

Title (en)

DEVICE AND METHOD FOR PHOTOTHERMAL ENHANCED PLASMONIC BIOSENSING

Title (de)

VORRICHTUNG UND VERFAHREN FÜR PHOTOTHERMISCH VERBESSERTES PLASMONISCHES BIOSENSING

Title (fr)

DISPOSITIF ET PROCÉDÉ DE BIODÉTECTION PLASMONIQUE AMÉLIORÉE PHOTOTHERMIQUE

Publication

EP 4133111 A1 20230215 (EN)

Application

EP 21709706 A 20210309

Priority

- EP 20169226 A 20200411
- EP 2021055906 W 20210309

Abstract (en)

[origin: WO2021204479A1] The present invention is directed to a dual-functional plasmonic detector comprising (a) a photothermal unit configured to generate a monochromatic light beam; (b) a plasmonic sensing unit configured to introduce a localized surface plasmon resonance effect and to transduce a target sample by means of a polychromatic radiation beam; and (c) a detection unit configured to detect plasmonic characteristics by recording and processing the radiation beam altered by the plasmonic sensing unit. The invention also relates to the use of the dual-functional plasmonic detector of the invention for detecting, quantifying and/or characterizing a target sample, in particular for detecting, quantifying and/or characterizing a nucleic acid or a virus, e.g. a coronavirus such as SARS-CoV or SARS-CoV-2.

IPC 8 full level

C12Q 1/70 (2006.01); **G01N 33/569** (2006.01)

CPC (source: EP)

C12Q 1/6816 (2013.01); **C12Q 1/701** (2013.01); **G01N 21/554** (2013.01); **G01N 33/56983** (2013.01); **G01N 21/05** (2013.01); **G01N 21/171** (2013.01); **Y02A 50/30** (2017.12)

C-Set (source: EP)

C12Q 1/6816 + **C12Q 2565/628**

Citation (search report)

See references of WO 2021204479A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2021204479 A1 20211014; EP 4133111 A1 20230215

DOCDB simple family (application)

EP 2021055906 W 20210309; EP 21709706 A 20210309