



Pozvánka na seminár

Ústavu experimentálnej fyziky

SAV, v. v. i.



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„Nexte generation materials for advanced applications: performance vs. sustainability“

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Anotácia:

The rapid digitalization of the society and the economy, associated to concepts like Internet of Things and Industry 4.0 is boosting the increasing implementation of sensors and actuators and influencing all areas of human being, promoting novel concepts such as smart housing, smart cities or smart health. At the same time, the energy transition strongly demands novel energy generation and storage systems, while the increasing industrialization all over the world is strongly influencing the environment, in particular with respect to water sources and air quality. Finally, quality of life is increasingly relying on novel paradigms, such as personalized medicine, including the use of point of care devices or novel tissue engineering approaches.

Those on-going transitions: digitalization, energy and sustainability and biomedicine, require novel materials with advance (multi)functional responses tailored for specific application scenarios.

In this talk our main activity in those areas will be presented explaining the motivation and the strategies for materials design, synthesis, processing, characterization and integration into devices. Further, performance versus sustainability scenarios will be addressed related to different application scenarios.



S. Lanceros-Mendez is Ikerbasque Professor and Scientific Director at BCMaterials, Basque Center for Materials, Applications and Nanostructures, Leioa, Spain. He graduated in physics at the University of the Basque Country, Leioa, Spain, and obtained his Ph.D. degree at the Institute of Physics of the Julius-Maximilians-Universität Würzburg, Germany. He was Research Scholar at Montana State University, Bozeman, MT, visiting scientist at the Pennsylvania State University, USA and University of Potsdam, and associate researcher at the INL – International Iberian Nanotechnology Laboratory, among others. He is also Professor at the Physics Department of the University of Minho, Portugal (on leave). His work is focused in the area of smart and multifunctional materials for sensors and actuators, energy, environmental and biomedical applications.