

Title (en)

An ion barrier membrane for use in a vacuum tube using electron multiplying, an electron multiplying structure for use in a vacuum tube using electron multiplying as well as a vacuum tube using electron multiplying provided with such an electron multiplying structure

Title (de)

Eine Ionenbarrieremembran zur Verwendung in einer Elektronenvervielfachung verwendenden Vakuumröhre, eine elektronenvervielfachende Struktur zur Verwendung in einer Elektronenvervielfachung verwendenden Vakuumröhre und eine Elektronenvervielfachung verwendende Vakuumröhre mit solch einer elektronenvervielfachenden Struktur

Title (fr)

Une membrane à barrière ionique à utiliser dans un tube à vide utilisant la multiplication d'électrons, une structure multiplicatrice d'électrons à utiliser dans un tube à vide utilisant la multiplication d'électrons et un tube à vide utilisant la multiplication d'électrons équipé d'une structure multiplicatrice d'électrons

Publication

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Abstract (en)

[origin: EP2164092A1] The invention relates to an electron multiplying structure for use in a vacuum tube using electron multiplying, the electron multiplying structure comprising an input face intended to be oriented in a facing relationship with an entrance window of the vacuum tube, an output face intended to be oriented in a facing relationship with a detection surface of the vacuum tube, as well as an ion barrier membrane for shielding off stray ions. The invention also relates to an vacuum tube using electron multiplying having a photocathode capable of releasing electrons into said vacuum chamber when exposed to light, electric field means for accelerating said released electrons from said photocathode towards an anode spaced apart from said photocathode in a facing relationship, as well as an electron multiplying structure according to the invention disposed in said vacuum chamber between said photocathode and said anode. The invention also relates to an ion barrier membrane for use in a vacuum tube and/or an electron multiplying structure according to the invention. It is an object of the invention is to provide an improved electron multiplying structure having an improved performance in term of shielding capabilities against stray ions and reduced loss of emitted electrons. For this purpose, the electron multiplying structure according to the invention is characterized in that said ion barrier membrane is composed of at least one atomic layer containing graphene.

IPC 8 full level

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CPC (source: EP)

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