The press service of the Novosibirsk State Technical University (NSTU) reported that university scientists have developed a composite material based on carbon nanoconon, capable of effectively protecting from static electricity. The coating is intended for use in chemical, oil and gas and other hazardous industries.

Scientists have used the mechanactivation method by grinding the material in a special mill in 7–10 minutes. This approach made it possible to control the electrical conductivity of the composite and reduce the amount of expensive carbon filler.

The resulting material demonstrates high indicators of electrical conductivity and dielectric permeability. It can be used not only for antistatic protection, but also for shielding from electromagnetic interference, as well as monitoring the state of structures.

Studies have shown that the optimal grinding time is 7.5 minutes – further processing worsens the properties of the material. Development also has improved heat resistance and oxidation resistance.

The new composite will find use in the warehouses of explosives, in metallurgy, mining industry and other industries, where static electricity is a serious danger.