

The press service of the Ministry of Education and Science of the Russian Federation reported that the specialists of the Tomsk Polytechnic University have developed a new method of processing coal waste, which can significantly reduce energy consumption. The method is based on the addition of organic materials – cedar nuts and cow manure.

The traditional method of microwave pyrolysis, although effective for processing organic waste, requires large energy consumption. Russian researchers proposed a solution to this problem using available natural materials as catalysts.

The experiments have shown that the addition of only 10% of the cow manure to the coal gas accelerates the pyrolysis process by almost double. Cedar nuts in the same proportion reduces energy consumption by 47.5%. Both options also reduce the total processing time by 8-10%.

Scientists have already created an experimental installation with a capacity of up to 20 kg per day for further study and introduction of technology. A new approach can be the basis for creating economical and environmentally friendly methods for the disposal of various industrial waste.