

عنوان مقاله:

Study on Low temperature atmospheric plasma for microbial decontamination

محل انتشار:

چهارمین کنفرانس بین المللی علوم و مهندسی (سال: 1395)

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خلاصه مقاله:

Low temperature Plasma (LTP) is a high-energy gas that is created when an electrical current is passed through a gas. Until recently, plasmas could only be created at relatively high temperatures in a vacuum and the use of plasma on sensitive materials such as human tissue, food products, medical devices and the packaging industry, was therefore impractical. However, over the last few years technological breakthroughs have made it possible to produce low temperature plasmas under atmospheric conditions providing many advantages. Plasma discharges with a higher oxygen concentration have been associated with increased levels of microbial survival inhibition due to oxygen based active species, atomic oxygen and ozone. Low temperature plasmas have shown success in decontamination of a wide range of microorganisms including bacteria, fungi and algae and has even shown success in damaging bacterial spores. These factors have brought this exciting new, emerging technology to the forefront of novel antimicrobial techniques.

کلمات کلیدی:

non thermal plasma; decontamination; antimicrobial; Cold plasma

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