

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
17 February 2022 (17.02.2022)



(10) International Publication Number
WO 2022/034435 A1

(51) **International Patent Classification:**
G02B 1/04 (2006.01) *B29D 11/00* (2006.01)

(21) **International Application Number:**
PCT/IB2021/057105

(22) **International Filing Date:**
03 August 2021 (03.08.2021)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
63/064,105 11 August 2020 (11.08.2020) US

(71) **Applicant:** **ALCON INC.** [CH/CH]; Rue Louis-d'Affry 6,
1701 Fribourg (CH).

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))

(72) **Inventors:** **GE, Junhao**; c/o Alcon Research, LLC, 298 Harbor Boulevard, Belmont, CA 94002 (US). **ZHANG, Steve Yun**; c/o Alcon Research, LLC, 11460 Johns Creek Parkway, Johns Creek, Georgia 30097 (US). **WU, Daqing**; c/o Alcon Research, LLC, 11460 Johns Creek Parkway, Johns Creek, Georgia 30097 (US). **CHENG, Jing**; 406 Condor Ave., Brea, CA 92823 (US). **CHANG, Yuan**; 5300 Peachtree Road #3212, Atlanta, Georgia 30341 (US). **JING, Feng**; c/o Alcon Research, LLC, 11460 Johns Creek Parkway, Johns Creek, Georgia 30097 (US). **CHIOU, Jang-Shing**; c/o Alcon Research, LLC, 11460 Johns Creek Parkway, Johns Creek, Georgia 30097 (US). **PERREAULT, Stephen Raymond**; 4339 Canoe Court, Peachtree Corners, Georgia 30092 (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, 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, 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:** CONTACT LENS PACKAGING SOLUTIONS

(57) **Abstract:** The present invention relates to a method to load a water insoluble phospholipid as nanoparticles to load into a hydrogel contact lens in autoclaving process during the hydrogel contact lens manufacturing process without an extra manufacturing step and without swelling the hydrogel contact lens with an organic solvent. The phospholipid nanoparticles loaded in hydrogel contact lens subsequently releases to the eye upon wearing.



WO 2022/034435 A1