

Abstract Submitted  
for the GEC13 Meeting of  
The American Physical Society

**Plasma processes in water under effect of short duration pulse discharges** ELCHIN GURBANOV, moslem — It is very important to get a clear water without any impurities and bacteria by methods, that don't change the physical and chemical indicators of water now. In this article the plasma processes during the water treatment by strong electric fields and short duration pulse discharges are considered. The crown discharge around an electrode with a small radius of curvature consists of plasma leader channels with a high conductivity, where the thermo ionization processes and UV-radiation are taken place. Simultaneously the partial discharges around potential electrode lead to formation of atomic oxygen and ozone. The spark discharge arises, when plasma leader channels cross the all interelectrode gap, where the temperature and pressure are strongly grown. As a result the shock waves and dispersing liquid streams in all discharge gap are formed. The plasma channels extend, pressure inside it becomes less than hydrostatic one and the collapse and UV-radiation processes are started. The considered physical processes can be successfully used as a basis for development of pilot-industrial installations for conditioning of drinking water and to disinfecting of sewage.

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Date submitted: 06 May 2013

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