

Title (en)  
RADIOGENIC SOURCE COMPRISING AT LEAST ONE ELECTRON SOURCE COMBINED WITH A PHOTOELECTRIC CONTROL DEVICE

Title (de)  
MIT EINER PHOTOELEKTRISCHEN STEUERVORRICHTUNG KOMBINIERTE RADIOGENE QUELLE MIT MINDESTENS EINER ELEKTRONENQUELLE

Title (fr)  
SOURCE RADIOGENE COMPRENANT AU MOINS UNE SOURCE D'ELECTRONS ASSOCIEE A UN DISPOSITIF PHOTOELECTRIQUE DE COMMANDE

Publication  
**EP 2232520 A1 20100929 (FR)**

Application  
**EP 09703777 A 20090123**

Priority  
• EP 2009050809 W 20090123  
• FR 0800397 A 20080125

Abstract (en)  
[origin: WO2009092813A1] The invention relates to a radiogenic source comprising a vacuum chamber (50), means (56h) for injecting an optical wave (56i), a cold source (52), enabling electrons (52i) to be emitted in the vacuum by field emission when it is subjected to a field, a power supply (55) delivering a high electrical voltage, an anode (53) comprising a material (53j) capable of emitting X-rays (53i) under the effect of electron bombardment, and at least one window (54) through which the X-rays exit, at least one light source (56) delivering said optical wave, characterized in that the cold source comprises at least one substrate (57) provided with at least one conducting surface (55) and is subjected to an electric field resulting from applying the high voltage between at least one conducting surface (55) and the anode (53), said cold source further including at least one photoconductive element (58) in which the current is controlled substantially linearly by the illumination and at least one electron emitter element (59), said photoconductive element (58) being electrically connected in series between at least one emitter element (59) and a conducting surface (55), so that the current photogenerated in the photoconductive device is equal to that emitted by the emitter or the group of emitters with which it is associated, and so that the emitted X-ray flux is substantially linearly dependent on the illumination.

IPC 8 full level  
**H01J 35/06** (2006.01)

CPC (source: EP US)  
**H01J 35/065** (2013.01 - EP US); **H01J 2235/062** (2013.01 - EP US); **H01J 2235/068** (2013.01 - EP US)

Citation (search report)  
See references of WO 2009092813A1

Designated contracting state (EPC)  
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 SE SI SK TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**WO 2009092813 A1 20090730**; CA 2713060 A1 20090730; CA 2713060 C 20170829; EP 2232520 A1 20100929; EP 2232520 B1 20140430; FR 2926924 A1 20090731; FR 2926924 B1 20121012; JP 2011512004 A 20110414; JP 2016033922 A 20160310; JP 6362113 B2 20180725; US 2010290593 A1 20101118; US 8503614 B2 20130806

DOCDB simple family (application)  
**EP 2009050809 W 20090123**; CA 2713060 A 20090123; EP 09703777 A 20090123; FR 0800397 A 20080125; JP 2010543514 A 20090123; JP 2015209373 A 20151023; US 86431609 A 20090123