

RESEARCH FOR EUROPE

@ Slovak University of Technology in Bratislava

HORIZON 2020

List of Projects

October 2016



SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

I. Excellent Science

Marie Skłodowska-Curie Actions

papabuild

Advanced physical-acoustic and psycho-acoustic diagnostic methods for innovation in building acoustics (RISE)

We aim at improvement of diagnostic methods for more precise determination of physical properties of buildings elements, on subjective assessment for proposal of suitable single number quantity and to improved diagnostic methods - enable sustainable product innovation.

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ImageInLife

Training European Experts in Multilevel Bioimaging, Analysis and Modelling of Vertebrate Development and Disease

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II. Leadership in Enabling and Industrial Technologies

Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology

HISENTS

High level Integrated SEnsor for NanoToxicity Screening (RIA)

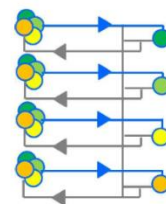
The aim is to develop a screening platform for monitoring the toxicity of nanomaterials. Each module will represent one particular physiological target and each target will be monitored separately. All will be integrated into a multimodular high throughput screening platform through innovative instrumentation developments. Modeling the pathway and interaction of a number of toxins with targets in a model biological organism will be carried out.

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FASTGRID

Cost effective FCL using advanced superconducting tapes for future HVDC grids

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Information and Communication Technologies



NEWTON

Networked Labs for Training in Sciences and Technologies for Information and Communication (IA)

A large scale initiative to develop and integrate innovative technology-enhanced tools for teaching and learning, to create new or inter-connect existing state-of-the-art teaching labs and to build a pan-European learning network platform supporting multi-modal and multi-sensorial media distribution, that supports fast

dissemination of learning content to a wide audience in an ubiquitous manner. NEWTON platform will develop, integrate, deploy and disseminate state of the art technology-enhanced teaching methodologies including augmented reality, gamification and self-directed learning to ease system access and learning to users from secondary and vocational schools, third level education and further education, including students with special needs.

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III. Societal Challenges

SC 1 - Health, Demographic Change and Wellbeing

EHBMI

European Human Biomonitoring Initiative

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SC 3 - Secure, Clean and Efficient Energy

ingREeS

Setting up Qualification and Continuing Education and Training Scheme for Middle and Senior Level Professionals on Energy Efficiency and Use of Renewable Energy Sources in Buildings (CSA)

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SC 5 - Climate Action, Environment, Resource Efficiency and Raw Materials

INSPIRATION

INtegrated Spatial Planning, land use and soil management Research ActTION (CSA)

The aim is to develop a Strategic Research Agenda for Europe on soil, land use and land management. A good understanding of the complex linkages of land usage is essential in order to steward land to a more sustainable future for Europe's citizens and its global partners. Research contributes to facilitate sustainable land management and support evidence based policy making. INSPIRATION adopts a bottom-up approach. It is aiming for a research agenda that is accepted by all societal groups in the EU member states. Therefore, groups are represented by national key stakeholders coming from funders (public and private), knowledge producers, end users of research and NGO's in the participating INSPIRATION countries.

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INREP

Towards Indium free TCOs (RIA)

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Spreading Excellence and Widening Participation

Teaming



SlovakION

Slovak Centre of Excellence in Ion Beam and Plasma Technologies for Materials Engineering and Nanotechnology (FPA-SGA-CSA)

The aim is to develop the Centre into a leading and unique transdisciplinary research institution in the European Research Area (ERA) in the fields of - Surface functionalization and nanocomposite coatings by high power impulse magnetron sputtering (HiPIMS), - Emerging ion-beam analysis (IBA) techniques, - Ion-matter interaction in transdisciplinary research. And to develop and maintain tight and effective links between research and the industry for an easy and seamless transfer of technology and innovation into industrial implementation.

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Public-Private Partnerships

Electronic Components and Systems for European Leadership (ECSEL)



PowerBase

Enhanced substrates and GAN pilot lines enabling compact power applications (IA)

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OSIRIS

Optimal SiC substrates for Integrated Microwave and Power CircuitS (RIA)

The project aims at improving substantially the cost effectiveness and performance of gallium nitride (GaN) based millimetre wave components. In particular in SiC power electronics and in microwave device using GaN high electron mobility transistors (HEMT) grown on innovative SiC material using isotopic sources with thermal conductivity improvement.

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IoSense

Flexible FE/BE Sensor Pilot Line for the Internet of Everything (IA)

The focus is the design, development, characterization, preparation, and availability of top innovative, competitive sensors and sensor systems “Made in Europe” for applications in Smart Mobility, Society, Energy, Health and Production.

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