> (KAUST, Saudi Arabia)	K
Title to be defined		

16:20-16:50 Coffee Break / Poster Session

16:50-19:00 PARALLEL SESSION 1 (PHD STUDENTS)

16:50-18:35 PARALLEL SESSION 2 (ALBANIA)

## PARALLEL SESSION 1 - PhD Students (Nanobiotechnologies &amp; Nanomedicine, Nanosensors, Others)

Chairperson: Artur M. Pinto (LEPABE – University of Porto, Portugal)

16:50-17:00	<b>Orges Cara</b> (Università degli Studi di Bari, Italy) Tomato Brown Rugose Fruit Virus in Albania: Detection and Characterization Using SANGER Sequencing and Nanopore Technology	0
17:00-17:10	<b>Nur Melis Kilic</b> (Institute of Natural and Applied Sciences, Turkey) Electrospun nanofiber based assay design for pathogen detection	0
17:10-17:20	<b>Kanako Ishii</b> (Keio University, Japan) Selective Electrochemical Detection of Doxorubicin Using Molecularly Imprinted Polymer-Modified Boron Doped Diamond Electrodes	0
17:20-17:30	<b>Maby Johns</b> (University of Antwerp, Belgium) A fully wearable conductive yarn-based potentiometric ion sensor, self-powered by TENG in shoe sole for analysing sodium in sweat	0
17:30-17:40	<b>Anna Scarsi</b> (Istituto Italiano di Tecnologia, Italy) Noble metal nanoparticle-based lateral flow devices for colorimetric nanodiagnostics	0
17:40-17:50	<b>Helena Torné Morató</b> (Istituto Italiano di Tecnologia, Italy) Lateral flow assays for on-farm bovine veterinary monitoring	0
17:50-18:00	<b>Huseyin Senturk</b> (Ege University, Turkey) Carbon nanofibers modified eight-channel array of electrodes for detection of lysozyme	0
18:00-18:10	<b>Vernalyn Abarintos</b> (Catalan Institute of Nanoscience and Nanotechnology, Spain) Fabrication of cleanroom free, low-cost nanoband electrodes with low zM limits of detection	0
18:10-18:20	<b>Shogo Nihongi</b> (Keio University, Japan) Selective Transformation of Cumene in Electrochemical Batch and Flow Reactors	0
18:20-18:30	<b>S. Irem Kaya</b> (University of Health Sciences, Turkey) Comparison of Polymerization Techniques for the Development of Molecularly Imprinted Polymer-Based Electrochemical Sensor Used for Anticancer Drug Determination	0
18:30-18:40	<b>Bayan Almarhoon</b> (King Abdullah University of Science and Technology, Saudi Arabia) Electrochemical device for the detection of Alzheimer's disease protein markers	0
18:40-18:50	<b>Goksu Ozcelikay Akyildiz</b> (Ankara University, Turkey) Determination of Famotidine as antiulcer drug in serum samples with high selectivity using a MIP-based electrochemical sensor by photopolymerization	0

## PARALLEL SESSION 2 Albania

Chairperson: Kledi Xhaxhiu (University of Tirana, Albania)

16:50-17:00	<b>Toskë Kryeziu</b> (University of Prishtina - NANOALB, Albania) Enhancing the Antioxidant and Anticancer Potential of Lavandula angustifolia Essential Oil through Nanoformulation and Storage Evaluation	0
17:00-17:15	<b>Eni Bushi</b> (University of Medicine of Tirana: Universiteti i Mjekesise Tirane, Albania) Enhancing therapeutic efficacy through optimizing drug delivery from nanoparticles	0
17:15-17:30	<b>Brunilda Myftari</b> (Universiteti i Mjekesise, Albania) The safety of using nanotechnology in cosmeceuticals and their availability in the albanian market	0
17:30-17:45	<b>Geldon Hoxhaj</b> (Western Balkans University, Albania) Nanotechnology Applications for Brain-Computer Interfaces: Enhancing Communication and Mobility	0
17:45-17:55	<b>Sara Dervishi</b> (University of Tirana, Albania) UV-Induced Photodegradation of Rhodamine B Dye using TiO <sub>2</sub> -Based Nanocomposites	0
17:55-18:05	<b>Lirika Humolli</b> (University of Prishtina, Albania) Electrochemical sensor for HMF based on glassy carbon electrode modified with nickel graphene carboxylate	0
18:05-18:15	<b>Arban Uka</b> (Epoka University, Albania) Multistep optimization of Point-of-Care Microscopy in Microfluidic Settings	0
18:15-18:30	<b>Erjon Troja</b> (University of Medicine of Tirana, Albania) The impact of AI and recent developments in the pharmaceutical R&D steps Systems	0

## PARALLEL SESSION 2 Albania

18:30-18:45	<b>Deniz Dogan</b> (Kirikkale University, Turkey) Biopolymer Coated Magnetic Nanoparticles as a Carrier for Controlled Drug Delivery	O
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## FRIDAY OCTOBER 20, 2023

## Chairperson: Paolo Caliceti (Università di Padova, Italy)

09:00-09:30	<b>Dhimiter Bello</b> (UMass Lowell, USA) Biomarkers for health effects of exposure to advanced materials in mixtures	K
09:30-09:50	<b>Ahmed Jashari</b> (University of Tetovo, Republic of North Macedonia) Synthesis of Some Novel Chromandione Derivatives with Biological Activity	I
09:50-10:10	<b>Gjylje Hoti</b> (University of Turin, Italy) Synthesis, Characterization, and Application of Cyclodextrin-based Nanosponges as Drug Delivery Systems	I
10:10-10:30	<b>Partizan Malkaj</b> (Polytechnic University of Tirana, Albania) Modifying the properties of PVA with Montmorillonite for medical purposes.	I

## 10:30-11:15 Coffee Break

## Chairperson: Arben Merkoci (ICREA - ICN2 - BIST, Spain)

11:15-11:35	<b>Paolo Caliceti</b> (Università di Padova, Italy) Supramolecular architectures for tailored drug delivery	I
11:35-11:50	<b>Lorenzo Cursi</b> (Istituto Italiano di Tecnologia, Italy) Unravelling the Multi-Enzymatic Activity of Platinum Nanoparticles	O
11:50-12:05	<b>Giorgia Ailuno</b> (University of Genoa, Italy) Bioinspired nanoparticles for glioblastoma treatment	O
12:05-12:20	<b>Giuseppe Francesco Racaniello</b> (University of Bari, Italy) Microfluidic production of biomimetic liposomes for personalized therapy of metastatic melanoma	O
12:20-12:40	<b>Marina Cretich</b> (CNR - SCITEC, Italy) One probe to bring them all: integrated separation and analytical workflow for extracellular vesicles	I
12:40-13:00	<b>Anila Bello</b> (University of Massachusetts Lowell, USA) Crystalline silica in construction: strategies to reduce exposures and to promote sustainable nanotechnologies in the workplace	I

13:00

CLOSING &amp; NANOALKAN2024 ANNOUNCEMENT