

Title (en)

PLANAR ELECTRODE FOR BIOSENSORS REALIZED USING REPETITIVE FRACTAL GEOMETRY

Title (de)

PLANARE ELEKTRODE FÜR BIOSENSOREN, DIE MIT WIEDERHOLTER FRAKTALER GEOMETRIE REALISIERT WERDEN

Title (fr)

ÉLECTRODE PLANE POUR BIOCAPTEURS RÉALISÉE AU MOYEN D'UNE GÉOMÉTRIE FRACTALE RÉPÉTITIVE

Publication

EP 4213929 A1 20230726 (EN)

Application

EP 21806053 A 20210830

Priority

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- RS 2021000011 W 20210830

Abstract (en)

[origin: WO2022050860A1] The planar electrode for biosensors realized by applying repetitive fractal geometry is characterized by the way of constructing a system of three biosensor electrodes using the repeating fractal geometry until the level of third order. The realization includes repetitive geometry of the 1st order of the Sierpine fractal, but it also relates to the repetitive geometry of the Koch curve, Pean curve and Hilbert curve, and of the geometric shapes including the three most common shapes square, circle, and triangle. Repetitive geometry in the design of the planar electrode significantly contributes to the increased sensitivity of biosensors. The biosensor is realized by LTCC technology and screen printing, i.e. for the substrate from which the biosensor electrode is made, ceramic is used on which gold is applied by screen printing, although silver, platinum and carbon pastes can be used, but also other manufacturing technologies as well as substrate materials and further functionalization of electrode surfaces.

IPC 8 full level

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CPC (source: EP)

A61N 1/05 (2013.01); **G01N 27/3272** (2013.01); **G01N 27/3277** (2013.01); **G01N 33/5438** (2013.01); **C12Q 1/6825** (2013.01); **G01N 27/48** (2013.01)

Citation (search report)

See references of WO 2022050860A1

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