Use of Low-Temperature Plasma in Practical Decontamination

Offer

Various applications of low-temperature plasma

- Decontamination of liquids and surfaces in praxis
- Research and development in the fi elds of both – human health therapeutics and – veterinary treatments

Know-How & Technologies

- Non-thermal plasma (NTP) arising in various electric discharges in air acts on living organisms through production of many reactive oxygen substances (ROS) and reactive nitrogen substances (RNS).
- NTP can be used to inactivate bacteria and fungi in small volumes of liquids or on various surfaces, enabling their disinfection or sterilization at ambient temperature.
- Exposure of human skin without damage is possible, enabling not only disinfection, but also therapy of human skin and nails mycoses (dermatomycoses and onychomycoses).
- Plenty of further NTP applications is described in literature, including surface modifi cations, food industry utilization, therapeutic use in stomatology, wound healing, up to cancer treatment.
- We are able to generate NTP using various discharges, namely corona discharges of both negative and positive polarity, by patented discharge called cometary in the arrangement with or without insulated grid, or by the Tesla transformer.

Selected publications

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