Belarusian State University
of Informatics and Radioelectronics

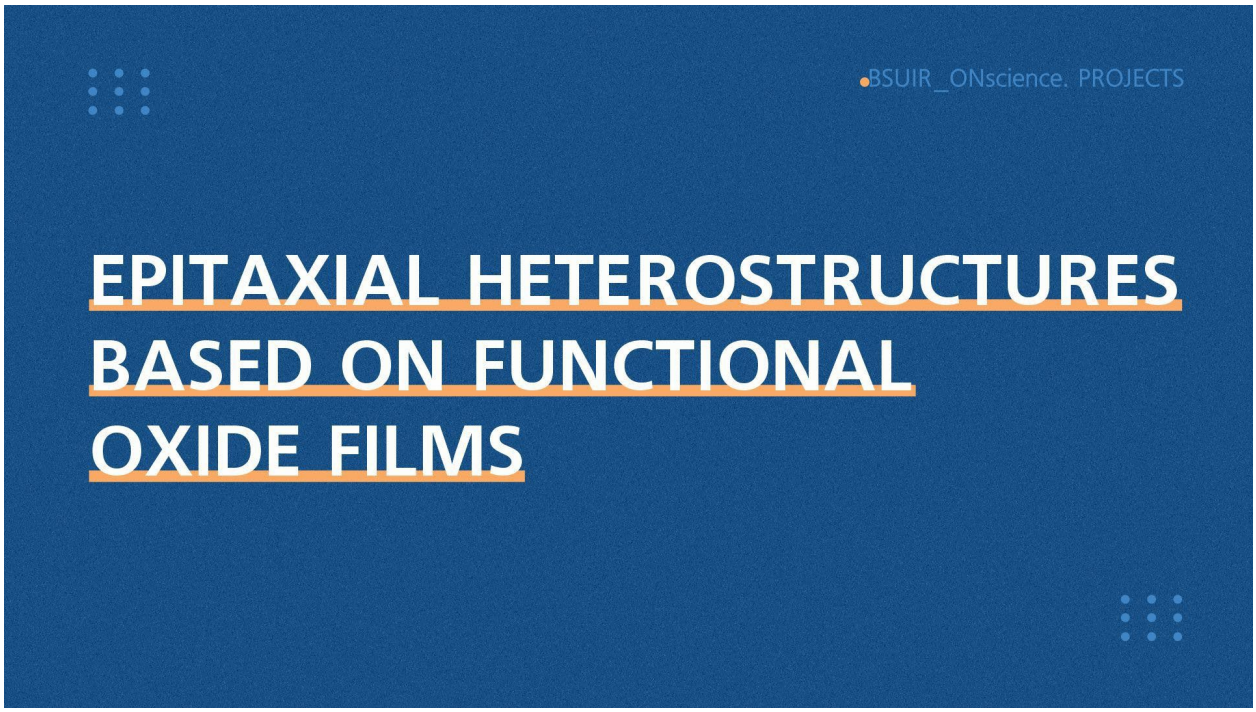
R&D Department

January 8, 2024

BSUIR scientists: joint projects with international partners

We continue to tell you about the projects carried out with the participation of the University scientists and their international colleagues.

Project No. 17: "Epitaxial heterostructures based on functional oxide films of nanometer thickness for spintronics elements, including superconducting ones."



Project partner: Russia, Institute of Radio Engineering and Electronics named after V.A. Kotelnikov RAS.

Project terms: November 15, 2022 – October 31, 2025

✔ Scientific advisor of the project from #BSUIR: Dmitry Migas, Doctor of Physical and Mathematical Sciences, Associate Professor, Head of the Department of Micro- and Nanoelectronics, expert in the field of computer modeling of nanomaterials.

The project is sponsored by the Belarusian Republican Foundation for Fundamental Research and the Russian Science Foundation.

The main scientific idea of the project is to test the hypothesis that the relationship of the effects of intersubband transitions, disorder, weak localization and antilocalization is key in the emergence of a quasi-two-dimensional electronic system with structural inversion asymmetry and strong spin-orbit interaction for conversion at the lanthanum magnetite/strontium iridate interface spinal current into the charging current due to the self-consistent relationship of interface properties, material parameters and electrical characteristics.

In the frames of the project, for the first time in the world, the possibility of controlling the electrical parameters of strontium manganite/iridate oxide heterostructures within specified characteristics will be demonstrated, which will make it possible to identify previously unknown material parameters and electrical characteristics.

You can contact the scientific advisor of the project via: migas@bsuir.by, and also read the publications of the project leader via the link → https://bit.ly/3G672Ot.

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