Title (en)

OPTICAL IMAGING OF SMART HYDROGEL STRUCTURES FOR SENSING APPLICATIONS

Title (de)

OPTISCHE BILDGEBUNG VON INTELLIGENTEN HYDROGELSTRUKTUREN FÜR MESSANWENDUNGEN

Title (fr)

IMAGERIE OPTIQUE DE STRUCTURES D'HYDROGEL INTELLIGENTES POUR DES APPLICATIONS DE DÉTECTION

Publication

EP 4139679 A1 20230301 (EN)

Application

EP 21818392 A 20210602

Priority

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Abstract (en)

[origin: WO2021247750A1] A stand-alone point-of-care device can employ smart hydrogel structures to detect target analytes in a fluid sample. The device includes a microfluidic sample slide including a microfluidic channel with one or more smart hydrogel structures positioned within the channel. The slide can be inserted into an associated analytic device, to analyze the swelling state of the hydrogel structures using an optical camera to capture images of the hydrogel structure(s) before and after interaction of such hydrogel structure with the fluid sample. Such optical imaging can be used to quickly and easily measure the dimensional change in the hydrogel structure, which change can be correlated to the concentration of analyte in the fluid sample. Imaging and analytics can be performed by an associated analytic device (e.g., which receives a microchannel slide containing the fluid sample), or imaging and analytics can be accomplished with a smartphone camera and associated app.

IPC 8 full level

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