

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
15 December 2022 (15.12.2022)



(10) International Publication Number
WO 2022/260702 A1

(51) International Patent Classification:

A61L 2/00 (2006.01) A61L 2/24 (2006.01)
A61L 2/14 (2006.01) A61L 9/00 (2006.01)
A61L 2/20 (2006.01) A61L 9/015 (2006.01)

(21) International Application Number:

PCT/US2021/062496

(22) International Filing Date:

08 December 2021 (08.12.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PCT/US2021/036501
08 June 2021 (08.06.2021) US

(71) Applicant: **CHORUS, LLC** [US/US]; 201 Boston Post Road West, Suite 408, Marlboro, MA 01752 (US).

(72) Inventors; and

(71) Applicants: **RADER, Richard, S.** [US/US]; 10 Fuller Road, Wayland, MA 01778 (US). **HEATER, Kenneth, J.** [US/US]; 7440 Bridlespur Lane, Delaware, OH 43015 (US). **DESABATO, Raymond** [US/US]; 88 Fisher Road, Southborough, MA 01772 (US). **LORCH, Daniel, P.** [US/US]; 1820 Itawamba Trail, London, OH 43140 (US). **LEWIS, Adriane, L.** [US/US]; 668 Wiltshire Road, Columbus, OH 43204 (US). **WELLS, Timothy N.** [US/US]; 82 Jacqueline Drive, Manchester, CT 06040 (US).

(74) Agent: **KERN, Benjamin, E.**; Kern Kendrick, LLC, P.O. Box 159, Frazeysburg, OH 43822 (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, 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))

(54) Title: SYSTEMS, METHODS, AND APPARATUSES FOR DISINFECTION AND DECONTAMINATION

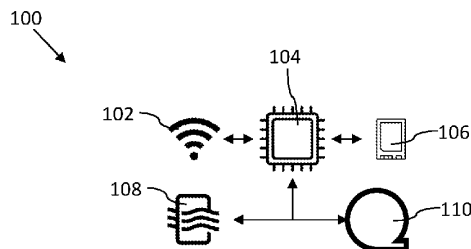


FIG. 1A

(57) Abstract: In one aspect, a system for generating and monitoring an antimicrobial is provided, the system including: a microprocessor and/or a microcontroller; an external communications device; a computational system; an antimicrobial sensor and/or an environmental sensor; and an antimicrobial generator, wherein the external communications device, the computational system, the antimicrobial generator, and the antimicrobial sensor and/or the environmental sensor are operatively connected to the microprocessor and/or the microcontroller. The system may further include a separate sensor sub-system comprising: a sensor sub-system microprocessor and/or a sensor sub-system microcontroller; a sensor sub-system external communications device; a sensor sub-system antimicrobial sensor and/or a sensor sub-system environmental sensor; and a sensor sub-system computational system. The system may further include a separate generation sub-system comprising: a generation sub-system microprocessor and/or a generation sub-system microcontroller; a generation sub-system external communications device; and a generation sub-system antimicrobial generator.

WO 2022/260702 A1