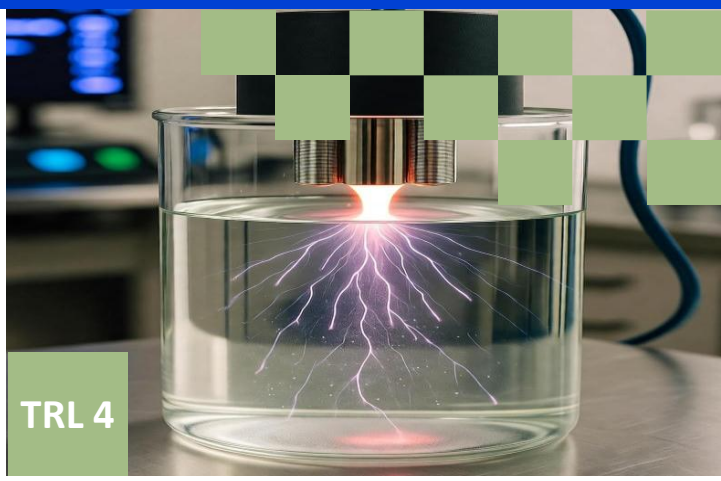
Bio-tech

Method for eradicating microorganisms pathogenic to humans and animals from liquid waste



About the solution

The invention presents an innovative method for eliminating pathogenic microorganisms from liquid waste of clinical, laboratory, and industrial origin.

The process uses pulse-modulated radio-frequency atmospheric pressure glow discharge (pm-rf-APGD) generated in contact with a liquid stream.

This approach enables efficient eradication of a wide range of pathogens, including Staphylococcus, Pseudomonas, Escherichia, and Enterococcus species, without the need for chemical reagents or high temperatures.

The technology offers low operating costs, requires no plasma gases, and can operate in a continuous flow system — making it suitable for medical, industrial, and environmental applications.

IP Protection

The invention is protected by the Polish Patent Office under the following number: **Pat.240770**

Research Team

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Applications

- Sterilization and disinfection of liquid waste in medical and veterinary sectors,
- Treatment of laboratory and industrial wastewater contaminated with pathogens,
- Application in water purification and environmental biosecurity systems.

Cooperation opportunities

- Joint research on process optimization and scaling,
- Licensing of the technology for industrial applications,
- Partnerships with environmental protection and healthcare sectors.

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