



## 6<sup>th</sup> Workshop

# NANOTECHNOLOGIES FOR 21st CENTURY

COOPERATION EVENT BETWEEN ALBANIA, JAPAN AND SPAIN

**Tirana, Albania (October 1<sup>st</sup>, 2025)**

This Workshop aims to keep the collaboration between the three countries, Albania, Japan, and Spain in the field of Nanoscience and Nanotechnologies and their applications in important areas such as life sciences, information technologies and energy. Scientists and representatives from institutions of the three countries will share ideas about collaboration opportunities and research support programs in the research and development including cooperation with industry in the field of nanotechnology.

**LOCATION:** NanoBalkan2024 will take place at Tirana International Hotel & Conference Centre, Tirana, Albania

**DATE:** October 1, 2025

### ORGANISERS:

Event organized by Phantoms Foundation (Spain) with the support from Spain of ICN2, CERCA, BIST, from Albania of NanoAlb, Academy of Sciences and from Japan of Keio Univ. and the embassies of Spain and Japan in Albania.

### ORGANISING COMMITTEE

Antonio Correia (Phantoms Foundation, Spain) - Coordinator

Arben Merkoçi (ICN2, Spain) – Co-Coordinator

Ruslán Alvarez (ICN2, Spain)

Majlinda Vasjari (NanoAlb, University of Tirana, Albania)

Kledi Xhaxhiu (*NanoAlb, University of Prishtina*)

### TENTATIVE PROGRAM

**9:00-9:30 Welcome, Organizers & Representatives from the Embassies of Japan and Spain in Tirana**



## **Spain**

**9:30-9:45 Alfredo de la Escosura-Muñiz (University of Oviedo, Spain) , Novel biosensing strategies based on nanoparticles and nanochannels**

**9:45-10:00 Bergoi Ibarlucea Canton (Tecnalia, Spain), Scalable solutions toward in vitro and in vivo diagnostics**

**10:00-10:15 Josep Nogués (ICN2, Spain) , Magneto-optic-electrochemical nanostructures for biomedical, energy and environmental applications**

**10:15-10:30 Samuel Sánchez (IBEC, Spain), Engineering Hybrid Robotics from the nano- to the meso-scale**

**10:30-10:45 Maria Guix (University of Barcelona, Spain), Microfluidics and robotics, from Earth to microgravity**

**10.45-11:15 Coffee break and Networking**



## **Japan**

**11:15-11:30 Gjergj Dodbiba (The University of Tokyo, Japan), Title to be defined**

**11:30-11:45 Yasuaki Einaga (Keio University, Japan), CO2 reduction by boron-doped diamond electrodes**

**11:45-12:00 Sachiko Matsushita (Institute of Science Tokyo, Japan), New thermal energy conversion technology: Semiconductor-sensitized thermal cell**

**12:00-12:15 Hiroto Nishihara (IMRAM, Tohoku University, Japan), Advanced temperature-programmed desorption for ultra-sensitive analysis in inorganic materials**

**12:15-12:30 Hiroaki Onoe (Keio University, Japan), Biochemical microgel sensor using DNA nanotechnology**

**12:30-12:45 Tomoko Shimizu (Keio University, Japan), Exotic Phenomena Revealed by Tip-Enhanced Raman Spectroscopy of Carbon Nanomaterials**

**12:45-14:30 Lunch**



## **Albania**

**14:30-14:45 Fetah Podvorica (University of Prishtina, Republic Kosovo), Direct grafting of acrylate polymers on electrode surfaces**

**14:45-15:00 Sadik Cenolli (University of Tirana, Albania), Boron-Doped Diamond Modified Carbon Paste Electrodes for Sensitive Electrochemical Detection of Antibiotics**

**15:00-15:15 Valbona Aliko (University of Tirana, Albania), Deep Learning-Driven Image Analysis for Real-Time Monitoring of Nanomaterial Interactions in Biological Systems**

**15:15-15:30 Magdalena Cara (University of Tirana, Albania), Advancing agriculture through nanotechnology-enabled diagnostics and management of plant pathogens**

**15:30-15:45 Kledi Xhaxhiu (University of Tirana, Albania), Extractive stripping voltammetry combined with nanomodifiers – a promising tool for rapid and low cost determination of antioxidants and hormones**

**15:45-16:00 Bashkim Ziberi (University of Tetova, Republic of North Macedonia), Functionalized nanoparticles for cancer diagnosis and therapeutics**

**16:00-16:15 Brainstorming and session closing**

**16:15 Closing remarks**