

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
17 September 2020 (17.09.2020)



(10) International Publication Number
WO 2020/185791 A1

(51) International Patent Classification:
C12Q 1/6837 (2018.01)

(21) International Application Number:
PCT/US2020/021910

(22) International Filing Date:
10 March 2020 (10.03.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/816,692 11 March 2019 (11.03.2019) US

(71) Applicant: **10X GENOMICS, INC.** [US/US]; 6230
Stoneridge Mall Road, Pleasanton, California 94588-3260
(US).

(72) Inventors: **BHARADWAJ, Rajiv**; c/o 10X Genomics,
Inc., 6230 Stoneridge Mall Road, Pleasanton, California
94588-3260 (US). **BENT, Zachary**; c/o 10X Genomics,
Inc., 6230 Stoneridge Mall Road, Pleasanton, California
94588-3260 (US).

(74) Agent: **LEE, Na Kyung**; Wilson Sonsini Goodrich &
Rosati, PC, 650 Page Mill Road, Palo Alto, California
94304 (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, 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, 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,
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,

(54) Title: SYSTEMS AND METHODS FOR PROCESSING OPTICALLY TAGGED BEADS

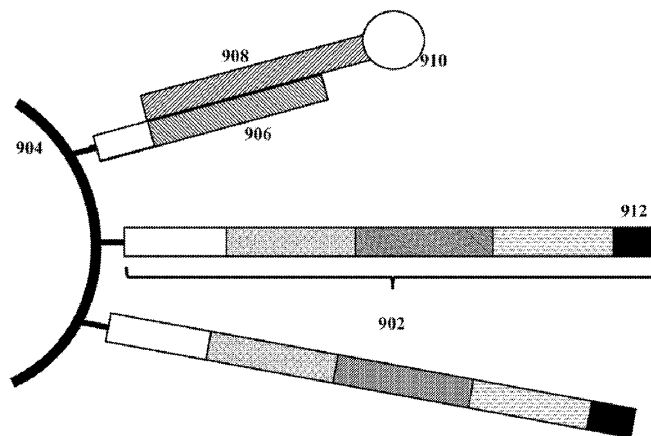


FIG. 9

(57) Abstract: The present disclosure provides methods and systems for generating and processing optically tagged beads. A nucleic acid probe comprising a fluorescent tag may be hybridized to a bead to generate an optically tagged bead. The nucleic acid probe hybridized to the optically tagged bead may be detectable by one or more signals and may be substantially unreactive to one or more chemical reactions performed with, or in the presence of, the optically tagged bead.

[Continued on next page]



WO 2020/185791 A1

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))*