

Title (en)

APPARATUS FOR GENERATING LOW TEMPERATURE PLASMA AT ATMOSPHERIC PRESSURE

Title (de)

VORRICHTUNG ZUM ERZEUGEN VON NIEDERTEMPERATURPLASMA BEI ATMOSPHERENDRUCK

Title (fr)

APPAREIL DE PRODUCTION DE PLASMA A BASSE TEMPERATURE ET A PRESSION ATMOSPHERIQUE

Publication

**EP 1366647 A1 20031203 (EN)**

Application

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Abstract (en)

[origin: WO02065820A1] Disclosed is an apparatus for generating low-temperature plasma at atmospheric pressure, comprising: a couple of electrodes facing each other at a distance, one of them being connected to a power supply, the other being grounded; a couple of dielectrics with a thickness of 25  $\mu$ m-10 mm, positioned on the facing surfaces of the electrodes in such a way as to face each other, one of them having at least one discharge gap therein; and a conductor electrode having at least one tip positioned within the discharge gap, wherein an electric field is applied at an intensity of 1-100 KV/cm through the power supply across the electrodes by use of a pulse direct current or an alternating current in a frequency bandwidth of 50 Hz-10 GHz while a reaction gas is fed between the electrodes, so as to induce a hollow cathode discharge, a capillary discharge or the high accumulation of charges from the discharge gap. The inventive apparatus prevents the conversion of the plasma to arcs and thus gives stable, low-temperature plasma in a high density.

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