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GREEN CHEMISTRY AND ITS IMPORTANCE IN OUR LIFE

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Green chemistry is an important part of modern chemistry, aimed at developing chemical substances and processes in a way that does not harm human health and the environment. Its twelve principles were developed by chemists, guiding the design of chemical technologies. They help to develop practical applications, such as Petretec technology. As we know, petroleum products are considered resources that do not comply with the principles of green chemistry, while PET (polyethylene terephthalate) may partially comply with the principles of green chemistry, but its production processes require recycling and compliance with the principles of green chemistry to reduce their impact on the environment.

Green chemistry helps to develop environmentally friendly chemicals and processes, which makes it one of the important directions of the modern chemical industry. It performs tasks such as reducing the amount of harmful substances, increasing energy efficiency, fully utilizing raw materials, and ensuring the safety of chemicals.

In practice, green chemistry is the use of chemical processes and products is to introduce the principles of minimizing the harmful effects on humans and the environment. Practical examples include the development and use of less toxic reagents and solvents, the use of catalytic processes instead of stoichiometric processes, and biodegradable materials (e.g. bioplastics).

The main areas of practice are the following: waste prevention, that is, it is better not to generate waste at all than to recycle it. Atom conservation, synthesis should be such that the maximum number of atoms of the starting reagents should be included in the final product. Less hazardous syntheses, on the other hand, are to use or create substances that are not toxic or less toxic to humans and the environment.

Safe chemicals are the design of new products with the best functional properties and the least toxicity. Energy conservation, eEnergy reduction and minimizing the environmental consequences associated with energy consumption. The use of renewable raw materials, on the other hand, requires the use of natural, renewable raw materials instead of finite resources wherever possible Reducing intermediate steps means eliminating unnecessary intermediate synthesis steps that can lead to waste.

Carbon taxes are one of the most effective tools for reducing greenhouse gas emissions globally. Carbon taxes are fees levied on the carbon contained in fossil fuels. These taxes have been introduced globally for the following reasons. First, they are an effective means of achieving national commitments on hazardous emissions. In particular, a tax of $35 per ton of CO2 emitted into the atmosphere in 2030 would increase the prices of coal, electricity, and gasoline by about 100, 25, and 10%, respectively. In addition, carbon taxes serve to encourage investment in the energy sector to shift to low-carbon technologies, including power plants powered by renewable energy sources. Third, carbon taxes contribute to environmental improvements, including: could lead to a significant reduction in premature deaths from air pollution caused by burning fossil fuels. A carbon tax of $35 per ton could prevent 300,000 premature deaths in China and 170,000 in India by 2030. However, the implementation of the

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agreements reached may be in doubt. The economic mechanism for implementing environmental policy at the national level is based on the following measures: planning and financing of environmental protection measures; preferential lending and taxation of environmental protection activities; setting limits on the use of natural resources, waste management, and the emission of greenhouse gases into the atmosphere; levying taxes and other fees for the use of natural resources and the emission of greenhouse gases into the atmosphere; levying fees for the disposal of various types of waste that harm the environment; covering in the prescribed manner, etc.

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