

Pressemitteilung

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New research network for bioelectronics in Saxony

The research network “BiotroNiS” will create a new cooperation platform for bioelectronic materials and systems over the next three years. The project, with a total volume of 3.6 million euros, is being funded by the European Regional Development Fund (ERDF).

Bioelectronics, the combination of living organisms and electronic systems, is a future technology with promising applications in medicine and biotechnology. The BiotroNiS project is establishing a new research network to strengthen interdisciplinary cooperation in this field in Saxony. To this end, information and cooperation formats are being created to drive forward the development of bioelectronic materials and systems and facilitate their implementation in applications. BiotroNiS will help to pool and expand specific expertise and identify topics with disruptive potential. The initiators of the network, which already has nine partners, are Karl Leo, Professor of Optoelectronics at Dresden University of Technology and Director of the Dresden Integrated Center for Applied Physics and Photonic Materials (IAPP), Kathrin Harre, Professor of Technical Chemistry at the Dresden University of Applied Sciences (HTWD) and Project Manager at the Center for Applied Research and Technology (ZAFT), and Carsten Werner, Director of the Leibniz Institute of Polymer Research Dresden (IPF, coordination).

“The BiotroNiS project partners' research aims to develop innovative technologies that combine electronic and living systems in order to digitize information from tissues and control biological processes. In addition to innovative medical technology products, solutions for environmental technologies and food production can also be explored. BiotroNiS also takes into account aspects of sustainability, data security and user acceptance,” explains Carsten Werner.

“With BiotroNiS, we are creating a platform that not only promotes basic research, but also the practical development of bioelectronic materials and systems. Our strength lies in the close networking of partners, ranging from the fundamentals of physics and chemistry to materials science and applications,” adds Kathrin Harre.

BiotroNiS aims to work closely with established organizations such as Organic Electronics Saxony, Biosaxony and Silicon Saxony as well as industrial partners. “We want to examine the commercialization potential of innovative developments at an early stage and thus support spin-offs and industrial collaborations. With BiotroNiS, Saxony is supposed to develop into a leading global research and industrial location in the field of bioelectronics,” says Karl Leo.

BiotroNiS network partners:

TUD Dresden University of Technology, Leibniz Institute of Polymer Research Dresden (IPF), Center for Applied Research and Technology (ZAFT) at Dresden University of Applied Sciences (HTWD), Leibniz Institute for Solid State and Materials Research Dresden (IFW), Fraunhofer Institute for Manufacturing Engineering and Applied Materials Research Dresden (IFAM), Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology (FEP), Kurt Schwabe Institute for Measurement and Sensor Technology Meinsberg (KSI), German Center for Neurodegenerative Diseases (DZNE) and Helmholtz-Zentrum Dresden-Rossendorf (HZDR)

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BiotroNiS research network - Graphic
Emanuel Richter, Leibniz-IPF (parts of the image were generated with AI methods (DALL-E))