

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
09 January 2025 (09.01.2025)



(10) International Publication Number
WO 2025/010030 A1

(51) International Patent Classification:

A61B 1/05 (2006.01) G01N 21/65 (2006.01)
A61B 5/00 (2006.01)

(21) International Application Number:

PCT/SG2024/050437

(22) International Filing Date:

04 July 2024 (04.07.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202301934V 06 July 2023 (06.07.2023) SG

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: OPTICAL ARRANGEMENT, DEVICE AND NON-INVASIVE METHOD FOR ANALYZING A SKIN SAMPLE

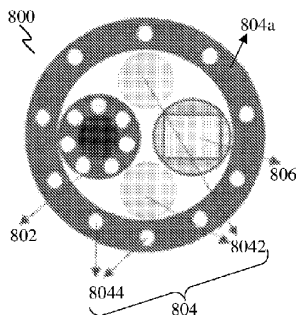


FIG. 10

(57) Abstract: According to embodiments of the present invention, an optical arrangement is provided. The optical arrangement includes a first fiber optic probe configured to measure Raman spectra of a skin sample; a second fiber optic probe configured to measure diffuse reflectance spectra of the skin sample; and an imaging camera configured to capture a reflectance image of the skin sample. The first fiber optic probe, at least part of the second fiber optic probe and the imaging camera are arranged adjacent to one another. Based on at least one selected from the measured Raman spectra, the measured diffuse reflectance spectra, or the captured reflectance image, the optical arrangement is configured to interrogate a pre-determined depth below a surface of the skin sample, and/or tissue chromophores of the skin sample at the pre-determined depth. According to further embodiments, a device and non-invasive method for analyzing a skin sample are also provided.

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