

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
23 September 2021 (23.09.2021)



(10) International Publication Number
WO 2021/189049 A1

(51) International Patent Classification:

B82B 3/00 (2006.01) **C05G 3/50** (2020.01)
C09D 5/00 (2006.01) **C05G 5/27** (2020.01)
C09D 7/61 (2018.01) **A61K 9/51** (2006.01)
C09K 8/03 (2006.01) **A61K 9/00** (2006.01)

(21) International Application Number:

PCT/US2021/023491

(22) International Filing Date:

22 March 2021 (22.03.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/992,420 20 March 2020 (20.03.2020) US

(71) Applicant: **LOCUS IP COMPANY, LLC** [US/US];
30600 Aurora Road, Suite 180, Solon, OH 44139 (US).

(72) Inventors: **FARMER, Sean**; 5263 SW 34th Way, Ft.
Lauderdale, FL 33312-5536 (US). **ALIBEK, Ken**; 30600
Aurora Road, Suite 180, Solon, OH 44139 (US). **ROGERS,
Jonathan**; 30600 Aurora Road, Suite 180, Solon, OH
44139 (US).

(74) Agent: **SALIWANCHIK, David R.** et al.;
SALIWANCHIK, LLOYD & EISENSCHENK, P.O. Box
142950, Gainesville, FL 32614-2950 (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: MATERIALS AND METHODS FOR THE EFFICIENT DISPERSION OF NANOPARTICLES

Red color of the testing plate
is more visible through the
thickest coated parts of
Control primer.

Layer with Lactonic SLP
(0,05 g/l and 0,1 g/l) covered
the red surface better.

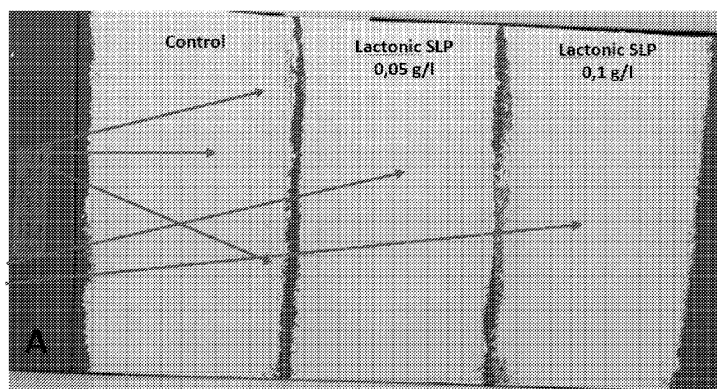


FIG. 5A

(57) Abstract: This present invention relates to compositions and methods of enhancing the dispersion of nanoparticles. In certain embodiments, the compositions and methods can be used for enhancing the performance and/or longevity of primers using biochemical-producing microbes and/or byproducts synthesized by the microbes. In certain embodiments, the addition of biosurfactants can enhance the dispersion of pigments and/or other nanoparticles, as well as inhibition of stain or color bleeding through the primer.