Title (en)

ION SOURCE, IN PARTICULAR FOR HIGHLY CHARGED METALLIC IONS, WHOSE ION CURRENT IS CONTROLLED

Publication

EP 0142414 B1 19890322 (FR)

Application

EP 84402080 A 19841016

Priority

FR 8316465 A 19831017

Abstract (en)

[origin: US4582997A] The invention relates to a device for regulating an ionic current, particularly a highly charged metal ion current, obtained by vaporizing and then ionizing a solid material in an ultra-high frequency cavity with the aid of a hot electron plasma confined in said cavity. This plasma is produced by ionizing a gas as a result of the combined action of a high frequency electromagnetic field and a magnetic field, whose amplitude is such that the electron cyclotron resonance is satisfied. The device inter alia comprises a pulse generator, whereof the useful cycle is regulated in order to pulse the electromagnetic field and control its mean power, a valve for modifying the gas flow entering the cavity and means for controlling said valve in such a way that the pressure prevailing in the cavity remains constant.

IPC 1-7

H01J 27/18

IPC 8 full level

H01J 27/18 (2006.01); **H05H 1/18** (2006.01)

CPC (source: EP US)

H01J 27/18 (2013.01 - EP US)

Cited by

FR2757310A1; CN103974517A; DE19933762A1; DE19933762C2; EP0238397A1; FR2595868A1; US4780642A; US6194836B1; WO9827572A1

Designated contracting state (EPC)

DE GB NL

DOCDB simple family (publication)

EP 0142414 A2 19850522; **EP 0142414 A3 19860604**; **EP 0142414 B1 19890322**; DE 3477444 D1 19890427; FR 2553574 A1 19850419; FR 2553574 B1 19851227; JP S60101843 A 19850605; US 4582997 A 19860415

DOCDB simple family (application)

EP 84402080 A 19841016; DE 3477444 T 19841016; FR 8316465 A 19831017; JP 21531784 A 19841016; US 65931584 A 19841010