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GENERATION OF ACTIVE OXYGEN AND NITROGEN SPECIES IN LIQUIDS UNDER EXPOSURE TO MICROWAVE PULSE CAPILLARY DISCHARGE ^{*)}

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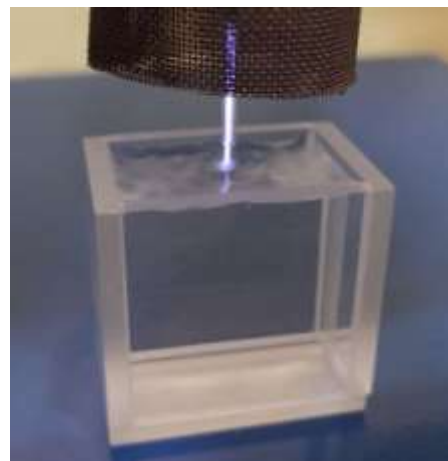
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The effect of an atmospheric pressure gas discharge on water is a multifactorial process leading to the formation of nitrogen and oxygen species in the liquid. These compounds have high biological and chemical activity, which causes increased interest in their applied research.

The paper presents the results of water treatment using pulsed microwave capillary discharge. The formation of long-lived species (H_2O_2 , NO_2^- , NO_3^-) in the liquid phase and the change in pH during exposure for various plasma-forming gases (argon, air, oxygen, nitrogen) were studied.

The concentrations of hydrogen peroxide and nitrite ions were determined by the spectrophotometric method. To determine the concentration of H_2O_2 , the FOX assay and the radiation wavelength $\lambda = 560$ nm were used. To determine NO_2^- , the Griess assay and the radiation wavelength $\lambda = 525$ nm were used.



^{*)} [abstracts of this report in Russian](#)