be assisted by computers in the air in a battle. Perhaps, in the near future artificial intelligence systems will completely replace the work of a pilot. In any cases, the absence of the pilot in the cockpit will save his life in a battle. (Sun, 2021).

Technology has always played a role in scientific research, and artificial intelligence is expected to take a step forward and raise the bar in scientific research to a new level. It can assist in peer review the image quality search and extraction, plagiarism detection and data tampering (Fuse machines, 2019).

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SPIRIT-BASED BIOFUELS

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The current increase in the number of cars, which has resulted in increased demand for motor fuel amid declining oil reserves and stringent environmental requirements for fuels and their combustion products, is prompting scientists to create alternative fuel resources. Among them the most promising are spirit-based biofuels.

Biofuels are a new milestone in the history of civilization. A sensible approach to the production of biofuels can solve the economic and environmental problems of mankind. It is an organic fuel obtained from raw materials of vegetable or animal origin, as well as from industrial waste. It is a renewable resource that can produce energy without harming the environment. The use of alcohols in a mixture with gasoline can significantly reduce the release of carbon monoxide, which is the cause

of smog. In Ukraine, the issues of improving energy efficiency and the development of renewable energy are now extremely urgent.

Bioethanol is an environmentally friendly product. It is non-toxic, easily soluble in water and does not pollute groundwater whilst gasoline is a source of carcinogens and its spillage in large quantities is inevitable, which provides a serious damage to the environment.

Regarding the benefits of ethanol, its vapors burn faster with a lower temperature, which has a beneficial effect on the operation of the exhaust valves. This will significantly increase engine power. Moreover, ethanol doubles the service life of oil and spark plugs, as well as significantly extends the engine resources. To substitute a liter of gasoline it is necessary 1.15 liters of ethanol.

Ethanol is the best way to reduce the gases that cause the notorious greenhouse effect. Its use minimizes the damage from exhaust gases. With addition of only 5% of ethanol, the toxicity of exhaust gases is significantly reduced, the content of hydrocarbons in the exhaust is reduced by 5%, nitric oxide - by 7%, carbon monoxide - by 25%. Therefore, this can really solve the problem of polluted air in many cities, and most of all in the capital.

The main task is to reduce dependence not only on gas but also on oil products. Ukraine has significant potential in the agricultural sector and biofuel production in the country has good prospects.

Ukraine has all the prerequisites for eco-fuel production. Firstly, we have an agrarian country with rich crops for food needs. Secondly, Ukraine is energy dependent. We do not have enough energy resources to meet the domestic needs. The plants we can grow by their properties are optimal for biofuel production. Most of them, for example, rapeseed, corn and sunflower are already grown in Ukraine.

Nowadays, methanol, ethanol and other alcohols are used as alcohol additives to fuels, which helps to increase the octane number and improve the quality of exhaust gases during the combustion of gasoline.

The US Department of Agriculture estimates that ethanol produces 134% of energy during its life cycle (if you take 100% of the energy consumption when

receiving - growing, harvesting and processing). But gasoline can return only 80% of the energy spent on its production. In other words, bioethanol is highly profitable and not harmful to the environment.

In conclusion, I would like to say that biofuels are our renewable future!

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USING BLACKCURRANT POMACE (WASTE PRODUCT) IN COSMETICS

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The concept of greening and implementation of "green" technologies is one of the key trends in the development of modern chemical technology. Significant interest in industrial waste as a secondary resource in the production of chemically active substances, the demand for which is in various fields of chemical technology, especially in cosmetics, is based on the economic and environmental feasibility of their use.

Blackcurrant pomace was extracted by conventional maceration directly in a hydroalcoholic mixture of solvent (EtOH/H2O 50/50). Such a hydroalcoholic solvent also revealed itself appropriate for the extraction of the compounds of cosmetic