

Russian scientists have developed a new way to create safe and environmentally friendly colloidal quantum points from nanocrystals. These points are usually used in TVs and monitors, but their production is associated with harmful substances such as cadmium. Therefore, scientists are looking for safer options. This was announced by the Center for Scientific Communication of the MIPT.

The new method developed in the MIP allows you to create quantum points from materials that can be found in Russia: nanocrystals from copper, India and sulfur. For this, the substance of the Decent-1 is used, which is easy to get in our country. The Russian scientists first received the sulfur precursor on the basis of densen-1.

Previously, in Russia there were no necessary substances to create such precursors and the ability to produce subsequent compounds from them. Now Russian scientists have found a way to get quantum points from densen-1. These points can be used in different devices, for example, to create detectors that respond to ultraviolet light, monitors, etc.

MFT chemists received quantum points safe for humans and the environment, dissolving the elementary sulfur in dezen-1 and interacting with India salts. This made it possible to create nanoparticles in the form of pyramids, effectively interacting with light.

Although new points are not yet as effective as others created on the basis of cadmium and selenium compounds, they can still be useful in the future. They can be used in new devices that will work on Russian raw materials and materials.

"None of the modern sulfur precursors for the synthesis of colloidal quantum points is produced by the Russian chemical industry, so the search for effective alternatives is very important. For the first time, we received a sulfur precursor based on domestic Decen-1, which can be used to obtain colloidal quantum points," said Ivan Shuklov, senior researcher at MFTI.