

عنوان مقاله:

Electrical Discharges: An Emerging Modality in Sterilization, Disinfection, and Therapeutics

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خلاصه مقاله:

Electrical discharges are the key mechanism to the generation of atmospheric pressure plasmas which are further classified as equilibrium and non-equilibrium plasmas, also referred to as thermal and non-thermal plasmas. The technological advancement of non-thermal plasma has extended its potential clinical non-invasive applications in a multitude of disciplines such as dermatology, ophthalmology and oncology, etc. to bolster tissue generation, refraction error correction and necrosis of the cancerous cells in the domain of plasma medicine, respectively. A fundamental on the various types of discharges and their mechanism is investigated. A perspective on the application of non-thermal plasmas in the domains such as sterilization and disinfection is presented in this review. We have focused on the plasma therapeutics and its significance as a clean and dry therapy to treat superficial skin diseases via the mechanism of proliferation of basal skin cells and prothrombin stimulation to cauterize the blood through Argon Plasma generated by Argon Plasma Coagulator. We propose to fabricate atmospheric pressure plasma devices and understanding of the associated plasma radicals that aids in the activation of biochemical and biomolecular reactions .to treat the cutaneous and sub-cutaneous diseases

کلمات کلیدی:

Thermal and Non-Thermal Plasma, Sterilization, Disinfection, Cell Proliferation, Dielectric barrier discharge, Argon Plasma Coagulator

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