At the Kabardino-Balkarian State University (KBSU), an innovative method for processing plastic has developed, which safely disposes of waste and turns them into energy. At the same time, traditional methods of burning plastic lead to emission of harmful substances due to incomplete combustion.

The new approach proposed by the researchers of the KBSU includes the burning of chopped plastic in a closed system using an nitrate-base oxidative melt that decomposes a polymer without releasing toxic substances. A mixture of polymer and melt can serve as solid fuel.

When heated to 450 ° C, the polymer completely burns, and the alkalis neutralize toxic gases. Polyethylene experiments showed high efficiency of the method without exceeding the permissible concentrations of harmful substances.

Scientists plan to conduct additional research using specialized equipment for quantitative calculations. “Our approach has practically no analogues. He not only solves an environmental problem, but also turns dangerous waste into a valuable energy resource that can potentially be used as fuel, ”said Zhamal Kochkarov, professor of the Department of Inorganic and Physical Chemistry of the Institute of Mathematics and Natural Sciences.

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