

Fundamental Principles of Green Chemistry

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The paper examines the concept of green chemistry and its fundamental principles, which constitute one of the most significant directions in contemporary chemistry. The study outlines the twelve core principles of green chemistry, provides examples of their practical implementation, and analyzes the role of green chemistry in the chemical industry as well as in the advancement of scientific research. Particular emphasis is placed on the continuous development of the field of green chemistry and its importance for humanity in terms of establishing an environmentally sustainable and safe environment. The paper highlights the necessity of adopting innovative, safe, and less toxic methods and technologies aimed at waste minimization and efficient energy utilization. Furthermore, special attention is devoted to the significance of green chemistry in protecting human health, promoting an environmentally sound ecosystem, and preserving biodiversity. The development of green chemistry is regarded as a crucial factor in achieving sustainable development goals and ensuring a safe and healthy environment for future generations.