Title (en)

WIRELESS SENSOR FOR PHOTONS AND/OR FOREIGN SUBSTANCES HAVING A GRAPHENE FET

Title (de)

DRAHTLOSER SENSOR FÜR PHOTONEN UND/ODER FREMDSTOFFE MIT EINEM GRAPHEN-FET

Title (fr)

CAPTEUR SANS FIL POUR PHOTONS ET/OU SUBSTANCES ÉTRANGÈRES AYANT UN TRANSISTOR À EFFET DE CHAMP À BASE DE GRAPHÈNE

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Application

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Abstract (en)

[origin: WO2021028158A1] The invention relates to a wirelessly readable sensor for detecting photons incident on the surface thereof and/or foreign substances accumulating on the surface thereof, having no power supply of its own. The sensor has i) a graphene FET structured in layers, having a) a metallic gate electrode, which has a gate connection (24), b) a dielectric barrier (26) and c) a graphene layer (28) arranged in turn thereover, which is connected to a source contact (30) and a drain contact (32), wherein the source contact (30) is connected to the gate connection (24); ii) a first antenna (34), which is connected to one of the source contact (30) and the drain contact (32), and iii) a surface layer (20) which is arranged above or below the graphene layer (28) and which reacts electrically to photons and/or accumulated foreign substances.

IPC 8 full level

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