



(51) International Patent Classification:
G01N 21/35 (2014.01) G02B 5/08 (2006.01)

(21) International Application Number:
PCT/US2024/014511

(22) International Filing Date:
05 February 2024 (05.02.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/483,117 03 February 2023 (03.02.2023) US

(71) Applicant: **ONCODEA CORPORATION** [US/US];
1000 Westgate Drive #142, St. Paul, Minnesota 55114 (US).

(72) Inventors: **KHAMMANIVONG, Ali**; c/o Oncodea Corporation, 1000 Westgate Dr. #142, St. Paul, Minnesota 55114 (US). **PHAM, Dan Que**; c/o Oncodea Corporation, 1000 Westgate Dr. #142, St. Paul, Minnesota 55114 (US).

PETCAVICH, Robert; c/o Oncodea Corporation, 1000 Westgate Dr. #142, St. Paul, MN 55114 (US).

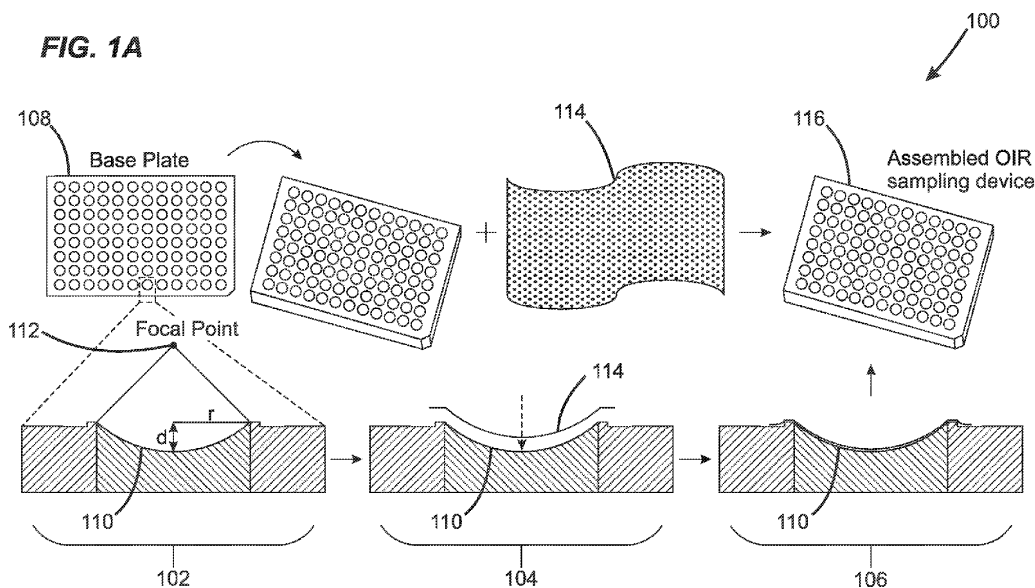
(74) Agent: **BRUESS, Steven C.** et al.; Merchant & Gould P.C., P.O. Box 2903, Minneapolis, Minnesota 55402-0903 (US).

(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,

(54) Title: INFRARED REFLECTIVE SAMPLING DEVICE

FIG. 1A



(57) Abstract: A reflective sampling device for Fourier transform infrared (FTIR) spectroscopy-based analysis and methods of use for the reflective sampling device. The reflective sample device includes a base plate defining an array of wells on a surface thereof, wherein each of one or more wells arranged on the surface of the base plate is configured as a concave mirror that is reflective in a predetermined wavelength range. The reflective sampling device includes a base plate with an array of wells optimized in depth and radius to produce an optimal focal point for minimizing reflection interferences and maximizing signal amplitude.

[Continued on next page]

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))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*