

The press service of the Southern Federal University (UFU) reported that the university received a grant to create the first intellectual research station in Russia to work with synchrotron radiation. The project is implemented together with the Kurchatov Institute as part of the Federal Program for the Development of Research Infrastructure.

The new station will be equipped with an Operando diagnostic system that allows you to study materials in real working conditions. This is especially important for the analysis of chemical reactions, phase transitions and processes of nanostructures.

Synchrotron radiation is widely used in material science, chemistry and nanobiotics. It allows you to explore the structure of substances at an atomic level with high accuracy. However, existing installations require complex control systems and data processing.

The project under the guidance of Professor Alexander Soldatov provides for the automation of measurements and analysis of data using artificial intelligence. This will increase the accuracy of the experiments and allow you to transfer the station into a round -the -clock mode of operation.