



(51) International Patent Classification:

A01N 25/24 (2006.01) B82Y 30/00 (2011.01)
C01F 5/16 (2006.01) B82Y 40/00 (2011.01)

(21) International Application Number:

PCT/SG2024/050089

(22) International Filing Date:

20 February 2024 (20.02.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202300495Q 24 February 2023 (24.02.2023) SG

(71) Applicants: SINGAPORE HEALTH SERVICES PTE LTD [SG/SG]; 10 Hospital Boulevard, #19-01 Outram Community Hospital, Singapore 168582 (SG). SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN [SG/SG]; 8 Somapah Road, Singapore 487372 (SG).

(72) Inventors: WU, Ping; c/o Singapore University of Technology and Design, 8 Somapah Road, Singapore 487372 (SG). ANARIBA, Franklin; c/o Singapore University of Technology and Design, 8 Somapah Road, Singapore 487372 (SG). SENEVIRATHNA, A.J.M. Hasanthi Lakshika; c/o Singapore University of Technology and Design, 8 Somapah Road, Singapore 487372 (SG). WEERASINGHE, Puwakdandawe Vishakha Thilini; c/o Sin-

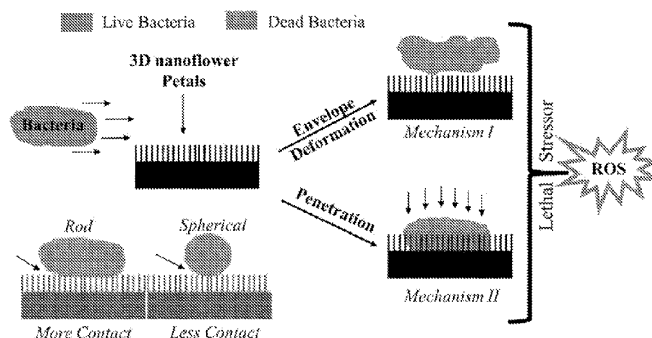
gapore University of Technology and Design, 8 Somapah Road, Singapore 487372 (SG). AGARWAL, Ashutosh; c/o Singapore University of Technology and Design, 8 Somapah Road, Singapore 487372 (SG). LEE, Wuen Pei, Cathie; c/o Singapore University of Technology and Design, 8 Somapah Road, Singapore 487372 (SG). NG, Foo Cheong; c/o Changi General Hospital Pte Ltd, 2 Simei Street 3, Singapore 529889 (SG). WONG, Shie Lyeen, Crystal; c/o Changi General Hospital Pte Ltd, 2 Simei Street 3, Singapore 529889 (SG). KOO, Seok Hwee; c/o Changi General Hospital Pte Ltd, 2 Simei Street 3, Singapore 529889 (SG). PARK, Joon Jae; c/o Changi General Hospital Pte Ltd, 2 Simei Street 3, Singapore 529889 (SG).

(74) Agent: LAI, Yin Kee Nikki; Marks & Clerk Singapore LLP, Tanjong Pagar Post Office, P.O. Box 636, Singapore 910816 (SG).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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,

(54) Title: AN ANTIBACTERIAL COMPOSITION AND METHOD OF FORMING THE SAME

Figure 6



(57) Abstract: There is provided an antibacterial composition comprising: nanostructures of a Group (II) metal oxide-hydroxide composite. There is also provided a method of forming the antibacterial composition. In a particular embodiment, the Group (II) metal oxide-hydroxide composite may be magnesium oxide-hydroxide composite, calcium oxide-hydroxide composite, or a combination thereof.

[Continued on next page]

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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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 non-prejudicial disclosures or exceptions to lack of novelty (Rule 4.17(v))*

Published:

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