

Chemical technologies

- An effective approach to the use of the main and by-products of the oil refinery
- Digital process modeling
- Microfluidics and flow reactors
- Industrial ecology

ESG (Environmental, social and corporate government) and energy transition

- Organization of a carbon farm in northern climatic conditions, taking into account the selection of plants and the planting area
- Calculator application for calculating the carbon footprint generated from the provision of logistics services
- Solutions for the collection and further movement of liquid household waste at remote objects
- The use of municipal solid waste in the activities of large companies
- Membrane technologies (industrial wastewater treatment, membrane catalysis, gas production and purification)
- New energy sources (flowing power systems, solid-state batteries, aerogels, carbon materials, etc.)

Capital construction

- Robotic construction
- Artificial intelligence and construction cost forecasting
- Digital construction control systems
- Innovative materials
- Digital modeling in capital construction
- Advanced Work Packaging
- Energy-saving technologies in construction and green construction
- Import-independent construction
- Augmented, virtual and mixed reality in construction (VR, AR, MR)
- Digital twins in construction
- Additive technologies in construction
- Functional structural materials

New production technologies

- Digital modeling, including new materials and pipe production processes
- Digital Materials Science
- Predictive and prescriptive analytics in pipe and steelmaking
- Platforms, frameworks for digital twins
- Personnel status monitoring systems

- AR/VR digitalization solutions in labor safety
- Unmanned systems: unmanned aircraft, unmanned vehicles, unmanned vehicles

New materials and coating technologies

- New materials of protective coatings for the outer and inner surfaces of steel pipes
- New technologies for applying a protective coating to the outer and inner surfaces of steel pipes
- Anticorrosive coatings and methods of their application
- New methods of surface preparation of steel pipes
- New paint and varnish materials resistant to mechanical damage
- Additive manufacturing materials
- Technologies for creating materials with specified properties

Electronics (including -micro), instrumentation and industrial technologies

- Switching products
- Technological equipment
- Materials and substances
- Innovative components for industrial machines
- Electronic component base (resistors and capacitors, electrical connectors, integrated circuits, semiconductor devices)
- Functional devices
- Space, satellites, space communications

Metallurgy

- Materials based on rare and refractory metals and their compounds (Zr, Hf, Ta, Nb, Ca, Mo, V, W, etc.)
- Structural and heat-protective elements
- Components and ligatures for ferrous and non-ferrous metallurgy
- Technologies for increasing the efficiency of rolling production (obtaining rods, wire, etc.)

Information security

- Cyberattack protection systems
- Cyber threat analytics and modeling systems

