

Electric field on liquid and dielectric surfaces exposed to atmospheric pressure plasma jets

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Report of Abstracts

**18th, Laser Aided Plasma
Diagnostics**

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Content

Low temperature plasmas at atmospheric pressure are usable on materials sensitive to high temperatures, (bio)materials that are not resistant to vacuuming or even fully drying, (bio)targets that are sensitive to significant current transfer. A great number of scientific publications has followed this rise in interest for atmospheric pressure plasmas and they most commonly address the discharge dynamics, densities of heavy species, at times gas temperature measurements, imaging of flow fields and rarely electron densities and electric field but very few on electric field measurements.

This paper will give an overview of the recent work in the electric field measurements in atmospheric pressure plasma jets that operate in the 'bullet mode' when in contact with various surfaces. The results focus on the comparison between the jets driven by 30 kHz sine voltage and jets driven by short high voltage pulses. Two measurement methods have been used that allow for comparison between the electric field in the gas phase and on the treated targets, which vary from dielectrics to liquids.

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