



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: METHOD AND DEVICE FOR ION GENERATION

## (57) Abstract

A method of high efficiency generation of ions of desired polarity which includes the steps of positioning a first electrode (5) at a predetermined spacing from a second electrode (7) having a closed shape configuration, applying to both electrodes a direct voltage of the same polarity, at the same time as applying the direct voltage, applying high voltage pulses to the first electrode only, thereby to cause ion generation in the vicinity of the first electrode and to set up a rapidly moving ion stream from the first to the second electrode along an electrical field therebetween, wherein the duration of the pulses is shorter than the time taken for the ion stream to reach the second electrode, and wherein ions in the ion stream have the same polarity as the second electrode, thereby to be repelled and concentrated as they flow through the second electrode. The method may also include the generation of a stream of ions, with reduced ozone content, which includes the additional step of applying a negative pressure gradient to the ion stream, thereby to deflect ozone generated by the corona discharge to a direction different from that of the flow of ions.

