

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 May 2022 (19.05.2022)



(10) International Publication Number
WO 2022/101400 A1

(51) International Patent Classification:
C12Q 1/6869 (2018.01)

(21) International Application Number:
PCT/EP2021/081501

(22) International Filing Date:
12 November 2021 (12.11.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/114,302 16 November 2020 (16.11.2020) US

(71) Applicants: **ILLUMINA, INC.** [US/US]; 5200 Illumina Way, San Diego, California 92122 (US). **ILLUMINA CAMBRIDGE LIMITED** [GB/GB]; 19 Granta Park, Great Abington, Cambridge Cambridgeshire CB21 6DF (GB).

(72) Inventors: **ARTIOLI, Gianluca Andrea**; Illumina Cambridge Limited, 19 Granta Park, Great Abington, Cambridge Cambridgeshire CB21 6DF (GB). **LESSARD-VIGER, Mathieu**; Illumina, Inc., 5200 Illumina Way, San Diego, CA 92122 (US). **MATHER, Brian D.**; Illumina, Inc., 5200 Illumina Way, San Diego, California 92122 (US). **MC DONALD, Seth M.**; Illumina, Inc., 5200 Illumina Way, San Diego, California 92122 (US). **PUGLIESE, Kaitlin M.**; Illumina, Inc., 5200 Illumina Way, San Diego, California 92122 (US). **VON HATTEN, Xavier**; Illumina Cambridge Limited, 19 Granta Park, Great Abington, Cambridge Cambridgeshire CB21 6DF (GB).

(74) Agent: **FORRESTERS IP LLP**; Skygarden, Erika-Mann-Str. 11, 80636 Munich (DE).

(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, 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,

Published:

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

WO 2022/101400 A1

(54) Title: INCORPORATION AND IMAGING MIXES

(57) Abstract: An example of an incorporation mix includes a liquid carrier, a complex, and a labeled nucleotide. The complex includes a polymerase and a plasmonic nanostructure linked to the polymerase. The labeled nucleotide includes a nucleotide, a 3' OH blocking group attached to a sugar of the nucleotide, and a dye label attached to a base of the nucleotide.