



**EuroNanoForum
2019**



romania2019.eu
Romanian Presidency of the Council of the European Union

Almost there - what's next?



12-14 June 2019

Bucharest - Romania

**NANOTECHNOLOGY AND
ADVANCED MATERIALS
PROGRESS UNDER HORIZON 2020
AND BEYOND**

Programme

Organised by:

Organised and co-financed by:

Co-financed by:



**National Institute for
R&D in Microtechnologies
IMT Bucharest**



**Romanian Ministry
of Research and
Innovation**



**This project has received funding
from the European Union's
Horizon 2020 Research and
Innovation Programme under
Grant Agreement No. 847673.**

Welcome to EuroNanoForum 2019!

On behalf of the Organizing Committees of **EuroNanoForum 2019**, it is our pleasure to welcome you all to Europe's largest networking conference focusing on nanotechnologies and advanced materials science, innovation and business.

EuroNanoForum 2019, an event of the Romanian Presidency of the Council of the European Union, brings you together again - scientists, industry experts, managers, policy makers from all over the world - providing the opportunity to present and exchange your views on cross-sectoral challenges focusing both on the industrial applications of cutting-edge research results, and on future strategic research priorities, in the area of **Nanotechnology and Advanced Materials of the Horizon 2020 Programme and beyond**.

We hope that this event will be productive and satisfying for you all. We also wish you a very enjoyable and entertaining stay here, in Bucharest.

Welcome, Bine ați venit!

About the Organizers



**National Institute for R&D
in Microtechnologies
IMT Bucharest**

National Institute for Research and Development in Microtechnologies - IMT Bucharest

National Institute for Research and Development in Microtechnologies - IMT Bucharest, coordinated by the Romanian Ministry of Research and Innovation, is one of the main Romanian R&D organizations specialized in micro-nanotechnologies and advanced materials. Its main competences are related to development of micro-nanodevices and systems (*electronic, photonic, electro-mechanical, bio-electronic etc.*), including design, modelling and simulation; structuring and characterization of functional surfaces, materials, nanoparticles, etc. **National Institute for Research and Development in Microtechnologies - IMT Bucharest** has been participating in more than **40 European projects** (FP6, FP7, H2020, ENIAC/ECSEL/ERA-NET), becoming a recognized partner in various multidisciplinary consortia and networks. A special field of interest emerged in the past years in applications of new functional nanomaterials based on carbon: graphene, carbon nanotubes, carbon- and graphene quantum dots, composite aerogels, nanocrystalline graphene, graphene oxides, carbon nanofibers. IMT-Bucharest runs several cleanrooms and grey areas totalling more than 800 m², ensuring recognized manufacturing expertise in a complete technological chain reaching TRL-6 and being one of the European KETs Technology Centres.



Romanian Ministry of Research and Innovation

Ministry of Research and Innovation

The Ministry of Research and Innovation (MCI), as a specialized body of the central public administration, which is organized and operates under the Government, initiates execution policy and financial and human resources in the field of scientific research, technological development and innovation. As a state authority for research and development, MCI provides, on the one hand, design, implementation, monitoring and evaluation in scientific research, technological development and innovation, and on the other hand, coordinates the development, implementation, monitoring and evaluation of policies for expanding the national and the international heritage of research, technology and innovation, sustainable economic development, access to research results and technologies developed domestic and international customer satisfaction and quality of life.



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 847673.

European Commission - Horizon 2020

Horizon 2020 is the biggest EU Research and Innovation program ever with nearly €80 billion of funding available over 7 years (2014 to 2020). It represents the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness. Seen as a means to drive economic growth and create jobs, Horizon 2020 has the political backing of Europe's leaders and the Members of the European Parliament. They agreed that research is an investment in our future and so put it at the heart of the EU's blueprint for smart, sustainable and inclusive growth and jobs.

By coupling research and innovation, Horizon 2020 is helping to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

WELCOME SESSION

Location:



AL. I. CUZA Hall

Elke Anklam

EC, DG Joint Research Center, Geel, Belgium and Director of JRC Directorate F: Health, Consumers & Reference Material, Ispra, Italy

Nicolae Hurduc

Minister of Research and Innovation, Romania

Ecaterina Andronescu

Minister of National Education, Romania

Location:



AL. I. CUZA Hall

MODERATOR:**Soren Bowadt**

DG Research and Innovation, Deputy Head of Unit, European Commission

INVITED SPEAKERS:**Elke Anklam**

EC, DG Joint Research Center

EU Support to Innovation and Nanotechnologies

Pierre Barthelemy

Executive Director Innovation, European Chemical Industry Council, Belgium

*The chemical industry in the R&I ecosystem***Nicola Marzari**

École Polytechnique Fédérale de Lausanne, Director of the Swiss National Centre for Competence in Research NCCR MARVEL, on Computational Design and Discovery of Novel Materials, Switzerland

*The great acceleration in the design and discovery of novel materials***Daniele Pullini**

Research Manager of Global Materials Laboratories, FCA EMEA, Italy

*The automotive industry beyond 2030. New perspectives for advanced materials and technology***Adrian M. Ionescu**

Ecole Polytechnique Fédérale de Lausanne, Switzerland

14:00 – 15:30

JUNE 12, 2019

PARALLEL SESSION 1.1 | Nanotechnologies and Advanced Materials for a Carbon-neutral Society by 2050 [NANO for ENERGY]

Location:



AL. I. CUZA Hall

MODERATOR:

Philippe Jacques

Managing Director, The energy materials industrial research initiative, Belgium

INVITED SPEAKERS:

Laurent Baraton

Senior Research Engineer & Project Manager, ENGIE Lab CRIGEN, France
Applications of nanomaterials in the activities of an energy utility

Pierre Barthelemy

Executive Director Innovation, European Chemical Industry Council, Belgium
Engaging with SusChem on Nano - and Advanced Materials

Gabriele Centi

University of Messina and President European Research Institute of Catalysis, Belgium
Challenges in energy nanomaterials to substitute the use of fossil fuels

Petr Krtil

Head of Electrocatalysis group at the J. Heyrovsky Institute of Physical Chemistry, Czech Republic
Electrocatalytic nanomaterials for renewable energy storage

David Fraboulet

Direction Scientifique CEA-DRT, Recherche Technologique, Grenoble, France
Challenges for Energy Systems decarbonation and advanced technology and material needs. Opportunities for nanotechnology

14:00 – 15:30

JUNE 12, 2019

PARALLEL SESSION 2.1 | Advanced Materials and Nanotechnologies for Healthcare [NANO for PEOPLE]

Location:



SPIRU HARET Hall

MODERATOR:

Patrick Boisseau

Chairman of the European Technology Platform on Nanomedicine, VP Europe at CEATech Healthcare Institute, based in Grenoble, France

INVITED SPEAKERS:

Jean-Charles Arnault

CEA Research Director, France
Nanodiamonds for bioapplications

Chiraz Frydman

Global Senior Product Manager for SPRI and life science instruments at HORIBA, France
Novel diagnostics, ULTRAPLACAD project

Mariana Pinteala

Head of IntelCenter, Petru Poni Institute of Macromolecular Chemistry, Romania
Drug delivery systems and gene therapy non-viral vectors. Design and applications

Esther Hurtos Casals

EURECAT Technology Centre, Spain
Flexible electronics for implantable medical devices: the Optogenerapy case and beyond

Adam Vojtech

Head of Department of Chemistry and Biochemistry, Faculty of AgriSciences, Mendel University in Brno, Czech Republic
Antimicrobials Advanced NanoMaterials

14:00 – 15:30

JUNE 12, 2019

**PARALLEL SESSION 3.1 | Safe by Design &
Open Innovation Testbeds [POLICY for NANO]**

Location:



C.A. ROSETTI Hall

MODERATOR:

Carlos Eduardo Lima da Cunha

DG Research & Innovation, F4 – Materials for Tomorrow, European Commission

INVITED SPEAKERS:

Iraida Loinaz

Director of CIDETEC Nanomedicine Institute, Spain

A test bed specialized in the development of medical devices according to quality by design

Isabel Rodríguez-Llopis

GAIKER Technology Centre, Spain

Safety and sustainability assessment in Safe by Design in NanoReg2

Cesar Merino Sánchez

Director of the plant implemented by Grupo Antolin for manufacturing Carbon Nanofibers, Spain

NanoReg2 Safe by Design Industrial Case Study: Carbon Nanfibres Production by CVD floating catalyst method

Agnieszka Mech

Scientific Officer at European Commission's Joint Research Centre (EC JRC), Ispra, Italy

Authorities anticipate innovation: Regulatory Preparedness concept

15:30 – 17:00

JUNE 12, 2019

PARALLEL SESSION 1.2 | Advanced Materials and Nanotechnologies for Harnessing Solar Energy [NANO for ENERGY]

Location:



AL. I. CUZA Hall

MODERATOR:

Simon Perraud

Deputy Director at CEA Liten, vice chairman at EMIRI, France

INVITED SPEAKERS:

David Forgacs

Director of Knowledge Management at Saule Technologies Ltd, Poland
Ink-jet printed flexible perovskite photovoltaics - from the lab to the market

Joanna Kargul

Head of the Laboratory of Solar Fuels at the Centre of New Technologies-
University of Warsaw, Poland
*Sustainable fuels and chemicals from solar energy and CO2 - a candidate for a
future European large-scale research initiative*

Sorin Melinte

Institute of Information and Communication Technologies, Electronics and
Applied Mathematics, Université catholique de Louvain, Belgium
*Advanced materials for energy storage and building energy performance:
Insight from the Charleroi District Créatif FEDER 2014-2020 programme*

Fady Al-Kheir

Business Development Director at Energon holding District Brno-City, Czech
Republic
Business opportunities for advanced solar technology - market perspective

15:30 – 17:00

JUNE 12, 2019

**PARALLEL SESSION 2.2 | Nano-medicine and
Medical Technologies [NANO for PEOPLE]**

Location:



SPIRU HARET Hall

MODERATOR:

Patrick Boisseau

Chairman of the European Technology Platform on Nanomedicine, VP Europe at CEATech Healthcare Institute, based in Grenoble, France

INVITED SPEAKERS:

Patrick Boisseau

Chairman of the European Technology Platform on Nanomedicine, VP Europe at CEATech Healthcare Institute, France

Boost your nanomedicine development with the nanomedicine translation hub; EUNCL Infrastructure: your gateway to the regulatory approval of your nanopharmaceuticals

Iraida Loinaz

Director of CIDETEC Nanomedicine Institute, Spain

NANOPILOT: A specialized plant for the production of Nanopharmaceuticals

Oihane Ibarrola

Praxis Biopharma Research Institute, Spain

Open Innovation Test Bed for the nanomedical devices

Blanka Halamoda-Kenzaoui

EC Directorate General Joint Research Centre Ispra, Italy

The Regulatory Science Framework in nanomedicine: how science could improve the implementation of regulation?

15:30-17:00

JUNE 12, 2019

**PARALLEL SESSION 3.2 | Governance
& Standardisation [POLICY for NANO]**

Location:



C.A. ROSETTI Hall

MODERATOR:

Jana Drbohlavova

DG Research & Innovation, F4 – Materials for Tomorrow, European Commission

INVITED SPEAKERS:

Anke Jesse

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Germany

The Malta Initiative: A joint approach to develop OECD Test guidelines

Monique Groenewold

National Institute for Public Health and the Environment, Netherlands

Risk Governance of Nanotechnology: H2020 collaboration

Mar Gonzalez

Environment Directorate, Organisation for Economic Cooperation and Development, France

International harmonization of tools for the safety assessment of Nanomaterials

Marie-Valentine Florin

Executive Director of the International Risk Governance Center at EPFL, Switzerland

Do we need a framework for the governance of nanotechnology-related risks?

Anthony Bochon

Faculty of Law, Université libre de Bruxelles, Belgium

Handling the IPR, contractual and regulatory dimensions for safer innovation in nanotechnology

17:30 – 18:30

JUNE 12, 2019

**PARALLEL SESSION 1.3 | Energy enabling nanotechnologies
for circular sustainable growth [NANO for ENERGY]**

Location:



AL. I. CUZA Hall

MODERATOR:

David Fraboulet

Scientific Direction CEAtch, France

INVITED SPEAKERS:

Federico Poli

University of Bologna, Italy

Green supercapacitors for energy and environmental sustainability

Ernest Csapó-Martinescu

ROMBAT SA, Romania

New challenges for the lead acid storage and automotive starter batteries industry due to the high efficiency energy conversion and reduced environmental impact customer's requirements

Kristina Edström

Uppsala University, Sweden

Battery 2030+: inventing the batteries of the future

Jiří Kůs

Chairman of the Executive Board Czech Nanotechnology Industries Association, Czech Republic

Czech nanotech products in the automotive industry, present & future

Leif Højslet Christensen

Director at Danish Technological Institute, Centre for Nano- and Microtechnology, Denmark

Fuel cells and their applications - from hearing aids to aviation

Location:



SPIRU HARET Hall

MODERATOR:**Elvira Fortunato**

Vice-Rector at NOVA University, Lisbon and Director of the Associated Laboratory i3N, Portugal

INVITED SPEAKERS:**Iuliana Popescu**

PharmD, President of the Association for Women in Science, KY Affiliate Group, University of Kentucky, College of Medicine, USA
Advances in micro- and nano-technologies for people with diabetes

Lise Bitsch

Danish Board of Technology Foundation
Responsiveness to societal values as an opportunity for responsible innovation of nanotechnologies

Olga Glumac

Universidade do Porto, Portugal
Nano2all roadmap for a more inclusive nanotechnology development in Europe

Abdel Sumrein

Scientific Officer at European Chemicals Agency
The European Union Observatory for Nanomaterials: increasing transparency on nanomaterials in the EU

**PARALLEL SESSION 3.3 | Open Science
and Industry Commons [POLICY for NANO]**

Location:



C.A. ROSETTI Hall

MODERATOR:

Eva Valsami Jones

Director of the Facility for Environmental Nanoscience Analysis and Characterisation, Director of the MRes programme on Environmental and Biological Nanoscience, University of Birmingham, United Kingdom

INVITED SPEAKERS:

Alexandra Simperler

Goldbeck Consulting Ltd, United Kingdom

Data sharing across the NMBP programme via Industry Commons: from ontologies to marketplaces

Marco Sebastiani

“Roma TRE” University, member of the Operational Management Board at the European Materials Characterization Council, Italy

MODA and CHADA: Terminology and standardized documentation for materials modelling and characterization

Miguel Banares

Institute for Catalysis, CSIC, Spain

Development and implementation of a sustainable modelling platform for nanoInformatics

Antreas Afantitis

Managing Director NovaMechanics Ltd, Greece

Innovative Nanoinformatics models and tools: towards a Solid, verified and Integrated Approach to Predictive (eco)Toxicology

Iseult Lynch

Chair in Environmental Nanosciences, University of Birmingham, United Kingdom

Enabling FAIRness and Openness of EU NanoSafety Cluster data. The NanoCommons and NanoSolveIT approach

2nd PLENARY SESSION*Boosting innovation for EU Industry: the role of nanotechnologies*

Location:



AL. I. CUZA Hall

MODERATOR:**Soren Bowadt**

DG Research and Innovation, Deputy Head of Unit, European Commission

INVITED SPEAKERS:**Soren Bowadt**DG Research and Innovation, Deputy Head of Unit, European Commission
*Open Innovation Test Beds and Opportunities***Anne-Lise Høg Lejre**Vice President at Danish Technological Institute, Production, Denmark
*Technological infrastructure as enabler for innovation and uptake of new technology in SME's***Elke Anklam**Director of the JRC-Geel site, Belgium and Director of JRC Directorate F, Ispra, Italy
*Sharing scientific infrastructure and fostering collaboration to strengthen the European innovation potential***Konrad Franz Kaschek**Former Plant Manager of the BOSCH Cluj-Napoca Factory, Romania
*What will be "The Challenge" during the next decades?***Lars Montelius**Director General of the International Iberian Nanotechnology Laboratory, Spain
Connecting the dots - enabling innovation 4.0

**PARALLEL SESSION 4.1 | Nano enabling technologies
modernizing industry [NANO for EU RE-INDUSTRIALISATION]**

Location:



C.A. ROSETTI Hall

MODERATOR:

Barend Verachters

Head of Materials and Nanomaterials Unit at European Commission

INVITED SPEAKERS:

Radu Ionicioiu

Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering
– IFIN-HH; EU Quantum Flagship, Romania

Putting Quantum into Nanotechnologies / Towards quantum nanotechnologies

Nicolas Bécret

Nanomakers, Paris, France

Nano silicon as a key enabling technology in the framework of the present European effort to develop a battery European industry. Innovation, scale-up, industrial growth.

Henning Zoz

CEO & President of Zoz Group, Germany

Make more with less - Additive Manufacturing Process and Advanced Materials, HKP and Nanotun3D

Bert de Colvenaer

Executive Director at ECSEL JU, Belgium

A public private partnership on nano-electronic components and systems: the ECSEL ju

PARALLEL SESSION 5.1 | Nano and Multiscale modelling for a wide range of applications [Instruments for nanomaterials know-how]

Location: 

AL. I. CUZA Hall

MODERATOR:

Winfried Keiper

Keiper Consulting, co – secretary of the European Technology Platform for Advanced Engineering Materials and Technologies, Germany

INVITED SPEAKERS:

Pietro Asinari

Energy Department – Politecnico di Torino, Italy

How the European Materials Modelling Council promotes Model Development and Validation in Europe

Salim Belouettar

Head of the Structural Composites Group, Institute of Science and Technology, Luxembourg

Material Modelling Empowered Business Decision Support System (BDSS)

Natalia Konchakova

Magnesium Innovation Centre MagIC of the Helmholtz Zentrum Geesthacht, Germany

Translator guiding industry in decisions

Arpit Singhal

Fraunhofer Institut für Werkstoffmechanik IWM, Germany

Materials modelling MarketPlace to enable industrial innovation through interoperable multiscale simulations

Tomi Suhonen

VTT Finland

Integrated Computational Materials Engineering in Addressing Material Design and Optimization in Industrial Problems

Amaya Igartua

Head of Tribology Unit at IK4-TEKNIKER, EuMaT General Secretary, Spain

Modelling activities as a tool to predict properties and materials behaviour

12:00 – 13:30

JUNE 13, 2019

PARALLEL SESSION 6.1 | Nano from lab to fab: upscaling
[Instruments for nanomaterials application]

Location:  **SPIRU HARET Hall**

MODERATOR:

Lars Montelius

Director General of the International Iberian Nanotechnology Laboratory, Portugal

INVITED SPEAKERS:

Lars Montelius

Director General of the International Iberian Nanotechnology Laboratory, Portugal

EPPN: An enabler for accelerated innovation through rapid upscaling

Mircea Dragoman

President of the Scientific Council of the National Institute for R&D in Microtechnologies – IMT Bucharest, Romania

Graphene goes to cars - graphene lighting of automobiles

Dr. Ferry Kienberger

Austria Country Manager of Keysight Technologies Inc., Austria

Portable GHz instruments for electrical characterisation of nanoscale layered energy materials in manufacturing environments

Nicoleta Lupu

General Manager, National Institute of R&D for Technical Physics, Iasi, Romania

Advanced nanostructures from lab to fab: challenges and opportunities

Antonios Vavouliotis

Managing Director of Adamant Composites Ltd., Greece

Scaling-up of Nano-enabled composite materials through a modular R2R pilot line. The SME perspective

Anna Boczkowska

Warsaw University of Technology, Scientific Director of TMBK Partners

Up-scaling of CNT-doped thermoplastic veils production

14:30 – 16:00

JUNE 13, 2019

PARALLEL SESSION 4.2 | Nano Biomaterials and nanomembranes [NANO for EU RE-INDUSTRIALISATION]

Location:



C.A. ROSETTI Hall

MODERATOR:

Andreas Falk

CEO of BNN (BioNanoNet ForschungsGmbH), Austria

INVITED SPEAKERS:

Felix Sima

National Institute for Lasers, Plasma, and Radiation Physics, Romania
Laser processing and manufacturing of micro- and nanoscale biosystems

Cristiana Boi

University of Bologna, Italy
Nanostructured functional membranes: perspectives and challenges

John Fahlteich

Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology FEP, Germany
Nano-scale processes and their optimization

Ion Tighineanu

President of the Academy of Sciences of Moldova
Nanomembranes and Hollow Nanoparticles based on Gallium Nitride

PARALLEL SESSION 5.2 | Nano and multiscale characterisation for a wide range of applications [Instruments for nanomaterials know-how]

Location:



AL. I. CUZA Hall

MODERATOR:

Carlos Eduardo Lima da Cunha

DG Research & Innovation, F4 – Materials for Tomorrow, European Commission

INVITED SPEAKERS:

Elias Koumoulos

European Materials Characterisation Council, Belgium

Applying machine learning to process and characterisation data of nanomaterials: A means for prediction

Corneliu Ghica

Head of the Laboratory of Atomic Structures and Defects in Advanced Materials, National Institute of Materials Physics, Romania

Nanoscale materials characterization in a borderless Central European space: NIMP participation in CERIC-ERIC

Eva Valsami Jones

University of Birmingham, Director of the Facility for Environmental Nanoscience Analysis and Characterisation (FENAC) and Director of the MRes programme on Environmental and Biological Nanoscience

Analytical innovation for nanomaterial characterization: improving confidence in risk assessment

Nello Li Pira

Head of Physical Analysis Department, GML, Centro Ricerche Fiat, Italy

The fundamental role of the nanoscale materials characterization in the automotive industry

Tommaso Serchi

Environmental Health group of the SUSTAIN research Unit within the Environmental Research and Innovation Department (ERIN) of the Luxembourg Institute of Science and Technology, Luxembourg

The npSCOPE – development of a new integrated instrument for accurate and reproducible physico-chemical characterisation of nanoparticles

Calin Ur

Technical Director, Extreme Light Infrastructure – Nuclear Physics ELI-NP, Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering – IFIN-HH, Romania

New research opportunities at ELI-NP

PARALLEL SESSION 6.2 | Nano from fab to market
[Instruments for nanomaterials application]

Location:



SPIRU HARET Hall

MODERATOR:

Soren Bowadt

DG Research and Innovation, Deputy Head of Unit, European Commission

INVITED SPEAKERS:

Nuria Garcia

Public Programmes Team at Eurecat

Upscaling nano-based multifunctional polymer components

Karl-Heinz Haas

Head of New Business Development – Managing Director of Fraunhofer-Alliance Nanotechnology, Fraunhofer-Institute for Silicate Research – ISC, Germany

Nanotechnology markets and value chains – selected examples

Nicolas Lafitte

Fluigent, Paris, France

Holistic approach for microfluidic system prototyping and production

Vladimir Rassushin

Scientific Consultant & Technology Scout, District Melnik, Czech Republic

Launching a technology platform in cosmetics

Flaviu Turcu

Babes-Bolyai University, Cluj-Napoca, Romania

Assessing the hazard of multi-walled carbon nanotubes (MWCNT). A critical step to safe implementation of nanotechnologies

Location:



AL. I. CUZA Hall

MODERATOR:

Peter Dröll

Director, European Commission, DG Research & Innovation, Industrial Technologies

INVITED SPEAKERS:

Robert Schlögl

Director at the Fritz Haber Institute of the Max Planck Society in Berlin and founding director of the Max Planck Institute for Chemical Energy Conversion in Mülheim a.d. Ruhr, Germany

The circular economy of carbon: a critical element in sustainable energy systems

Poul Georg Moses

R&D director at Haldor Topsoe A/S, Denmark

Biomass, waste and renewable electricity as a resource for chemicals and fuels

Rodrigo Martins

President of European Academy of Sciences New University of Lisbon, Portugal

Science in Europe with Ethics and Responsibility

Peter Dröll

Director, European Commission, DG Research & Innovation, Industrial Technologies

Panel conclusions

9:30 – 12:30

JUNE 14, 2019

Workshop 1.1 | EuroNanoForum and Boosting Innovation for EU industry

Location:



AL. I. CUZA Hall

Facilities for open innovation and upscaling do exist in the European Union and programmes at European, national and regional levels have supported their development for many years. Federating all relevant infrastructures for upscaling innovation, including those on industry premises, is a crucial challenge for EU industry. Based on descriptions from speakers of the main systems currently at EU level, these sessions will look at ways to integrate them in a real ecosystem.

***Session organised by DG Research and Innovation Unit,
European Commission***

Workshop 1.2 | RO Infrastructures

Location:



AL. I. CUZA Hall

The workshop intends to give an overview of the Romanian infrastructures, technological transfer and services in the field of nanotechnologies and advanced materials.

The potential of modern and advanced facilities of Romania for cooperation, at EU level, will be presented. Nanotechnology covers a broad range of applications in different industries. The introduction of nanomaterials and novel fabrication processes based on nanotechnologies are essential in driving different areas of society. The focus of the Workshop will be on the capabilities and opportunities to cooperate with Romanian and EU industries and develop new technologies, to boost innovation, in a dynamic ecosystem.

Also discussed will be research challenges and industry priorities and the importance of collaboration between academia, research institutes and industrial partners along the value chain.

Session organised by National Institute for R&D in Microtechnologies – IMT Bucharest, Romania

Workshop 2.1 | Nano safety for the future: governance and sustainability

Location:

**SPIRU HARET Hall**

This workshop follows from the activities in Pillars 2 and 3 of day 1, and will focus on risk assessment in nanosafety and more specifically lessons learned from past research and directions for the future of the field.

H2020, and its predecessor FP7, have made a very significant investment in nanosafety research which has been bearing fruit, particularly very recently, through enabling the community to begin generating a thorough understanding of what may make nanomaterials hazardous and how to address their peculiarities through building on systematic knowledge, developing large datasets and starting in building predictive models of nanomaterial action. The workshop will consider nanosafety's coming of age and future directions for the field, and, importantly, how the knowledge gathered to date can support industry needs.

The session will include three presentations from experts in the field and will be complemented by an hour of active discussions on how different communities (academics, regulators, industry) might see the future of nanosafety in terms of remaining a prominent distinct discipline or aiming to merge with main stream material safety.

***Session organised by Nanosafety Cluster,
Carlos-Eduardo Lima-da-Cunha, Jana Drbohlalova***

Workshop 2.2 | The European Materials Characterisation Council (EMCC)

Location:



SPIRU HARET Hall

This workshop will give a deep overview of the European Materials Characterisation Council (EMCC) roadmap and discuss the input from the industry point on key required actions on advanced characterisation in Europe. The EMCC has published a roadmap that is a reference for discussion on the most urgent actions, to improve access of industry to advanced characterization.

Stakeholders from the EU industry, academia and standardization bodies will discuss the pivotal role of characterization in supporting innovation. Aspects of characterization data (CHADA), data management plan for scientific/process/manufacturing data, ontologies for the harnessing of data, taxonomy and curation of data, classification, database construction, will be discussed, with view on Industry 4.0 that requires an Open Innovation Ecosystem for knowledge and data sharing to link principal characterization infrastructures and experts to the real industrial world.

Workshop organisers: Jorge Costa Dantas Faria (European Commission) and European Materials Characterisation Council (EMCC)

9:30 – 12:30

JUNE 14, 2019

Workshop 3.1 | Nanotechnology and Advanced Materials research in H2020 and Horizon Europe (H-EU): Strategic planning, impact, governance and public engagement

Location:



C.A. ROSETTI Hall

Advanced materials are a key part of almost every innovation. Advanced materials are addressed in nearly every Horizon Europe cluster, mission, or activity. Hence the need for cross-silo, cross-cluster materials research. The Strategic Planning phase plays an outstanding role in designing the future governance of Materials R&I in H-EU. Paradigms as co-creation, impact, problem solving, inclusion will be relevant drivers to be addressed. It is time to start now to reflect among the Materials Community how to contribute to this exercise: A Round table with COM- and "Alliance for Materials, A4M" representatives.

Workshop organized by European Technology Platform for Advanced Engineering Materials and Technologies (EUMAT)

11:30 – 13:30

JUNE 14, 2019

Workshop 3.2 | *Shaping the Future R&I Programme Framework on Advanced Materials for Energy Transition and Mobility*

Location:



C.A. ROSETTI Hall

In November 2018, the European Commission adopted “a strategic long-term vision for a prosperous, modern, competitive and climate neutral economy by 2050 – A Clean Planet for all.”. The strategy shows how Europe can lead the way to climate neutrality by investing into realistic technological solutions, empowering citizens, and aligning action in key areas such as industrial policy, finance, or research – while ensuring social fairness for a just transition. A range of existing and novel technologies will be necessary for reaching climate neutrality. These technologies are at different levels of development and deployment. A massive research and innovation effort, built around a coherent strategic research and innovation and investment agenda is needed in the EU within the next two decades to make low and zero-carbon solutions economically viable.

The workshop will focus on up-coming actions to shape Horizon Europe programme for Research and innovation, targeting a pan-European ecosystem gathering Academia, Research & Technology Organisations and Industry. It will also showcase several examples of innovation support in the field of Advanced Materials for clean energy and clean mobility.

Workshop organised by Energy Materials Industrial Research Initiative (EMIRI), with the support of eseia

14:00 – 16:00

JUNE 14, 2019

**Workshop 3.3 | Additive Manufacturing:
industry necessities and research solutions**

Location:



C.A. ROSETTI Hall

The workshop would be a unique opportunity to gather at a round table the main representatives at national level in this field from both research and industry for the first time. The workshop will consist of a first part with short presentations of the expertise and research of Laboratories in additive manufacturing and of companies interested in developing additive manufacturing branches / technological transfer of additive manufacturing technologies. The second part will be dedicated to open discussions related to industry needs, technologies shortcomings to be resolved, exchange of ideas on development of additive manufacturing techniques, funding of industrial research and technological transfer.

Workshop organised by National Institute for Lasers, Plasma and Radiation Physics, Romania

Evening Events

A special “Welcome to Romania!”: June 12th, 19.00 – 21.00, Majestic Receptions Hall, Palace of the Parliament

As the first day of conference comes to an end, on June 12th, we are pleased to welcome you in the Majestic Receptions Hall of the Palace of the Parliament for an enjoyable cocktail.

Join us to meet amazing professionals as you are and make the most out of your participation!

A Memorable Gala Dinner: June 13th, 19.00 – 21.00, Ghica Palace Ballroom, 3-5 Mrs. Ghica Street, Bucharest

On June 13th, the elegant Ghica Palace Ballroom, an exquisite space telling the story of Romania’s capital city, will open its doors for all the guests of **EuroNanoForum 2019**, to celebrate innovation and creativity together. The evening will be sprinkled with beautiful moments, for your enchantment and unforgettable memories!

B4-B6 | **European Commission**

Would you like to learn more about the funding possibilities in Horizon 2020, proposal submission, consortium building or the EU Participant Portal? Join us on the European Commission stand at the exhibition. A team of dedicated staff will be there to answer your questions.

B1 | **AMIRES**

AMIRES is a consulting company for research, development and innovation projects. The main strength of AMIRES is the creation of new international sustainable partnerships within innovation focused value chains. AMIRES provides a mix of complementary services necessary for initiating, planning, executing and managing successful cooperative research, development or innovation projects.

B2 | **CUPIDO**

CUPIDO is an EU-funded project that aims to develop an innovative and patient-friendly drug delivery system for the heart: inhalable nanoparticles that can carry a therapy directly to the myocardial cells. The drug carriers in CUPIDO are biocompatible and biodegradable nanoparticles that load a therapeutic molecule for cardiovascular diseases.

B3 | **C³HARME**

C³HARME is a research project funded under the EU's Horizon 2020 Framework Programme for Research and Innovation. Its main purpose is the design, testing and manufacturing of a new class of ceramic matrix composites based on ultra-high temperature ceramics reinforced with SiC or C fibers. The new UHTCMC materials should be suitable to operate in severe aerospace environments, with applications in rocket nozzles and vehicles for hypersonic re-entry.

Exhibitors

B7 | EU-Japan Centre for Industrial Cooperation

The EU-Japan Centre for Industrial Cooperation is a unique venture between a joint venture between the European Commission Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROWTH) and the Ministry of Economy, Trade and Industry of the Japanese Government. The Centre organizes and manages annual missions to Japan in targeted key Business sectors: ICT, Biotech and Nanotech.

B8 -B9 | European projects in Nanomedicine

Nanomedicine is the application of nanotechnologies in healthcare. At ENF19, the ETP Nanomedicine (ETPN) presents 5 European Projects: NOBEL an ecosystem for the convergence of all emerging medical technologies in Europe, EUNCL the European Nanomedicine Characterisation Laboratory, REFINE a regulatory framework for the risk-benefit assessment of nanomedicines & biomaterials, NANOPILOT a pilot plant for the production of polymeric nano-pharmaceuticals, and SAFE-N-MEDTECH an open innovation platform accelerating the development of nano-enabled medical devices.

B10 | Creative Nano

Creative Nano is developing innovative custom solutions to meet customers particular requirements and specifications. Our proved experience in delivering prototyping solutions in surface finishing area and nano-chemistry, ensures the formulation/fabrication of a cost-effective, easily adaptable, tailor-made process that addresses unique operational needs.

B11 | UEFISCDI

UEFISCDI is a public entity of the Central Administration under the ultimate authority of Ministry of National Education (MNE). UEFISCDI implements, under the supervision of its advisory councils, four out of the five programs of the National Plan for Research, Development and Innovation 2015 - 2020 (PN III), financing mainly research and innovation projects, fellowships (Phd. Students, postdoctoral research), scientific mobilities, awards for excellence in research (publishing articles in the top scientific journals, participation in the Horizon 2020 projects).

B12-B15 | **Romanian Research Organizations**

National Institute of Materials Physics (NIMP) - infim.ro

National Institute for Laser, Plasma & Radiation Physics (INFLPR) -
inflpr.ro/en

National Research & Development Institute for Non-Ferrous and Rare Metals
(IMNR) - imnr.ro/en

National Institute of Research and Development for Technical Physics
(NIRDTP) - phys-iasi.ro

Politehnica University of Bucharest - upb.ro/en

National Institute for Research and Development in Microtechnologies (IMT
Bucharest) - imt.ro

B17 | **RAITH**

Raith is a leading precision technology solution provider for electron beam lithography, focused ion beam (FIB) tools, nano engineering and reverse engineering applications. Customers include universities and other organizations involved in various fields of nanotechnology research and materials science – as well as industrial and medium sized enterprises that use nanotechnology for specific product applications or produce compound semiconductors.

B18-B20 | **NanoSafety Cluster**

The NanoSafety Cluster joins 16 projects funded through Europe's Horizon2020 programme that aim to deliver next generation safety and innovation for nanomaterials. Key aspects addressed include reduced animal use, translation into industry, the power of data and risk governance.

T4 | **AMBER Research Centre**

AMBER (Advanced Materials and BioEngineering Research) is a Science Foundation Ireland funded centre that provides a partnership between leading researchers in materials science and industry. We are researching materials that will transform everyday products of the future, from mobile phones to knee implants, batteries to beer bottles.

Exhibitors

T9 | Ronexprim

Ronexprim delivers advanced characterization and measuring systems manufactured by world-renowned companies like Thermo Fisher Scientific, Malvern Panalytical, Edax Ametek, Fluke, Kruss, Nanonics Imaging, PSL, Milestone and others, which brings high responsibilities to our customers. Superior technical solutions in materials science and life science; nanotechnology and nanomaterials; physics, chemistry and engineering; petrochemical and petroleum are sustained by specialized training, support and maintenance.

T10 | INASE

The Institute for Nanotechnologies and Alternative Sources of Energy – INASE, part of “Ovidius” University of Constanta, is specialized in the development of scientific researches, tests and other types of experimental investigations, numerical modelling, simulation and characterization of nanomaterials, development of nanotechnologies as well as their applications in the field of energy, advanced materials for different industry applications and other fields. The Institute offers various related services.

T11 | NANORIGO – a Risk Governance Framework and Council for Nanomaterials and Nano-enabled Products

NANORIGO (NANOtechnology Risk GOVERNance) started on 1st January 2019. Coordinated by Aarhus University and involving 26 other partners from across Europe, the €4.7 million project will develop and implement a transparent, transdisciplinary and active Risk Governance Framework (RGF) for manufactured nanomaterials and nano-enabled products.

T12 | JAMK – ALD CoCampus

Roll-to-roll ALD and helium ion microscope (HIM) are the main attractions of ALD CoCampus, Jyväskylä, Finland, co-operated by University of Jyväskylä and JAMK University of Applied Sciences. In addition to the Beneq WCS 500 roll-to-roll it offers access to another spatial ALD, Beneq TFS 200 R, and temporals Beneq TFS 200 and Beneq TFS 500.

Exhibitors

T17 | ZEISS

As a leading manufacturer of microscopes ZEISS offers inspiring solutions and services for material research and quality assurance. From entry-level to high-end, from micro to nano – choose the ideal microscope solution for your application from the broadest product portfolio on the market.

T18 | InoCure s.r.o.

InoCure is a company with strong expertise in electrospinning and electro spraying technology – especially in their application on the field of life science, healthcare, and pharmaceutical industry. We build pilot-scale modular electrospinning/spraying unit for research laboratories and also industrial scale unit for large production. InoCure also provides 3D Cell Culture and custom encapsulation service to research lab around the world.

Media Partners



The International NanoScience Community
www.nanopaprika.eu
"Spicy world of NanoScience"



ADVISORY BOARD

Karen AMRAM

CEA TECH, France

Elvira FORTUNATO

NOVA University, Lisbon, Portugal

Philippe JACQUES

Energy Materials Industrial Research Initiative (EMIRI)

Winfried KEIPER

Keiper Consulting, Germany

Mihaela KUSKO

National Institute for Research and Development in Microtechnologies
IMT Bucharest, Romania

Viorel VULTURESCU

Ministry of Research and Innovation, Romania

ACKNOWLEDGEMENT

We would like to express our warm thanks to all who contributed to the organization of this conference. We are grateful to all the organizations that provided support in a variety of ways and in particular to the **European Commission**, the **Romanian Ministry for Research and Innovation** and **Ministry of Foreign Affairs**.

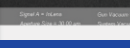
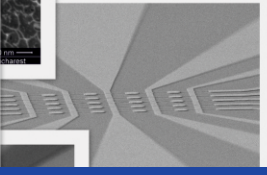
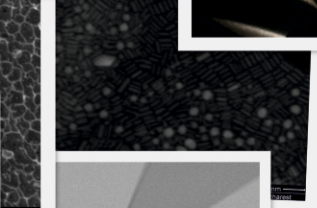
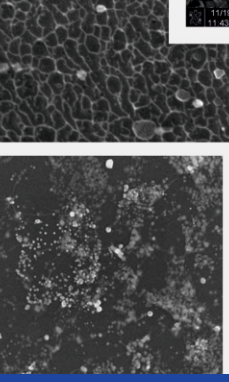
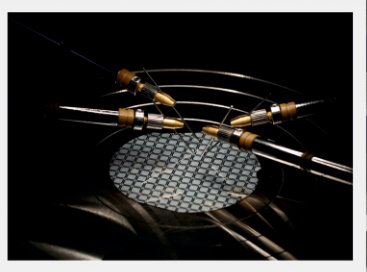
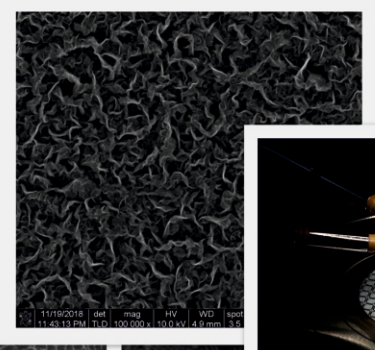
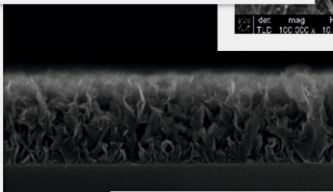
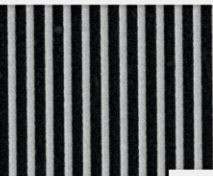
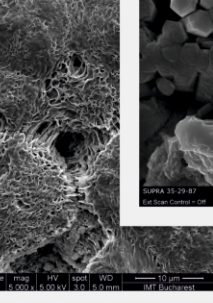
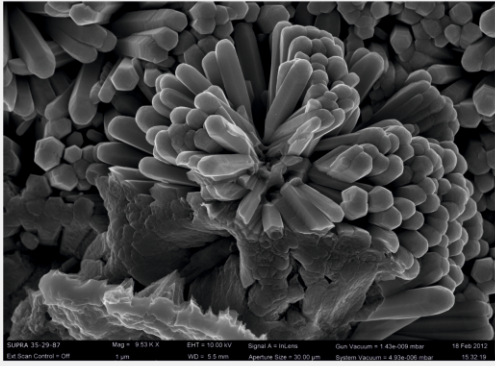
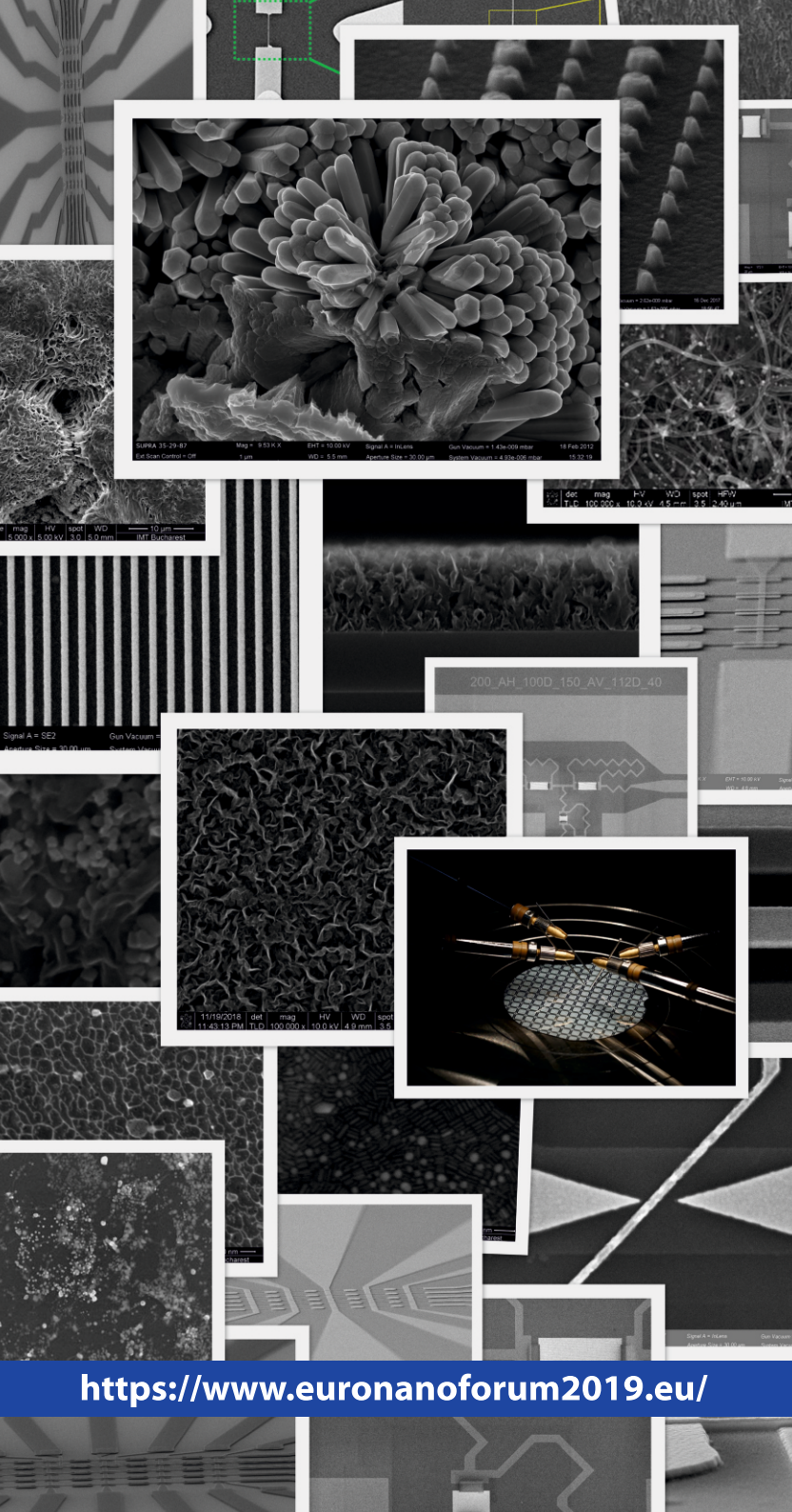
Last, but not least, we would like to thank all **Advisory Board** and **Organising Committee members (IMT Bucharest)**, **chairs**, **moderators** and **invited speakers**, who contributed in defining the conference programme.

ENF2019 HAS BEEN CO-FINANCED BY THE EUROPEAN COMMISSION AND THE ROMANIAN GOVERNMENT, THROUGH THE FOLLOWING PROJECTS:

EURONANOFORUM 2019 - Nanotechnology and advanced materials progress under Horizon 2020 and beyond - ENF 2019. Funded by the European Union's Horizon 2020 Research and Innovation Programme (Grant Agreement No. 847673)

EURONANOFORUM 2019 - Nanotechnology and advanced materials progress under Horizon 2020 and beyond. Funded by the Ministry of Research and Innovation through the UEFISCDI financing agency (contract No. 40RG/2019)

EXCEL-IMT Strengthen IMT EXCElence in the field of innovative micro-nano technologies and intelligent systems to increase the impact of priority areas for smart specialization and public priority, Funded by the Ministry of Research and Innovation through: Program 1 - Development of the National R&D System, 1.2 - Institutional Performance (contract No 13PFE 2018-2020)



<https://www.euronanoforum2019.eu/>