

Title (en)

APPARATUS AND METHODS FOR DEACTIVATING MICROORGANISMS WITH NON-THERMAL PLASMA

Title (de)

VORRICHTUNG UND VERFAHREN ZUR DEAKTIVIERUNG VON MIKROORGANISMEN MIT NICHTTHERMISCHEM PLASMA

Title (fr)

APPAREIL ET PROCÉDÉS POUR DÉSACTIVER DES MICRO-ORGANISMES AVEC UN PLASMA NON THERMIQUE

Publication

EP 4162776 A1 20230412 (EN)

Application

EP 21823102 A 20210610

Priority

- US 202016896136 A 20200608
- US 2021036891 W 20210610

Abstract (en)

[origin: WO2021252816A1] An array of non-thermal plasma emitters is controlled to emit plasma based on application of an electric current at desired frequencies and a controlled power level. A power supply for an array controller includes a transformer that operates at the resonant frequency of the combined capacitance of the array and the cable connecting the array to the power supply. The power into the array is monitored by the controller and can be adjusted by the user. The controller monitors reflected power characteristics, such as harmonics of the alternating current, to determine initiation voltage of the plasma and/or resonant frequency plasma emitters. The array of non-thermal plasma emitters may be used in therapeutic, diagnostic, and/or medical sanitization applications, such as to prevent, limit, and/or treat the development of diseases caused in humans by infectious agents.

IPC 8 full level

H05H 1/24 (2006.01); **A61B 18/04** (2006.01)

CPC (source: EP)

H05H 1/47 (2021.05); **A61B 2018/0016** (2013.01); **A61B 2018/00452** (2013.01); **A61B 2018/122** (2013.01); **H05H 2242/22** (2021.05); **H05H 2245/34** (2021.05)

Citation (search report)

See references of WO 2021252816A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2021252816 A1 20211216; CN 116114387 A 20230512; CN 116114387 A8 20231201; EP 4162776 A1 20230412; JP 2023529709 A 20230711

DOCDB simple family (application)

US 2021036891 W 20210610; CN 202180056963 A 20210610; EP 21823102 A 20210610; JP 2022576194 A 20210610