



**Belarusian State University
of Informatics and Radioelectronics**

R&D Department

BSUIR, 6, P. Brovki Str., Minsk 220013, Republic of Belarus

Announcement

International specialized exhibition "BELAGRO-2022"

June 7 – 11, 2022

Minsk region, Smolevichi district,
Chinese-Belarusian Industrial Park "Great Stone",

[About the exhibition](#)

The international specialized exhibition "BELAGRO-2022" will be held within the framework of the Belarusian Agro-Industrial Week, which annually becomes one of the main platforms for the presentation of innovative solutions in the field of crop production, animal husbandry, poultry farming, agro-industrial engineering, environmentally friendly materials, modern technologies for processing, packaging and storage of products.

Thematic topics of the exhibition:

- machinery, technologies and equipment for agricultural production, farms and greenhouses;
- agricultural products;
- agrochemistry, plant and soil protection products;
- zootechnics;
- feed and feed additives;
- veterinary drugs and medicines;
- building structures, power equipment, software;
- seeds, plants, technological equipment for grain processing;
- refrigeration equipment and technologies;
- packaging and packing equipment, materials, containers, labels for agricultural needs;
- beekeeping;
- spare parts and accessories;
- machinery, technologies and equipment for animal husbandry and poultry farming.

BSUIR will showcase high-tech developments:

Technology of unmanned vehicle control

The technology allows to modernize the chassis of the vehicle for use as a mobile robotic platform for agriculture, exploration and cleaning of territories, emergency response

purposes and etc. The experimental sample is based on the chassis of a serial mini-tractor "Belarusian-132N" with all-wheel drive and a Honda gasoline engine.

Advantages:

- high maneuverability;
- maintainability;
- easy installation and disassembly of attachments;
- low cost.

About the developer

Components of remote monitoring systems

The University offers the development and production of devices that allow remote monitoring of the parameters of a moving vehicle in real time:

- fuel level, temperature, pressure, density sensors;
- differential-type fuel flow meter;
- coupling device and adder for the fuel level sensor;
- two-channel vibrorelay;
- data display module.

The components of the remote monitoring system have been successfully implemented on mass-produced products of enterprises.

About the developer

Technology for producing optically selective coatings for solar collectors

The technology makes it possible to obtain composite highly selective coatings in the composition of anodic aluminum oxide/amorphous carbon. The coatings are evenly colored black and wear-resistant.

Advantages:

- resistance to ionizing radiation;
- high corrosion, thermal and light resistance;
- high electrical insulation properties;
- environmentally safe electrochemical coating forming process.

About the developer

Technology of ribbon-type smart desiccant based on ceramic alumina oxide nanofibers

The proposed technology allows to obtain ribbon-type air desiccant for use in modern pneumatic automation systems of vehicles. The smart desiccant has a high absorption capacity due to the use of a flexible array of ceramic aluminum oxide nanofibers in the formation of a highly developed inner surface of the plate.

The processes for obtaining the morphology of samples with ceramic alumina nanofibers have been proposed, as well as modes for obtaining experimental samples of a desiccant with ceramic alumina nanofibers have been worked out.

Advantages:

- innovative and eco-friendly production technology;
- one-piece desiccant product with a developed geometric shape;
- equal adsorption capacity with analogues of smaller desiccant sizes
- thermal stability, relatively simple production, increased mechanical strength and abrasion resistance;
- low recycle temperature – 120-140 °C and short time;
- low cost.

About the developer

Manufacturing technology of energy-saving flat aluminum heaters

The technology allows you to produce elements with any surface shape. This is especially important in the automotive industry, in the manufacture of printing plates, as well as in the military sector. The use of carbon filament ensures high stability of the electric characteristics of the heater and its reliability under constant thermal cycles "heating—cooling" during operation.

Advantages:

- adjustable electrical resistance in the range from 60 to 800 Ohm/m;
- maximum operating temperature up to 400°C;
- aluminum base;
- carbon filament heating tape;
- ultra-thin shape;
- low heat loss.

About the developer