

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
09 September 2022 (09.09.2022)



(10) International Publication Number
WO 2022/187843 A1

(51) International Patent Classification:
G01N 21/65 (2006.01)

(21) International Application Number:
PCT/US2022/070949

(22) International Filing Date:
03 March 2022 (03.03.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/156,846 04 March 2021 (04.03.2021) US

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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, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, IT, JM, JO, JP, KE, KG, KH,
KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA,
MD, ME, MG, MK, MN, 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, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,

(54) Title: METHODS AND SYSTEMS FOR RAMAN SPECTRA-BASED IDENTIFICATION OF CHEMICAL COMPOUNDS

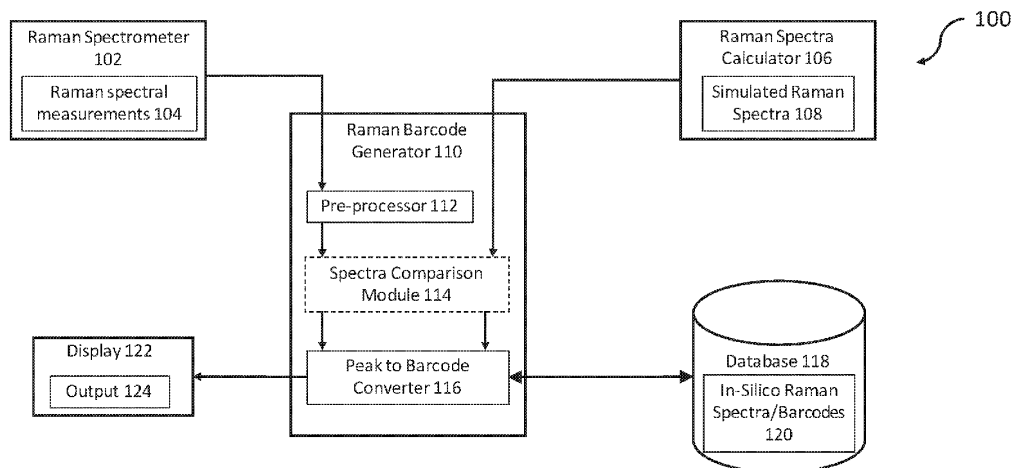


FIG. 1

(57) Abstract: A method and system for identifying chemical compounds based on Raman spectroscopic measurements and *in-silico* simulated Raman spectra are disclosed. In various embodiments, Raman barcodes of an unknown chemical compound may be generated from Raman spectra obtained by performing Raman spectroscopic measurements on the unknown chemical compound. The Raman barcodes may then be compared with a library of reference *in-silico* simulated Raman barcodes of known chemical compounds and the identity of the unknown chemical compound may be determined based on the comparison.

[Continued on next page]

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, 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).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*